There has been so much written about both the white and the yellow variety of sweet clover, that we will simply say here that if one of our present regular subscribers will send us $1 with a new name for next year (1901), we will send the new subscriber the balance of this year’s (1900) numbers free, and mail, postpaid, to the one sending the new name and the dollar, either one pound of yellow sweet clover seed, or two pounds of the white sweet clover. This is a good chance to get a start of both kinds of these honey covers. Better send two new subscribers (with $2.00) and get the three pounds of seed. Address

GEORGE W. YORK & CO., 118 Michigan St., CHICAGO, ILL.

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**Extracted Honey For Sale**

**ALFALFA HONEY**

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can’t get enough the Alfalfa extracted.

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This is the well-known light-colored honey gathered from the rich, nectar-laden Basswood blossoms in Wisconsin. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

**Prices of Either Alfalfa or Basswood Honey:**

A sample of either, by mail, 8 cents; samples of both, 15 cents—pay to order and postage. By freight—one 60-pound can, 9½ cents per pound; two cans, 9 cents per pound; four or more cans, 8½ cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. The cans are box. This is all

**ABSOLUTELY PURE BEES’ HONEY**

The finest of their kind produced in this country.

Read Dr. Miller’s Testimony on Alfalfa Honey:

I’ve just sampled the honey you sent, and it’s prime. Thank you. I feel that I’m something of a heretic, to sell several thousand pounds of honey of my own production and then buy honey of you for my own use. But however loyal one ought to be to the honey of his own region, there’s no denying the fact that for sale in the kind of hot drink, where one prefers the more wholesome honey to sugar, the more the excellent quality of alfalfa honey I have received from you is better suited than the honey of more market flavor, according to my taste. C. C. Miller, McHenry Co., III.

Order the Above Honey and then Sell It.

We would suggest that those beekeepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

Address

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.
Editorial.

1901—Volume XLI.—The first year of the new century is here—the 20th century. The first number of the 41st volume of the American Bee Journal is also here. The past century has seen so many wonderful improvements and developments, we suppose this new century we are just entering upon will be still more wonderful. That hardly seems possible, and yet it doubtless will be true.

But what of the old American Bee Journal in this 20th century? It also must keep step with the progressive spirit of this rapidly advancing age. And it will do so. We need not make any promises for the future to those who have been reading the old American Bee Journal during the past 10 or more, or even less, years. We mean to keep its standard up hereafter as we have tried to do in the past. We realize that this we can not do alone—we must have the hearty and continued support and encouragement of the bee-keepers themselves. We believe we will have it—at least we will endeavor to merit it.

We can all, then, look forward to the coming years with a strong faith and a high hope, realizing that in a united effort for the right we shall be successful in all that is worthy and true.

The Utter vs. Utter Case in New York State, which has been referred to in these columns several times the past few months, came to trial again, and was decided in favor of the bee-keeper, on Dec. 29th.

Mr. O. L. Hershiser, superintendent of the apiary exhibit at the Pan-American Exposition, being present and assisting during the trial, the following account written by him will be read with great satisfaction by all, and particularly by the members of the National Bee-keepers' Association, whose money helped their fellow member to win his case:

My Dear Mr. York—I enclose you newspaper clippings concerning the now famous case of Utter vs. Utter, and will request that remaining papers containing accounts of the case be forwarded to you by the publishers. In the meantime, let me tell you so you will have no dismal apprehensions concerning the result of the litigation, that the bees were entirely exonerated of the charge of mischief complained of. The case occupied over two days, the jury being nearly all drawn on Monday afternoon, and the jury's verdict brought in at about dusk on Wednesday evening.

For a case involving such insignificant damages, I've seen nothing that has created so much interest to lawyers and sensation to the people, in many a day, as did this case. It seemed to be the only subject of conversation for the people in the hotels, railway stations and stores, and by groups of people on the streets. Besides local witnesses, the plaintiff was able to call Mr. Bee-keepers from New Hampshire; and the defense, besides local witnesses, had several fruit-growers and apiarists from New Jersey, A. J. and E. R. Root from Ohio, Frank Benton from Washington, Mr. Marks from this State, and your humble servant as counsel for the plaintiff.

I understand the jury's first ballot was in 10 votes to 2 blanks for no cause of action, which was immediately made unanimous for no cause of action. They were out scarcely five minutes.

Was not that a complete victory?

Too much credit cannot be given the just judge for his fair and impartial attitude and rulings on every disputed point, and for the great learning and ability of Messrs. Bacon & Merritt. And while passing, I believe that trained counsel which did not know that learned and astute counsel were opposed to us in the persons of Messrs. F. V. Root and W. Sanborn, which were to some extent scholarly and gentlemanly members of the legal fraternity, and while they brought to bear their skill in all things, they were not hand in hand as we were. But as to acumen in this very bitterly contested case, I think that all on the opposite side will admit that they were treated in a gentlemanly and dignified manner.

Of course, you will observe that the scene of this fight was in the village of Anody, which, to say the least, was very ironical, that, metaphorically speaking, one brother fought to kill, or “do up” the other, and that this fratricide might be accomplished according to ancient usage, as recorded in Holy Writ. Kain was brought in to assist one of the brothers in his task, while, however, the plaintiff would not be disposed of in this summary manner, and knowing of a firm of brothers among the witnesses, it is possible he may be said to have been analogous to the Bible, W. Sanborn, who, in the course of the trial, called Mr. Utter his agent, enlisted him in his behalf. These lawyers were sent on (sent to) the actuality, as it were, and appropriately, sent for certain gentlemen from Washington and Ohio to assist him in getting out of the difficulty. However, the plaintiff's claims were made apparent to all observers, after the gentleman from Chapinville had made Marks of his witnesses, by proving to the jury that in their claims that bees puncture peaches they were simply making a counterfeit case for him. And now thinking that the case was fairly made, it was judicially settled that the claims of the plaintiff were too Utterly Utter, I think we are justified in believing that peace will reign in Anody again. Yours truly,

O. L. Hershiser.

From the clippings kindly sent us by Mr. Hershiser, we take these paragraphs, the newspaper in which they appeared being the Middlesex (N. J.) Daily Argus:

The case was opened for the plaintiff by Mr. Sanford. He said he asked only $800 damages; that the case was not one which charged that peaches and trees had been destroyed by stinging. He claimed about as follows: The two Utters lived near Anody, in the town of Garewick, with their peaches, the other is a keeper of bees. William II, owns 4,000 peaches. Forty rods from one of his orchards is a clump belonging to several of his brother's. The bees from these hives acquired the habit of flying over to the orchard and "puncturing" his peaches, seeking the fruit, and making great quantities of it unfit for market. The juice trickling from the fruit would form a substance about the branches of the trees, which, in time, destroyed the branches, and in time 49 trees were totally destroyed.

Wm. II, Utter, the plaintiff, was the first witness. This is the substance of his testimony: On July 5th last, he walked into his orchard and noticed there were many bees among his peach-trees. Every day after that the bees began to get thicker and thicker. He counted as many as 14 bees on a peach, and saw so many others on other peaches that he couldn't count them. He watched their operations. A single bee would come up to the peaches, walk all around it, pick out a good spot, and put its nose in. Then it would wiggle its head one way and then it would wiggle it another. Then it would stand upon its feet and pull out its nose. Then another bee would come and the hole. Then a third and the fourth, and a whole dozen bees would come to that peach, and in less than a week the peach would die.

This is the way he found out that the bees were from his brother's hives: He built a box and put flour in it. Then by another con- trivance he caught a lot of the bees on his peach, put them in the flour-box, and when they had become white he permitted them to escape. Then he followed their line of flight, and in most cases they went directly to his brother's hives.

Next week we hope to have a further report on this celebrated case.

Clarifying of Wax.—It is a good thing to have the same thing viewed by many eyes, thereby reaching it from all sides. Regarding the clarifying of wax, the following kind note is received:

My Dear Mr. York—Have you made any experiments lately upon the Hill about the cooling of wax? The real truth is, that the time taken in the cooling of the wax makes no difference whatever, it is in the length of time it remains in a molten condition. The effect on color will be exactly the same if the wax should be slightly heating instead of cooling all the time it remains melted. And I can not conceive how you could possibly give the meaning you did to the quotation you made from Mr. Hill.

O. O. Poppleton.

Decidedly Mr. Poppleton is correct, that the thing that makes a difference in the clarifying of the wax is the "length of time it remains in a molten condition," altho it is doubtful if any one has express the idea in that exact form before. But is it strictly correct to say that "the time taken in the cooling of the wax makes no difference whatever?" It is true that after the temperature of the wax has come down to the melting-point, it makes no difference whether it is ten seconds or ten years in getting down to the temperature of the surrounding atmosphere, but it does make a difference as to the time of the cooling of the wax down to about 145 degrees, just because the longer time it takes in cooling down to that point the longer time it is in the desirable melted condition.

Having agreed that slow cooling is not per se...
The thing desired, but only desirable because it leads to the right condition, the practical question comes, is it better to say to a beginner, "You must cool your wax slowly, " or "You must keep your wax a long time in a melted condition?" If he is told to cool his wax slowly, he will keep it long enough. If he is told to keep his wax in a melted condition, he will keep it a long time in a proper condition for the foreign particles to settle; at any rate, if any one has been misled by such a direction, it has not come to light.

Suppose, however, we try to be more exact, and say, "Your wax must remain a long time in a melted condition."

One can easily fancy him thinking. "Well, it will remain in a melted condition if I keep it hot, and I can just as well leave it on the stove half a day."

So it remains "in a melted condition" for half a day—not only in a melted condition, but at so high a temperature that the particles are kept constantly in motion, and there is no chance for impurities to settle; and then it is taken off and allowed to cool rapidly, with the result that impurities are mixed all through.

The best of all would be a full explanation. Since the foregoing was written, the Bee-Keepers' Review has come to hand, and Editor Hutchinson says:

"The trouble with Bro. York's argument, as I understand him, is that he is confusing purity, or freedom from dirt, with that of color. That is, he assumes that the dark color is due to the presence of dirt. We have found that this is not the case, and the brighter, yellower wax fairly loaded with particles of dirt. If kept a long time these particles settle to the bottom, but the color of the wax is not changed one iota."

There is no desire whatever to deny that two specimens of wax entirely free from impurities may be very different in color. But it is also true that a very large part of the beeswax thrown upon the market is of a very dirty nature, and that it is true that, even in the purest wax, there are "fairly loaded with dirt."

Now does Mr. Hutchinson mean to tell us that that dirt is of the same bright color as the wax when it is cleaned? Does a cake of it look just the same after cleansing as before? If the answer is in the affirmative, then there is something strange about the color of wax found in his locality. If a white handkerchief is covered with soot, we don't say it is white, but black.

Reformed Spelling. A correspondent writes that he would be a subscriber for life if it were not for the spelling which follows the rule: "Change it and of final t when so pronounced, as in baked (look), etc., unless the e affects the preceding sound, as in chafed, etc." He thinks until our lexicographers change the rule that makes the past tense and perfect participle of regular verbs end in ed there should be no change, and that it is a further injury to children who are learning to spell to read this journal.

It would be hardly worth while to refer to the matter except for some who are recent subscribers. To them some explanation is due for departing from the general custom. This departure is not a whim of the American Bee Journal, but it is the practice of all the best lexicographers of the world.

It is because our lexicographers, the ablest and best lexicographers of the world, have changed the spelling of a fact of which our correspondent does not seem to be aware. If he will turn to page xxi of the Standard Dictionary, he will find the matter treated somewhat extensively. The change is endorsed by the Philological Societies of England and America, and the Modern Language Association of America, the members of which include most of the recognized authority in linguistic science in England and America among them. Wm. K. Harris, LL.D., who for years has been the United States Commissioner of Education, and the late very able Max Muller, of England, with professors from leading colleges in both countries. There is no law compelling people to obey these rules, no more than there is to compel people to talk good English, but reforms having such strong arguments in their favor and urged by such high authorities, will surely prevail in the end, and it is the part of wisdom promptly to fall in with them.

If the father and grandfather of our correspondent had been of his mind, very poor would have been his chances for much modern literature, for they would not have allowed him to read a book that did not continue the spelling to which they had first been accustomed, such as honour, labour, Atlantic, arctic, etc.

Mr. Thomas G. Newman, for so many years editor of this journal, and also general manager of the National Bee-keepers' Union (a year ago united with the National Association), has this personal paragraph in the issue of his Philological Journal for Dec. 22, 1900:

The editor, in response to many requests for a public statement concerning his vision, would say that his sight is much improved, but his sight has not yet returned sufficiently to allow him to read or write. This condition has prevailed now for a year or more, than he has been taking daily magnetic or mental treatments the whole time, but he feels sure that full sight would soon return, if he could take a much-needed rest, the optic nerves being only partially paralyzed, thru excessive strain and overwork, which makes a need of rest, after the extra labor and care of the past year. Thomas G. Newman.

Mr. Newman's many old friends will all unite in the hope that he may soon have that necessary rest so that his eyes may recover. Also that Mr. Newman may join in the vacation.

Mr. Dady's Paris Credentials, which he mentions in his article this week, read as follows:

Mr. C. F. Dady.

Dear Sir,—I am pleased to inform you that the Board of Directors of the National Bee-keepers' Association, thru its chairman, Mr. F. A. White, has granted you this certificate of credentials, appointing you as their delegate to the International Congress of bee-keepers at Paris, or any other meeting of bee-keepers which you may be able to attend during your trip abroad. On behalf of the Association I wish you success in your trip.

Mr. Newman, we seriously wish that we could have it in your person of all these others the best fitted to represent American bee-keepers in Europe. It is a fact that only recently we have received a letter from a man in the United States saying that he had been working in the country for several years, covering many years of successful management with bees: your thorou acquaintance with the beeys of this country and Europe, your familiarity with the French language and customs, will all be a distinct advantage to you in the country and in Europe; and we shall be pleased to have you with us.

A. M. B.,


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A. M. B.
Convention Proceedings.


BY DR. A. B. MASON, SEC.

(Continued from page 82.)

FEEDING BEES RIGHT OUTDOORS.

Suppose your colonies were away from other bees, wouldn’t it be safe to feed right outdoors to them, and let them carry it in?

Mr. Fixter—No.

Mr. Fixter—I have fed by placing the feeder on top of the colony I wish to feed in the evening about sundown, and by morning they would have it all taken down. Put in the syrup lukewarm.

Mr. Wood—I have had experience in feeding; after the bees are all thru breeding the best time to feed; then feed all at once. If it is cool weather warm the food. Con- fine the bees to the combs they can cover, don’t let them scatter, put the feed on top, and keep them warm.

FEEDING SUGAR SYRUP TO BEES.

Mr. Moore—Is there any particular danger in feeding granulated sugar from its solidifying in the combs? How can that be prevented?

Mr. Root—We never have any trouble, and our scheme is always to feed syrup thin, about half sugar and half water. If you make it a third water and two-thirds sugar you are liable to have some sugar solidify; you can avoid it a good deal by putting in water or some sort of acid. I think it is better to make it thin.

Dr. Mason—By adding honey you never have that granulated.

Pres. Root—You want to make it thin; make it about half and half; if you make it thin enough it won’t granu- late.

A Member—How early do you feed it?

Pres. Root—In September and October, in our locality, when the days are warm.

Dr. Mason—if you use much water the bees will have a great deal of work to do.

Mr. Fixter—Take 15 pounds of syrup, by the time that is in the cells when you have two parts sugar and one water, you have over 10 pounds of food left.

Pres. Root—You have to figure according to that when you feed that thin syrup.

Mr. Fixter—I have tried that, and weighed the hives before the bees were fed, and weighed them afterwards.

Mr. Green—Don’t you have trouble in feeding this thin food rather slow?

Mr. Fixter—I ask Mr. Root in feeding this thin syrup and feeding it rather slow (as I supposed he would have to), if he did not have trouble with getting the bees started to brood-rearing.

Mr. Root—Sometimes we feed 10 or 15 pounds at a time. The main idea in feeding thin syrup is to have the bees convert that syrup into honey.

Mr. Green—Sometimes it becomes necessary to feed bees in rather cold weather, and at such a time we must either mix it with honey, as has been suggested, or boil with tariaic acid and feed it then at a proper consistency, nearly the consistency of honey, and feed it rapidly.

Dr. Mason—If I understand you correctly, I think I have learned something, Mr. President. You say, “The main idea in feeding thin syrup is to have the bees convert that syrup into honey.” By adding white of water do the bees make the sugar syrup into honey? Is that so?

Pres. Root—I want to qualify that a little.

Dr. Mason—I guess you would better.

Pres. Root—Feeding it thin, one-half sugar and one-half water, the bees have an opportunity to invert it. Prof. Cook calls it “digest.” If you feed it too thick they won’t digest it and convert it into honey.

Mr. Abbott—I want to offer my protest so that the stenographer will be sure to get it, and the bee-keepers as-

sembled will be sure to understand it; that you can’t feed sugar-syrup of any kind, to any kind of bees, and have it converted into honey [Applause], Prof. Cook to the contrary notwithstanding.

Pres. Root—What I mean by that is, it is not the same you get from flowers. What I mean by honey—real honey— is nectar from flowers stored by the bees in the comb and converted into honey; but nectar in cane-syrup is a good deal like we feed. What I am afraid of is that, when written of now is chemical honey, and not commercial honey.

Mr. Abbott—Either chemical or commercial honey. If you feed them cane-syrup you reap cane-sugar when you eat it.

Pres. Root—It will be inverted, too. Mr. Abbott—No, it won’t be inverted; it will simply be cane-sugar.

Pres. Root—Where is President Abbott?

Mr. Taylor—There seems to be quite an issue between Mr. Cowan in his paper and Mr. Abbott.

Pres. Root—Mr. Abbott speaks of chemical honey or commercial honey. I don’t care whether they have nectar from flowers or sugar-cane; if you give them time enough they will make it to honey.

Mr. Moore—I will have to enter an emphatic protest against the use of this term “chemical honey.” You might as well say “glucose honey”; it is the same thing in the eyes of the public. I have handled a family trade for 15 years and I am one who would hold that lots of people have said to me, “Do you feed your bees sugar to make honey?” I say even a bee doesn’t make honey; she gathers honey from the flowers. You can’t give it to people in this dialectic way; if you do you won’t understand it. I tell them bee-keepers don’t practice that sort of thing. First, it doesn’t pay us. I state here, you can take lots of bees and produce honey cheaper than you can get it from sugar-syrup and other things. I tell them this.

Pres. Root—I can’t get your sugar-syrup into the combs; if you got it into the combs it wouldn’t be honey—it would be sugar-syrup in the combs; it wouldn’t pay. I am protesting against using terms that are misleading to the people who would understand them. They are asking me these ques- tions every day, and I must enforce personality on that party before I can get his confidence. For the benefit of our pursuit, and for bee-keepers generally, I think we must avoid the error of speaking in misleading terms, and thus leading to misconceptions of our pursuit. [Applause.]

Mr. White—When we talk about sugar-syrup let us talk about it as only feeding to winter our bees; that we never sell any of it; it is simply to live on; it is just as good. I believe, when it is “tinted” as you call it—I don’t want to know the term, anyhow—but it is just as good to winter our bees. I believe we can winter the bees on it all right, but let it go out that it is for feed and not for family use.

Pres. Root—If you feed the syrup too thick it will candy and go back to sugar. If you make it thin enough the bees will invert it.

Dr. Mason—Don’t use the word “honey” in that con- nection.

A Member—I always heat the syrup hot. I think that is one reason why it does not candy in the comb.

Mr. York—I want to emphasize what has been said about feeding sugar, and saying what it is used for when you feed it to bees. I am very careful what is said on this subject in the American Bee Journal. I help my corres- pondents to say what is used, as you call it—I don’t want to know the term, anyhow—but it is just as good to winter our bees. I believe we can winter the bees on it all right, but let it go out that it is for feed and not for family use.

Dr. Mason—This is really a serious matter; if it should go out to the public that our honored president has been advocating anything of that kind, it would be a great dam- age to our fraternity. We say we ought to keep this side—not to say it at all in the first place. I am in dead earnest about this. Mr. Moore knows what it means. If our president goes out on the market and peddles it from house to house he will find out he would better not say sugar-syrup any more.

Pres. Root—I concede the point Dr. Mason makes, and the point of Mr. Moore and Mr. Abbott, and all these others. I am willing to be corrected on that. I will, if you please, use the word “inverted.”

Mr. York—We should always say that we feed the bees for winter stores, or to keep them from starving. If the general public only did know, it wouldn’t do any harm. But it is hard to get them to comprehend the matter correctly.

Mrs. Dunne—I think in speaking of storing sugar for winter use, we should confine ourselves to the bare fact,
and say it is given to stimulate the bees for brood-rearing, to store for winter food, and give none of them to understand it is to be converted into honey for any purpose.

Mr. Abbott—I was writing a resolution, and don’t know as I just understood what was said, but I infer that you meant to use the bees to eat it or given it, it would go back into sugar; that syrup couldn’t be made to do it.—wouldn’t go back into sugar without the bees did something to it. I feed my bees sugar-syrup to winter them; they eat sugar-syrup, and live on sugar-syrup in spring. I carry them in sugar-syrup, when I feed, and when a bee eats it it is never anything else but sugar-syrup, and I don’t see any reason for calling it anything else.

Pres. Root—It is not chemically the same as it was before.

Mr. Abbott—It is absolutely the same as it was before, chemically; I can demonstrate clearly that it is so.

Pres. Root—I am only stating it as have Cowan, and Cheshire, and Dr. Headon of the Colorado Experiment Station, and other scientists—they called it “inverted.”

A. F. Morley—I have been reading that when bees are fed sugar-syrup they will fly out into the air and manufacture it over to some extent before they store it.

Mr. Fixter—if you allow the bees to store 25 or 30 pounds of syrup in the brood-chamber, aren’t they going to carry that over into the colony? That is how the sugar is converted. How are you going to separate the sugar-syrup from the honey?

Pres. Root—Not very liable to after that length of time.

SUPERSDING QUEENS.

Why should a colony refuse to kill the old queen when she has stopped laying, and a young queen has emerged, the colony finally swarming with the old queen that was clipt, there being no eggs or uncapt brood, and but little capped brood, the cell empty?

Mr. Aikin—For my part, I think there is a mistake somewhere; such things do not occur except as a freak, in all my experience.

Mr. Green—They occur pretty frequently.

Dr. Mason—You must be in a freak country; localities differ.

Will a colony superseding a queen swarm with the old queen after the young one is hatcht and in the hive?

Mr. Aikin—It is possible that the presence of two queens in the hive, the old and the young, might cause a disturbance; but where the colony would come out I should most certainly expect them to come with the young queen rather than with the old one.

REARING QUEENS.

How often would you put queen-cells in the same hive?

Mr. Aikin—I suppose this is intended for queen-breeder.

Mr. Hutchison—I put in queen-cells as often as I take out a queen.

Mr. Holdren—That isn’t the idea; I want to know, when you are making brood, how often would you put cells in the same hive to rear queens for sale?

Mr. Aikin—Isn’t your thought this: How many cells would you cause one colony to rear?

Mr. Holdren—Yes, sir; without giving them a rest.

Mr. Hutchison—Perhaps two or three—somewhere in that neighborhood. They will rear one batch of cells in ten days.

NUMBER OF COMB-SPACES WITH BEES FOR WINTER.

Taking the Langstroth frame for a standard, how many spaces between combs should be occupied by the bees for good wintering?

Mr. Aikin—I don’t know the number of spaces; that will depend upon the temperature, largely, and it varies so much the first of October that probably six or eight spaces would be right.

Mr. Burton—Five in sharp weather.

Mr. Abbott—I believe that would be pretty close.

Dr. Mason—Six makes a good, solid colony.

FORMING LATE NUCLEI.

How late can a nucleus be formed in northern Illinois, using a virgin queen, and build up strong enough to last until spring?

Mr. Aikin—That is out of my territory. I should say it depended largely upon the weather and the honey-flow—particularly those two things—and the man who is handling them.

Continued next week.)
right along with one-story ones, and the two-story hives have rousing big colonies when the June flow comes, plenty of honey and far more bees than the one-story ones. The big two-story colonies will be storing surplus when the other ones are barely started. This summer my large hive gave comfort to the Dadants, and I am sure that for outdoor wintering they are right, that the big hive is the better. I believe the net results to be better from such.

In producing comb honey it is true that a very large brood-comb chamber colony may get ready to downswarming before they do section-work, but this does not apply so much to extracted-honey stock where a set or two of combs above, ready to store in, attracts the bees to them.

Conditions that “locality” sometimes make a great difference. I call the reader to note carefully what I am just now to put before you, for these matters must be understood or you will say the doctors do not agree.

I have been for several years in a field in which the few weeks just preceding the June flow, were weeks of an absolute dearth of nectar. Now, reader, suppose you were here with your bees under such conditions. Suppose they were in 8-frame hives, and the last half of May and first half of June there was practically nothing for them in the fields, and the stores at home very low. Do you think you would have any swarming? Or even a proper amount of breeding? You would not need to bother your head about how to keep down swarming—I will guarantee no swarming-fever and no swarming.

Now, suppose your bees, instead of being in 8-frame hives, single story, were in two-story or 16-frame ones, stores to be in proportion, with a larger brood and other conditions favorable, you would have some swarming before the flow, and much more after it began. You could, by a careful and judicious management, handle your one-story hives so as to have good colonies, but it would have to be done in flow-watch and never at any time very anxious to get out of stores, and while they would have very little ahead make them handle what little they do have. One principal factor in inducing free laying by the queen, is to have hives full at the time.

Thus it is possible to have bees carried thru the spring in a dearth of nectar, bringing them up to a honey-flow in good condition and no swarming-fever. Such colonies will go into the sections and work for some time without swarming, many going thru a flow and not swarm if care is used to give and keep plenty of room in supers. But, should there be a little nectar from the fields for two or three weeks just before the flow, and at no time a scarcity of old stores, some would no doubt be ready to swarm at or about the beginning of the June flow.

Your two-story hives having a great abundance of two things (yes, three)—stores, empty comb and house-room—will breed just as rapidly under the complete-let-alone plan as will the other with the coaxing and encouragement. They will be ready for the next season for several reasons: 1st, because they go into winter with a host of bees, and can endure the cold, and so have more bees in in spring to start and care for brood; and 2d, because there is a plenty of feed at all times, both winter and spring. As before stated, I find my two-story hives build up faster in the spring, and make great rousing colonies by the time the others are in fair condition. I cannot account for it in any other way than the great amount of brood and bees in the fall being cared for by the bee-keeper and more rapid spring breeding from some cause; and a courage and ambition because of the much empty comb to occupy, and back by a rich store of honey.

Of course there is another probable reason—perhaps I should leave out the “probable.” When a colony is wintered in two chambers, that have been under conditions that find the brood and cluster low down or in the beeskin, they are bound to apply, have no place to go in winter and start breeding in the top hive in the spring. This leaves honey below the cluster in lower outer combs, and this they will from day to day carry up and store above and the bees act as a constant flow, which causes the workers to handle honey, have full succs, open stores and a well-fed queen and brood. It all conduces to the welfare and prosperity of the colony. It is a condition that is very like a flow of nectar, and is obtained with the same general care and the same la plus apiap.

Now I think I hear E. K. Root hurrahing for two-story 8-frame hives, and I think he is not far amiss as to the result to be obtained when they are rightly managed. If you winter bees outdoors, use a larger hive for the cellar.

If you produce extracted, use larger hives than for comb honey. If you use 8-frame hives, use two of them for a brood-chamber in very many cases; but you can contract if you choose, when the flow comes on.

Larimer Co., Colo.

**Flat-Bottomed Foundation—Securing Drones in the Fall.**

BY G. M. DOOLITTLE.

A correspondent writes thus: *"I have always used foundation having a natural septum or base, but I am thinking of using the flat-bottomed foundation next season. Will you please tell thru the columns of the American Bee Journal whether the flat-bottomed foundation before drawing it out? Or, after drawing it out, will they fill out the corners with wax, or let it remain with a flat base?"

Thus I have never leave the base of the cells as they come from the foundation-mill making foundation with flat-bottomed cells. This is one reason why there is never a base of yellow wax apparent with flat-bottomed foundation, where such is used in producing comb honey. With foundation having no natural base, the bees often, in times of an excessive honey-flow, add their own wax right on to the raised part of the foundation, so that this added part can be scraped off with the honey, the foundation washed, and the same perfectly clear and ready necessary in taking it bees. This gave rise to the “fish-bone center” in comb honey, complained of when comb foundation was first used in sections, and the flat-bottomed process of making foundation is invaluable to overcome this “fish-bone.” I am correctly informed.

When bees are given the flat-bottomed foundation, the first thing they do is to go to work to change the base, and in doing this the side-walls are manipulated also, but just how this work is accomplished I have never been able to tell, after all the close watching I have been enabled to do, for when the work is being done, the bee has his head in the cell, hence the vision of the would-be investigator is cut off, so long as the bee is at work.

While I prefer the flat-bottomed foundation to all other makes for section honey, it has two drawbacks, as I look at it, which are that this manipulation of the base of the cells takes time, so that sections filled with such foundation are not completed quite as quickly as is the case where the natural-shaped base is used; and where the sections are placed on the hive before the honey-flow is fully on, the bees will mischievously work at it far more than they will that with the natural base. As a result, when the honey-flow is what the honey-flow we expected does not come, so that it is necessary to look after the sections to see that they are all right when the bees are about to enter them to fill with honey, after a period of scarcity, or before putting them on for the next season.

I have had scores and hundreds of sections which were filled with this foundation, and which had been on the hives during a period of scarcity of honey, the foundation of which was eaten or gnawed away so that only a neck of foundation of from a quarter to a half an inch wide, remained next to the tops of the sections, while the lower half of the foundation was very nearly as it was when first put in. When honey commenced to come in the bees got to work on the foundation, it would twist about so that it would touch the separators, and be fastened there. And at the end of the season, when I expected to take off nice comb honey, the whole thing would be spoiled by the dust, and mud, and dirt left from the separators. This is the worst trouble I have with the flat-bottomed, and were it not for this, I would not think of using any other make in the sections. Of course, in good years this does not occur in years like the past has been, when fully ten percent of the sections have the foundation badly gnawed in them, it is quite an item.

For brood-frames, I can not see where the flat-bottomed has any advantage over that having the natural base, while it has, I think, disadvantages, and it is very important to use the foundation for the brood-frames.

**GETTING GRIMES FOR FALL QUEEN-REARING.**

Another correspondent writes thus: *"I wish to rear a few queens nearly every fall, but when I wish to do so, I find that the most or all of the drones have been killed off. Can I coax the queen to lay in drone-cub, if the same is..."*
placed in the middle of the brood-nest of a strong colony during the fall months.

Drones are the male eggs, which have puzzled many a queen-breeders, and while some say they can secure drone-eggs whenever they desire, the trying to rear drones after August 25th, by myself, in this locality, in an average season, produces me to think it would be quite an entire failure.

The only sure way that I know of, after trying nearly every experiment given, to have drones during September and October, is to mass what drone-brood (the drones from which are to our liking), can be found at the end of our summer honey-flow, placing the same in a large hive which will accommodate all that we may have, making the colony contained in this hive queenless, so they will keep these drones as long as you wish them, which they will do, provided no queen is allowed to hatch in the hive.

Drones do not live as large as you wish, you can make one of any proportions you may desire, by tiering one or more on top of each other. Worker brood must be given every ten days or two weeks, in order to keep up the strength of the colony, else they may be liable to be robbed when an entire scarcity comes in the fall. This hive must also contain a large amount of honey, as a hive having many drones in it grows light as to honey quite rapidly, and if, not properly fed, drones do not fly as freely as they should. As our beekeepers keep in bloom until August, the drones which are in the egg form, when the combs are mast, will not wear out because of old age before it will be too late to rear queens, say from the first to the tenth of October. We have had nectar in our hives live over, so as to fly quite plentifully on warm days in March and April, tho they are soon gone after the bees begin to have general flights.

After all other drones are killed off, if we wish to secure the very best results, this hive of drones can be exposed on some day when it is cloudy, and the mercury stands at from 55 to 60 degrees (at which temperature the drones are not likely to stampede off the combs), and all of the undersized and weakly drones can be removed, a full suit of combs can be almost sure that our queens will mate with the desired drones. This hand-picking of drones is quite a tedious job, but pays well where we have the object of the improvement of stock in view.

I have practiced the above plan for the past ten or twelve years, so I am not entirely ignorant in the matter, and am quite sure I have made much advancement as regards the quality of my bees by so doing.

Onondaga Co., N. Y.

No. 10.—Interesting Notes on European Travel.

BY C. P. DADANT.

T HE International congress of bee-keepers took place at Sept. 10, 11, and 12, 1900, on the Exposition grounds. Each of the delegates was provided, by the secretary, with a pass, for the duration of this congress, so they could go back and forth without having to pay any entrance to the grounds. The passes were called "service cards" as they were called, for I had been appointed delegate from Illinois to the Exposition, and about all the advantage I derived from it was the grant of two service cards, one for myself and one for my daughter, by the management of the American exhibition. The fee for entrance to the grounds was very low. It had originally been put at one franc (20 cents), but the issue of shares of stock had been suspended, and each person purchased his tickets, so that each purchaser of stock had the value of his stock in the Congress. In this manner, 65 million tickets had been issued, and as there were only 50 odd million of these used, the holders sold, in an eruption of their inferiority, have to fall. But it fell below reasonable prices. When we arrived in Chicago, the tickets were selling on the street at 7 cents, and when we came back to Paris, in August, they were at 6 cents (30 centimes).

Altogether, this International congress of bee-keepers was very interesting. I think more beneficial results have been achieved in many of our national meetings; but the most interesting feature to me was the opportunity of being among the leaders of science and practical bee-keeping that I have had. If I am not mistaken, there were 15 different nations, 24 foreign associations, and 35 French associations, represented. There were bee-keepers present from South America, Spain, Italy, Russia, Spain, Austria, Germany, of course, and 100,000 in England, and other countries. All but two or three of these men understood the French language, and all the discussions were in French, but the handling of different topics was placed in the hands of committees with foreign personnel, so that there was a juggling about by French languages, and it was quite interesting to notice the different accents of these men who occupied the chair in turn, and who, altho very familiar with French, still showed in their speech and elocution that it was a tongue foreign to them.

Having long known the energetic and amiable secretary of the congress, Mr. Caliaus, by reputation, I had paid him a visit a few days previously, at his home, to get permission to speak at the closing session of the congress, my credentials, written with a great eulogy, by Pres. Root of our National Association. He received me with the greatest cordiality, and when I offered to pay the membership fee, he accepted it, and all the foreign delegates were admitted as honorary members, free.

So much for French hospitality.

When I arrived at the congress hall, I was stopt at the door, the regulations, and I was told that I do not have a foreign passport, and was not permitted to enter. I rather felt then to criticise the French love for rules and regulations, which is so conspicuous, not only in France, but throughout Europe. But they took the pains to explain to me that I must register, which seemed to me rather vexations, was the only method that could be used of compelling members to help sustain the institution by paying their membership fee. Otherwise, they said, a number of those who could not possibly pay the membership fee, nor even would, and even discuss and vote, and would go home without having subscribed as much as a single cent towards defraying the expenses incurred. I could not help thinking that this was a good lesson for our leading bee keepers in the United States to deplore the fact that there were bee-keepers at each congress who took advantage of the meetings without helping their success in a pecuniary way. By compelling foreigners without expense to them, we must expect our local men to help us, and a bee-keeper who thinks enough of a congress of this kind to travel a number of miles purposely to attend it, ought to be willing to help defray some costs.

The number of delegates present must have been 150 or more, I have not yet received the report of the secretary, so have none of the proceedings to refer to, and can only speak of what I recall to memory. I was appointed by the number of doctors, teachers, and clergymen, whom I met. It seems to me that they must have composed fully a third of the attendance. The peculiar clothing of the Frenchmen make them much more conspicuous than our Protestant ministers. But a pleasant sort of men I never met.

Among the subjects toucht in the discussions, I will mention the "Role of the drones in the hive," and the "Olive opinion of the destructive work of drones," and the destruction of drone-comb and replacing of these by worker-combs, in inferior combs. Was desirable, for a motion to recommend this was past, but there was considerable opposition. One member came with a report showing that he had experimented on two hives, the one with many drones, the other with few. I will quote a part of his report:

In a hive I obtained many drones by placing in it, in the spring, some drone-combs already built and some unframed frames with guide, in which, as you all know, the bees would build more drones than worker combs. In another hive I placed comb built with worker-cells, so as to have but few drones. The definitive gain of the hive with drone-combs in which I worked was about a pound, on the other hand, I weighed five hives with many drones, and five hives with few drones. The five hives with many drones increased 116 kilograms. The five hives with few drones increased 125 kilograms.

This shows a difference of seven kilograms, or 16 pounds, in favor of the hives with few or no drones. But this gentleman does not think that this difference is sufficient to condemn the drones, and thinks they are advantageous in keeping the brood warm. He did not stop to note that before these drones took the bee-comb, they had to be kept warm themselves while in brood, and that, too, at a time when the bees are not numerous and the weather is cooler than during the honey crop; and that if there had been workers reared instead of drones, they would have been likely to get the same cold to the bees at that time, as it is well known that they will not harm if the weather became cold enough to necessitate this.

But one thing I heard asserted by a number, and which I entirely disbelieve, is that the bees change worker-comb to drone-comb, when all the worker-combs are full. This is not the case. I do not mean to contradict any one, but I believe that the asserted change from worker to drone com was not the
work of the bees, but a sagging of the cells in combs of foundation caused by heat. I have seen this in a few instances. But in order to convince me that the bees actually tore down worker-comb to rebuild drone-comb in its place, it would be necessary that the test be made with old worker-comb, in which there could be no prospect of sagging.

But I am running away from my task as narrator and falling into arguments.

Another subject, which is of great interest to the world over, is that of foul-brood, and it appeared to me that, in Europe as well as in America, many so-called cases of foul-brood are only accidental cases of chilled brood. I say this because I was told by a French bee-keeper that he had had foul brood among his bees, but it had disappeared without his having to do anything for it. And two or three bee-keepers got up in the meeting and asserted that foul-brood was not so dangerous a disease as had been reported to be, and one man ridiculed all the writers who advise such strong measures against it, but the interruptions and laughing of the majority showed him that he had no hope of convincing them. Several leading men, on the other hand, advised fire and boiling water as the only sure remedies for the true foul-brood, which is evidently a scourge the world over.

Another subject, which has perhaps more importance for the European than it has for us, was the creating of apiarian classes in schools and colleges. I say that is has more importance over there, because so great a proportion of the population does not seek information, as our farmers do here, thru the daily papers and agricultural press. But it has importance for us, nevertheless, for it would be useful to have, not only our bee-keepers, but all classes, informed, superficially at least, upon the natural history of the honey-bee, its role in nature, and the need of its cultivation.

I had an occasion of ascertaining the total ignorance of some of our average American citizens on this subject, during our return trip to America, on shipboard. To pass away idle hours, the passengers got up an evening entertainment at which each one was required to say, or sing, something for the entertainment of the others, under penalty of the payment of $1.00 into the sailors' orphans' fund, and they had me down on the program for a talk on bees. I did the best I could, and the few words that I spoke led to more questions than I could have answered in a week, and some of these questions were decidedly foolish.

Mr. Editor, I hope you will excuse me, but it seems I cannot avoid tumbling out of my subject. I was quietly taking notes among bee-keepers, at Paris, and here I am, on the ocean, sailing home before time.

This questions of teaching bee-culture is fast being solved everywhere. When I visited the old city of my birth — and I may tell you something about this by and by — I entered the doors of the old college in company with the treasurer of the college, who was also entrusted with a school of apiculture in this institution, and on his desk I found a French copy of "The Hive and Honey." It seems that everywhere they are trying to push the education of the peasants on all agricultural subjects. This is sure to bring results sooner or later.

A Summer of Bee-Keeping in Nevada—Alfalfa.

By J. T. Hammersmark.

It was on a dark, dismal evening in June that I stept off a train in the cozy little city of Reno, situated in the mountains a few miles east of the border-line of California. Altho we are in mountains, so to speak, still we are in a valley 10 by 15 miles, entirely surrounded by mountains. This and some of the neighboring valleys are very fertile, where water is to be had, but where it is lacking sage-brush and jack rabbits hold the fort. Some few scattering scrub pine trees are to be seen on the mountains. This is all that is left of what used to be a great forest some years ago. The valley is well populated with thrifty and well-to-do ranchers, cattle and sheep men, and bee-keepers. It is about the latter class and their industry that I will give a short sketch.

The bee-keeper's calendar here is just the same as in the Eastern States. We begin our work about the 1st of April and finish up about Oct. 1st, or as soon thereafter as possible. We are not troubled here with the wintering problem, as bees winter well on the summer stands. A great deal of alfalfa is grown here. Two crops of hay are cut each season from this source and the third crop is sold for fall pasture to men who turn their herds on these fields, which are in a few days grazed to the ground. Our source of honey is alfalfa. It is a very prolific yielder when the conditions are just right. It is something like white clover and basswood in regard to the amount of nectar it secretes; some years it yields more nectar than others, but it is not so subject to short and uncertain crops as the above-mentioned, and many other nectar-yielding plants of the East. One is always sure of a crop altho it may not be more than 40 to 50 pounds per colony some seasons. The average yield for 20 years, I feel safe to say, would not be less than 100 pounds per colony of comb honey. This is judging from past records.

The past season Mr. Hash's crop was 30,000 pounds of comb and extracted honey, being the smallest yield per colony he has had in 20 years, and this was an average of 50 pounds per colony. Some people have asked me since my return to Chicago, if their alfalfa honey is of good flavor. To this I say, yes. The alfalfa honey of this region is preferred to that of California by buyers. In my estimation it comes next to pure white clover honey, if I have any preference at all.

But we have our troubles here, even if we get lots of the best honey produced. Think of a ride on the cars from Chicago, for instance, from three to four days, first thru our fertile neighboring States, then over the vast desert of waste land and mountains of the far West. However, this would not be so bad if the railroad company did not charge you a small fortune to get there. Then, our freight charges are something awful. Suppose I order a carload of bee-fixtures from the East to be laid down in Reno, Nev. My goods go no further than Reno, but the company wants me with freight to San Francisco, and back freight again to Reno. Of course, they are the big fish and I am of the little fish and during the present state of political corruption, as long as the men who make our
laws can be bought and bribed to do as the big fish dictate, regardless of the rights of the people, the little fish must either submit to their robbery and be swallowed alive, or keep out of their way. There are hopes, however, that such things will some day be modified, for the people will not always be silent. Pardon me for switching off on politics, for I intended to write about bees, but you see it naturally came into the subject of our drawbacks in the West, and as this is my view of the matter, if I should not speak of it for fear of offending some one I would not be doing right.

Then, to be isolated in a new country, away from all one's friends, is another thing you have to contend with if you care for society, but if you could make friends in the East you can do so in the West. The climate of this high altitude is simply fine. Reno is 4479 feet above sea-level. Snow can be seen on the tops of the highest mountains nearly all the year round. Bee-keepers at Reno are now suffering from the fact that the place is overstocked with bees, for there are many fine locations in the West, especially if a man has two or three thousand dollars to buy out a well-started place—a man with $400 or $500 could get a good start, but of course he would have to depend on other in-

come aside from his bees for a few years until his stock in-
crease to from 500 to 500 colonies, at which time he could de-
pend on making a good living, and most likely accumulate a
nice little bank account from the product of his bees be-
sides.

There is another thing I have not mentioned: Alfalfa, I am sorry to say, is cut in its best bloom for honey. I no-
ticed that the bees did not, the past season at least, work
more than 7 or 8 days on each crop before it was cut. It is
of the sweet clover order. It commences to bloom about July
1st, and will bloom another 10 weeks or more if not cut.
What a lot of sweet could be produced from 1,000 acres of Alfalfa raised for seed!

Taking it carefully into consideration, it is a question whether one can live on alfalfa with the bees.

I have given a fair view of both sides of the question, so no one will be misled, I hope, thru the reading of this ar-
icle. Cook Co., Ill.

P. S.—Referring to the picture of the apiary, I may say
that one afternoon a traveling photographer came by our
place, and those seen in the photograph came out and lookt
towards the camera while the man pressed the button. Mr. Has-
hemia was away: I am sorry he was not at home for with his presence the picture would have been complete.
The sun was just going down over the Sunset mountains, which we stood facing; that's why we are all squinting so
admirably.

The young lady with the white waist is Mr. Hash's
niece, who helps him at times during the honey season. The
lady at the left in the picture is Mrs. Guthrie, who

came out to cook for us for a few weeks. Her daughter and
son are the one who will be there right away, and Mr. Guthrie is himself—myself. Miss Guthrie has helpt Mr. Hash in the
bee-business for the past three seasons. She is a splendid
"hand" and can scrape sections like a machine—so fast and

clean.

J. T. H.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller
direct, who will answer them and then ask the
Doctor to send answers by mail.—EDITOR.)

Moving Bees on the Cars.

I have been thinking of moving to Colorado. Could I

take bees that distance—900 miles? If so, how should I pack them to move on the train? Can I make the change, say the latter part of February?

NEBRASKA.

ANSWER.—In moving bees on the cars the two things to

fear are the breaking of the combs and the smothering of

the bees. There ought to be little danger as to the last in

the month of February. See that each colony is well cov-

erted at the entrance or elsewhere a space covered with

wire-cloth equivalent to 10 or 12 inches. If the frames are

fixed-distance frames they are all right, but if they are loose-

hanging frames, fasten them in place either by driving a

nail partially into the end of each top-bar, or by putting in

little sticks between the frames. Fasten the hives in the

cars so they can not move about, and let the frames run

parallel with the rails of the railroad. The excitement of

the journey will be a little hard for the bees in February, and

will make them eat more than they otherwise would, so

they will need a flight sooner than if they had been left in

quiet.

Transferring and Dividing Bees.

Suppose we have a colony of hybrid bees in a hive not

standard, but full of comb and brood. We can transfer

those old combs, but will have to tie or wire them in our new frames. Now, we have eight new hives in the

foundation; and we have coming in the spring—say the

first of May—one strong colony of pure Italian bees without a

hive, one queen in April, and two more in May and June.

We want to increase all we can, and have way more stock

colonies in the fall. If we had our colony in an improved hive next

spring, full of bees, comb, and brood, we would know how to

proceed, but if we transfer them we can't expect much

increase.

Don't you think it would do to transfer the bees (as they are hybrids) into a new hive, then put the queen that is

coming in April into the old hive, then put the colony that we are going to send for, in a hive with full sheets of foun-

dation? Then how are we to get drones to breed from next

summer? I do not know whether our old queen is a hybrid,

or a daughter of a hybrid.

You might infer from the tone of our letter that we are

running this bee-business alone, but we are not wishing to

mislead you in the least. We have a good papa who helps

us, or rather we help him, but the bees belong to us.

TWO WASHINGTON GIRLS.

ANSWER.—You are mistaken in thinking that transfer-

fing will make any great difference in the matter of in-

crease. In the present case it is merely transferring from

one set of frames to another, and you can have the brood

just as compact after transferring as before, in which case

the bees will go right on as if there had been no trans-

ferring. If I understand you rightly, your plan contem-

plates dividing your old colony in April and forming a new

colony to which you will give the queen received. It is very
doubtful that your colony will be strong enough to divide

in April to bear any depliction. The first thing is to have

it build up good and strong, and if you take anything from

it before that time you will lose by it. You can transfer in

fruit-bloom without any loss, but unless the colony is very

strong don't divide at that time.
As the colony of Italians you are to get will be without hives, it will be necessary for you to have a good plan to have the transferring done before you receive the Italian bees, and then you can give the Italians the larger share of the brood in the old colony. That will make at first a mixt lot of workers in the colony with the Italian queen, but that will be no harm. A week after any queen reared from brood taken from the Italian queen will be of the right stock. Having now the two colonies to draw from, you can form new colonies by taking a frame of brood and bees from each when you want to start a new colony.

By keeping the Italian colony strong, you will be sure to have drones therefrom. When you give brood from the old colony to the Italian, see that you take combs that have some drone-comb in them, but if any drone-comb is in them at the time destroy the slats by shaking off the heads of the sealed brood and sprinkling fine salt on the unsealed.

Transferring Bees.

1. Which would be the best month or time to transfer bees from common, rough redwood boxes to regular hives?
2. Is it not a rare thing for a few bees (I could not see more than 10 bees), at about 4 p.m., and about half a mile from the seashore, to commence building a comb on the edge of the same redwood box (a bed four years old, the brand being only about two or three feet from the ground)? I could see no other bees but the few workers I mentioned. I was looking at them about ten minutes.
3. I would like to know if it is possible to hive the above bees, and also, how and when to do it. Also, suppose they were hived, would you put the hive on the ground in the same place or not?

Answers.—1. Probably 21 days after casting a swarm. If you prefer it earlier, take the time when the combs are as light as possible and bees working at the same time. In the North this comes at the time of apple bloom.
2. Decidedly a rare thing for so small a number as 10 bees to be engaged in comb-building anywhere. Are you sure they were not carrying away wax that had been left there by a swarm that had been clustering there? Sometimes it happens that a swarm starts to build comb on a limb, then leaves, and a few stray bees get left.

3. It is doubtful if you could hive 10 bees and get them to stay, and they wouldn’t be of any value should you succeed.

CAGING AND MAILING QUEEN-BEES.

Forty bees in a very big cage, with both cold-wetheroom and hot-wetheroom—the way Doolittle sends queens to the Boers. If he would only contrive some way to send them, there is another brother (as green and innocent) who would crown him “king of men.” Sixty-five degrees of temperature for your caged queens, whenever you can boss the thermometer. Most of us would have jumped conclusions for a much higher temperature, and Mr. Doolittle deserves many thanks for a valuation of his bees. Also, who has no experience in caging queens during harvest are glad to be assured that the bees can be depended upon to feed them. Page 742.

NECTAR AND CANE-SUGAR.

It seems to me that Editor Cowan, on page 758, makes a little slip where he says that the sweet of nectar is “almost entirely” cane-sugar. Unless my memory is greatly astray, we had, not many years ago, the exact determination of the different kinds of sugars in several samples of nectar produced by scientific hands and gathered artificially. One or more of the samples showed more than half cane-sugar, but most of them less than half—composition varying greatly according to the species of plant the nectar came from.

ACID TO PREVENT GRANULATION.

I should have used over so much excess of acid if I had been asked to make bee-feed with vinegar to prevent granulation. I make a note. Tablespoonful will do for 10 pounds of sugar, if the vinegar is sharp. Page 751.

INTERNECINE WAR ABOUT PURE FOOD.

Mr. Abbott’s speech is quite a refreshing change from the formal tone of the ordinary convention paper. And so there’s internece war between friend and friend among the friends of pure-food legislation. Sad. And all because the butter-folks are set in the resolution to subject imitation butter to additional disabilities, beyond being said under its own name—disabilities more or less inquisitorial. Stated in that way, it sounds as if the Brosius folks are altogether right and the others altogether wrong. But no justice will be done by staling the other side. I suppose the other chaps will say that people are fooled with bogus butter more frequently than in almost any other way—and more to their disgust; that the person who eats butter is of a disposition not permitting the present methods inform the buyer what he buys, but not the eater what he eats; and that therefore it is right to protect the eater by forbidding the imitation to be colored like the genuine. That sounds quite fair, too, but when you add that under infant industry honesty infantile altho the industry is not seeing that no one will eat as a relish a new stuff that looks queer, but the boy that must have absolutely all the candy he calls for, else the prop will all the candy designed for that class will be wasted, I feel the most kindly friend of naughty boys would find it hard to say anything mitigatory for him. Page 753—5.

The “Old Reliable” seen thru New and Unreliable Glasses.

By E. E. HASTY, Richards, Ohio.

FRENCH ANTI-PROGRESS—BEES AND PLANTS.

I think most of us were interested in reading how, for the French-speaking portion of the world, the anti-progressive monster intrenched in the columns of the only French bee journal was bought and conquered by Messrs. Dadant and Bertrand. We are glad Mr. Bertrand has the beautiful home we read of, looking out upon its beautiful scene. Rather in the nature of news that Mr. Blanc is of three different colors at three different times of the day.

Yes, now editor Bertrand calls our attention to it, it is getting apparent that plants (for their own look-out-for number one profit) have three ways of securing the attendance of bees—nectar, pollen, and more or less mysterious dainties, very small in bulk, and of which the bee never gets a load to carry home. (This doesn’t prove that the bee never carries home any of these minute secretions.) Mr. Bertrand’s experiment of making a bee at work on his “bar-room plant,” and watching it for five hours consecutively, and noting that the little dupe had nothing to show for its work at the end of the time—that experiment deserves a great deal more attention than it has received hitherto. All of us who pay any scientific attention to forage plants need to be on the lookout. I feel pretty sure that poppies, altho they may furnish some of both pollen and nectar, furnish something else also, and that it is this "something else" that gets the bees so excited. And I wonder a little if the American garden club is not another of the same thing. I had never heard before that the Chapman honey-plant was of this character. It seems Mr. Bertrand had discovered that before its home in this country. I fear we will find that "all plants that attract bees are of this kind, and that all plants furnishing large amounts of nectar have occasional times of barrenness when bees ignore them. Don’t let any one tell the man who wastes his time hovering around our horrible Eryngium that this most of model of industry, the bee, does the same thing.

Do we understand that it was an American plant that scored in Mr. Bertrand’s garden the record of rapid growth—an old hop vine, that would have been saying that Mr. Dadant writes nice travel letters with the bees left out, they must admit that he has redefined himself this time. Page 761.

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The Chicago Convention Picture is a fine one. It is nearly 8x10 inches in size, mounted on heavy card and mounted on heavy card and posterboard. It is a picture to frame. We have not counted them, but think there are nearly 200 bee-keepers shown.
Best Honey Season in Years.

The past honey season has been the best we have had for years in western Massachusetts. I secured 153 pounds per colony, and the quality cannot be excelled.

I much regret the almost total failure of the honey crop in many sections of the country, as reported in the Bee Journal, but I trust that we all realize that there are ups and downs in the bee-keeping business as in all other occupations in life, yet if we persevere reward will surely come.

Jos. Blake

Report for the Past Season.

I have 9 colonies of bees in winter quarters. I wintered out one colony, and now they are settled, and secured no increase, but they stored 35 pounds of nice section honey, which I sold for 15 cents per pound.

H. J. Cooley
Kane Co., Ill., Dec. 19.

Bees Didn’t Do Very Well.

My bees didn’t do very well this season. They were wintered in a cold, damp cellar, the temperature sometimes going down to 10 degrees below the freezing point, so they were very weak in the spring.

I secured only 500 pounds of comb honey from 10 colonies, spring crop, and increased to 15. I use nothing but the tall sections of 4×5×56,”—with separators. Honey sells more readily in them, and I can get a better price for it.

Will Enlert
Wood Co., Wis., Dec. 20.

Poor Season for Honey.

This has been a poor season for honey in this locality, on account of the dry weather in May and June, but I feel that I can not get along without the American Bee Journal.

Lewis Lloyd, Jr.
Columbia Co., Wis., Dec. 18.

Cotton Honey—Swarming.

I notice on page 76 (1910) a report headed “Cotton as a Honey-Plant.” In answer to R. P. Davis’ letter on page 78. Mr. Carr says he doesn’t think that cotton is anything extra as a honey plant, but that we have a variety of prairie-flowers which are our main source for surplus honey. He may leave Lamar county out when it comes to prairie-flowers. When cotton fails to yield nectar the bee-keepers of this part of the state wear a long face. I extracted 760 pounds of cotton honey secured from 11 colonies, spring crop, and increased to 25. Davis is mistaken about the bees gathering surplus from the cotton bloom. They get the nectar from the middle stem of the leaf, and from the square and bolts they get pollen. They do some honey from the bloom.

On page 77 is an article headed, “Do Bees Select their Future Home Before Swarming?” In my opinion this question will never be settled, so I believe I should take the nectar and pollinate plants with the results of the bee tests. I shall take the nectar and pollinate plants with the results of the bee tests.
SPECIAL NOTICE!

Last winter's cut of basswood is the whitest it has been for many seasons. We are now making sections of this new stock and therefore are in a position to furnish you with the very finest quality in the market.

LEWIS WHITE-POLISHED SECTIONS

Are perfect in workmanship and color. Orders should be made immediately. We will ship immediately upon receipt. A complete line of everything needed in the apiary. Five different styles of Bee-Hives. Lewis Foundation Fastener simplest and best machine for the purpose. Price, ONE DOLLAR, without Lamp.

G. B. LEWIS CO., Watertown, Wis., U. S. A.

BRANCHES:

G. B. Lewis Co., 19 So. Alabama St., Indianapolis, Ind.

G. B. Lewis Co., 51 First Ave., N. E., Minneapolis, Minn.

SEND FOR CATALOG.

Please mention Bee Journal when writing.

Bee-Hives and Honey-Boxes

In our lots, wholesale or retail. Now is the time to get prices. We are the people who manufacture strictly first-class goods and sell them at prices that defy competition. Write us to-day.

Inter-State Box and Manufacturing Company, HUDSON, WIS.

Please mention Bee Journal when writing.

WHY NOT BE SURE ABOUT IT?

Sure that an injured wing will not handicap you or your New Premier Incubator. When you order a New Premier Incubator you are insured against any disappointment in the performance of the apparatus. An exclusive feature throughout is the provision for perfect ventilation. A complete direct agency, with a guarantee of better results or your money back.

COLUMBIA INCUBATOR CO., 5 Waite St., Delaware City, Del.

Please mention Bee Journal when writing.

Best on Earth

What? Our New Champion Winter Cases. A border of blue and white apples. In the United States and Canada we will sell them at a liberal discount until Oct. 15, 1909. Send for quotations. We are also headquarters for the No-Drip Snipping-Cases. R. H. SCHMIDT & CO., Sheboygan, Wisconsin.

Please mention Bee Journal when writing.

FOR SALE!

Best Extracted Alalfa Honey

Guaranteed absolutely Pure Bee's Honey. Pack in 5-gallon tin cans, of about 60 pounds each, two cases to the case, 75 cents per pound, cash with order. Pay direct from the home of Alalfa. You can purchase your Headquarters for ALFALFA and SWEET CLOVER SEED. Write for prices. Vogtler-Woessmann Co., 60-62 W., First So. St., SALT LAKE CITY, UTAH.

Please mention Bee Journal when writing.

We Can't Give Away Anything

You pay for what you get in this world. You understand that. But as a business proposition we want you to try our great medicine for Indigestion, Constipation, Biliousness, Sickness, Headache, Insomnia, “the Blues,” and like complaints—

Laxative NERVO-VITAL Tablets

We know you won't buy it, until you know something about it. The best way to get you to know how good it is, is to let you try it. That's what we do. Send Stamp for “Health” booklet, and we will send you a free sample package, that you may try it yourself. We know you will always keep it in the house, if you once try it. What fairer offer could we make? At all Druggists—10 and 25 cents.

Handsome Stick Pin FREE!

MODERN REMEDY COMPANY, KEWANEE, ILLINOIS.

If, instead of sending for a sample, you send us 25c we will send you “Health” booklet, a 25c box and a handsome gold stick-pin, set with emerald, ruby or pearl, warranted to be worth double the money. Order by number. This is an extra introductory offer. Only one pin to one person. If unsatisfactory, money returned. Send now while the offer is good.
The Novelty Pocket-Knife.

Your Name and Address on one side—Three lines on the other side.

HOWARD M. MELBEE, HONEYVILLE, Ia.

(THE KNIFE IS THE FULL SIZE OF THE KNIFE.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the knife.

The Novelty Knife is a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass: the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the Novelty Knife is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the Novelty Knives, your Pocket Knife will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this useful knife, as the Novelty Knife must be seen to be appreciated.

How to Get This Valuable Knife.—We send it post paid for $1.25, or give it as a Premium to the one sending us one new subscriber to the Bee Journal (with $2.00). We will club the Novelty Knife and the Bee Journal for one year, both for $1.50.


* * * “Please allow about two weeks for your knife order to be filled.

To Exchange—Bates & Edsmonds 1½ and 3 pipe carbon engines. Wanted: foot-power saws, lathes and machinery of all kinds.

ROBERT B. GEDEE, La Salle, Ill.

1A21 Mention the American Bee Journal.

Machinery FOR SALE.—Tensol machine, Ford-ite admirable machine, two-spindle shaper, saws—Ehle, grooves and saws, shafting, pulleys and belting. FRED DALTON, Walker, Mo.

1A24 Please mention the Bee Journal.

The Ohio Farmer

AND THE

American Bee Journal,

Both One Year for only $1.40.

THE OHIO FARMER is clearly one of the leaders of the agricultural papers of this country. It is a 20-page weekly, often 24 pages, handsomely printed on good paper, and CLEAN in both reading and advertising columns. It has the largest actual staff of editors and correspondents (all farmers) of any farm paper published, and is practically progressive in defending the farmer's interests.

IT WILL HELP YOU MAKE "THE FARM PAY." Send to Ohio Farmer, Cleveland, Ohio, for a free sample copy.

REMEMBER, we send both the Ohio Farmer and the American Bee Journal, both one year for only $1.40. Address,

GEORGE W. YORK & CO., 118 Michigan Street, CHICAGO, ILL.

20 cents Cash ★ ★ This is a good time to send in your Beeswax. We are paying 26 cents a pound—CASH—for best yellow, upon its receipt, or 28 cents in trade. Impure wax not taken at any price.

Address as follows, very plainly,

GEORGE W. YORK & CO., 118 Michigan St., CHICAGO.
AMERICAN BEE JOURNAL

Jan. 3, 1901.

supply our own table, besides selling $38.00 worth, thus keeping our "toot-hide" replenished to the extent of another year's subscription to the American Bee Journal. As long as the editor keeps the "Old Reliable" up to its present standard, we won't kick. We wish to add a larger number of new subscribers, and a merry Christmas.

M. P. LOWTY.


[Thank you, Mr. Lowty, for your good wishes—yes, and the same to so many other good friends who have sent us numberless kind words of encouragement. —Editor.]

Good Instruments.

Don't confuse these instruments with cheaply "bargain hunter" offerings. They are highly accurate, guaranteed, instruments. For WARTS.

VIOLIN.—Small model, choice of 3 strings, fine, $1.25; $2.00, light, regular, $1.50. Steel strings, $1.00. Full feathered bamboo canary, extra set of strings, $2.00. $3.00, 3.

My Price $1.25.

QUALITY VIOLIN.—Solid wood, nicely finished, Spun corderoy, full feathered bamboo canary, extra set of strings, $3.00. My Price $4.00.

My Price $1.25.


My Price $1.25.

Piano.—Consists of a redwood fingerboard, varnished finished, $1.00. My Price $1.25.

My Price $1.25.

Please mention Bee Journal when writing.

The Emerson Binder.

This Emerson stiff-board binder with cloth back for the American Bee Journal we mail for but $1.50. If you wish to bind your Journal for one year—both for only $1.40. It is a part of the essential of any bee-keeper. The June number will be mailed to subscribers as fast as they are received. If you have the Emerson no further binding is necessary.

GEORGE W. YORK & CO.,

114 Michigan Street, CHICAGO, ILL.

Langstroth on...

The Honey-Bee

Revised by Dadant—1899 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, with large, practical bee-keepers, so well known to all the readers of the American Bee Journal—Chas. Dadant & Son. Some errors are stated to have been clearly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $2.15, or club it with the American Bee Journal for one year—both for $1.75; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

GEORGE W. YORK & CO.

118 Michigan Street, CHICAGO, ILL.
We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR
Hives, Extractors
OR ANYTHING YOU WANT IN THE
BEE-KEEPING LINE.
WE MAKE ONLY THE BEST.

1 Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makers. New Catalog and copy of THE AMERICAN BEE-KEEPER free. Address, THE W. T. FALCONER MFG. CO., JAMESTOWN, N. Y.
2 W. M. GERBER, East Nottingham, N. H., carries a full line of our goods at catalog prices. Order of hand.

Please mention Bee Journal when writing.

PATENT WIRED COMB FOUNDATION
Has no Sag in Broom-Frames.
Thin Flat-Bottom Foundation
Has no Fissibone in the Surplus Honey.
Being the Clearest is usually worth double your foundation cost.
J. A. VAN DEUSEN, Sole Manufacturer, Sproat Brook, Montgomery Co., N.Y.

Please mention Bee Journal when writing.

SWEET CLOVER
And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

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Sweet Clover (white) | $1.00 |
Sweet Clover (yellow) | $1.25 |

Some Clover (white) | $1.25 |
Some Clover (yellow) | $1.00 |

Price subject to market changes. Add 25 cents to your order for cartage, if wanted by mail.

GEORGE W. YORK & CO.
118 Michigan Street, Chicago, Ill.

**IF YOU WANT THE BEE-BOOK**

That covers the whole Apiocultural Field more completely than any other publish, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his Bee-Keepers’ Guide.

FALL SPECIALTIES


Please mention Bee Journal when writing.

LOW RATES TO THE SOUTH.

Exclusion tickets at reduced rates are now being sold by the Chicago, Milwaukee & St. Paul Railway to the prominent resorts in the South, including Jacksonvile, Fl., Mobile, Ala., New Orleans, La., Savannah, Ga., El Paso, Tex., which are good for return passage at any time prior to June 1, 1901. Information regarding rates, routes, time, etc., can be obtained on application to any compon ticket agent of the Chicago, Milwaukee and St. Paul Railway.

24th Year Dadant’s Foundation. 24th Year

We guarantee satisfaction. Why does it sell so well?

What more can anybody do? BEAUTY PURITY, FIRMINES, No SAGING, No LOSS.
PATENT WEED-PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

BEE-KEEPERS’ SUPPLIES OF ALL KINDS.

Very fine pure-bred BARRIED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

LANGSTROTH on the HONEY-BEE—Revised

The Classic in Bee-Culture—Price, $1.25, by Mail.

Beeswax Wanted

AT ALL TIMES.

CHAS. DADANT & SON
Hamilton, Hancock Co., Ill.

MADE TO ORDER.

Bingham Brass Smokers,

made of sheet-brass which does not rust or burn and should last a lifetime. You need one but they cost 25 cents more than size of the same size. The little pen cut shows our brass hinges cut out the three larger sizes.

Prices:

- 2-inch, $1.25
- 2½-inch, $1.85
- 3-inch, $2.00

BINGHAM SMOKERS are the original, and have all the improvements, and have the STANDARD OF EXCELLENCE for 22 years.

Address, T. F. BINGHAM, FARWELL, MICH.
Please mention Bee Journal when writing.

Sections—A Bargain.

We have 10,000 ¾ x 5½ x 1½ inch plain sections, and as our call for them is light, we will sacrifice them. Prices very low. Write.

Apliances—Glen Cove, L.I., I. J. STRINGHAM, 105 Park Place, New York, N. Y.
Please mention Bee Journal when writing.

Four Celluloid Queen-Buttons Free

AS A PREMIUM

For sending us ONE NEW SUBSCRIBER to the American Bee Journal for three months with 30 cents, will mail you FOUR of these pretty buttons for wearing on the coat-lapel. (You can wear one and give the others to the children.) The queen has a golden tinge.

This offer is made only to our present regular subscribers.

NOTE—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one of these buttons to attract people to ask questions about the honeybee and, by a conversation that started would wind up with the sale of more or less honey at any rate, it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."

Prices of Buttons alone, postpaid: One button, 8 cents; 2 buttons, 6 cents each; 5 or more, 5 cents each. (Stamps taken.)

Address,

GEORGE W. YORK & CO., 118 Michigan St., CHICAGO.
Mr. C. P. Dadant and Daughter Among the Swiss Bee-Keepers.
The Bee-Keeper's Guide
Or, Manual of the Apiary,

By Prof. A. J. Cook.

460 Pages—16th (1899) Edition—18th Thousand—$1.25 postpaid.

A description of the book here is quite necessary—it is simply the most complete scientific and practical bee-book published to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without The Bee-Keeper's Guide.

This latest and edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting new subscribers for the American Bee Journal.

Given for TWO New Subscribers.

The following offer is made to present subscribers only, and no premium is also given to the new subscribers—simply the Bee Journal for one year.

Send us TWO NEW SUBSCRIBERS to the Bee Journal with $2.00, and we will mail you a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both for only $1.75. But surely anybody can get only TWO NEW SUBSCRIBERS to the Bee Journal for a year, and thus get the book as a premium. Let everybody try for it. Will you have one?

GEORGE W. YORK & CO.,
118 Michigan Street,
CHICAGO, ILL.

Yellow or White
Sweet Clover Seed
Free as a Premium
For Sending us One New Subscriber for a Year.

There has been so much written about both the white and the yellow variety of sweet clover, that we will simply say here that if one of our present regular subscribers will send us $1 with a new name for next year (1901), we will send the new subscriber the balance of this year's (1900) numbers free, and mail, postpaid, to the one sending the new name and the dollar, either one pound of yellow sweet clover seed, or two pounds of the white sweet clover. This is a good chance to get a start of both kinds of these honey clover. Better send two new subscribers (with $2.00) and get the three pounds of seed.

Address,

GEORGE W. YORK & CO., 118 Michigan St., CHICAGO, ILL.

Best
Extracted Honey For Sale

All in 60-pound tin cans.

Alfalfa Honey......
This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough the Alfalfa extracted.

Basswood Honey......
This is the well-known light-colored honey gathered from the rich, nectar-laden Basswood blossoms in Wisconsin. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

Prices of Either Alfalfa or Basswood Honey:
A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for packaging and postage. By freight—one 60-pound can, 9½ cents per pound; two cans, 9 cents per pound; four or more cans, 8½ cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. The cans are boxy. This is all absolutely pure bees' honey, the finest of their kinds produced in this country.

Read Dr. Miller's Testimony on Alfalfa Honey:
I've just sampled the honey you sent, and it's prime. Thank you. I feel that I'm something of a heretic, to sell several thousand pounds of honey of my own production and then buy honey of you for my own use. But however loyal one ought to be to the honey of his own region, there's no denying the fact that for use in any kind of hot drink, where one prefers the more wholesome honey to sugar, the very excellent quality of alfalfa honey I have received from you is better suited than the honeys of more market flavor, according to my taste.

C. C. MILLER.
McHenry Co., Ill.

Order the Above Honey and then Sell It.
We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

Address,

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.
Editorial Comments.

A Big Fire—Our Office and Stock Flooded.

On New Year’s day the office and floor occupied by the American Bee Journal, bee-supplies and honey business, was made almost a complete wreck by floods of water coming down from the upper floors where a big fire broke out about two o’clock in the afternoon. There were something like 20 fire-engines throwing water thru and on the top of the building in an endeavor to put out the fire, and of course practically all of that water came down thru our floor.

Fortunately the issue of the Bee Journal for mailing on Wednesday, Jan. 24, was still in the office of the printer, and thus was saved, as were also the forms from which it was printed. Thru the kindness of one of our former partners we were able to mail the Bee Journal in his office, thus preventing any delay in getting that number off.

We are writing this Thursday evening, Jan. 3d, and are not sure but that this number of the Bee Journal may be delayed. If it is, it will likely be the first time in 20 years, on the publishers’ account, that it has failed to be placed in the Chicago post-office on time. Also, it may be that we will be unable to get out more than 8 pages instead of the 16. If so, we feel very certain that bee-keepers will not complain, knowing that in case of a fire no firm can do exactly as they would under other circumstances.

We do not know just yet what our loss will be on printing-office, bee-supplies, and honey, but feel very sure that it will be sufficiently large. Of course, we had everything fairly well insured, but as all know who have had experience with insurance companies, it will be understood that there is no likelihood of getting the full amount of the loss. This misfortune comes at a time when it is not easily borne by the publishers of the American Bee Journal, so that we would like to suggest that all who are owing on their subscriptions please send it, and also a renewal for 1901. While the loss on account of the fire will be a good deal, it of course will not interfere with the continuation of the Bee Journal. However, everything sent in on arrearages, renewals, and new subscriptions, will be gratefully received at this time.

The fire in our building was one of the fiercest that the fire companies of Chicago have had to fight in a long time, and the weather being extremely cold on New Year’s day, it was really very remarkable that the building and contents were not totally consumed. The daily papers spoke in high commendation of the excellent work done by the Chicago fire department. To prevent the total destruction of a 7-story building, 100 feet square, when a great fire is raging at its top, is certainly a wonder. The Chicago fire department did it, and deserve great praise for their bravery and success.

If any of our readers or customers do not receive prompt response to their letters or orders they will now understand the reason for the delay. Just as soon as the insurance companies have adjusted the losses, we expect to get things in shape so as to be running again as usual. This may take a week or two for the bee-supplies and honey business, but we expect to be able to have our printing office in running shape again by the end of this week.

The total loss occasioned by fire and water, on building and contents, will likely be anywhere from $50,000 to $100,000. There were perhaps ten firms in the building, and all suffered more or less loss.

George W. York & Co.

Bulk or Chunk Honey—that is, comb honey filled in tin cans, and the empty space filled up with extracted honey—has been highly recommended by some bee-keepers, especially in the southwest, but according to E. T. Flanagan, in the Bee-Keepers’ Review, it is not wise to put up honey in that form. He seems to think it will be better to keep the two kinds separate, either kind alone bringing more than the two mixed. With such diametrically opposite views it is hard to tell just what to believe, unless it be that local preferences may have a bearing. As a bit of experience in the matter, Mr. Flanagan says:

Some years ago, having sold all my own crop of comb honey, I went to St. Louis to get a supply. At one of the largest commission houses in the city, where, I frequently dealt, I inquired if they had any comb honey on hand. “Yes, a very fine article; come and take a look at it,” I did, and found over 100 cases containing 120 pounds to the case. I supposed the one showing me the honey had made a mistake, for I thought the cases contained extracted honey, but I found the 120-pound cases filled with as fine comb honey as I ever saw, but in 60-pound cans. I asked the price, and was more than surprised to find it only 50 cents a pound, when I had come prepared to pay from 12½ to 14 cents for good section honey. I asked them to remove a portion that I might examine it more closely, but it was impossible to do so without breaking and tearing it all to pieces. Of course, I did not buy a pound of that honey, for I could not use it. I could not sell it to my customers for as much as clear extracted honey. Now, that was A No. 1 comb honey originally, and it would have brought 15 cents per pound at wholesale readily had it been in sections. I was there to give that much for as much of it as I needed, but I would not give the fire cents per pound that they subsequently offered it to me for, and I believe they sold it later for 4½ cents per pound. How much the poor fellow netted on that fine lot of “chunk” honey I leave you to figure out; I only know I was sorry for him, and glad I was not in his place.

Building Up Weak Colonies for the honey-flow is not advisable in many cases. If it be done at the expense of colonies only fairly strong in a region where the honey-flow closes rather early in the season, it will be at a loss, and a reversal of the practice would be advisable, that is, drawing from the weak to help the strong. But where the season is sufficiently long—possibly in any case where colo-
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nies become very strong—it is possible that the very strong may be made to help the weak so that the total harvest may become increased. With regard to weak colonies, Wm. McEvoy has struck a new thought, which he gives in the Canadian Bee Journal. He says that larvae in weak colonies are not fed as well as they should be—a thing not so hard to believe by those who are familiar with the fact that larvae are not always fed alike. So he has thought out a plan by which he kills two birds with one stone—he secures the feeding of a part of the larvae in strong colonies that left to themselves would have been fed in the weaklings, and at the same time gets the weak ones strengthened. Here is his plan:

Just as soon as the strongest colonies are in shape to put the combs out, I lift up a comb full of brood that is about ready to be capped, and place it above the queen-excluder, and leave it there for nine days. I do this with every strong colony.

During the nine days the bees in these strong colonies will feed the larvae extra well, and all that was in the egg form when I placed the combs above the queen-excluder will be capped brood at the close. At the end of nine days I take all the combs out of the brood-chambers of these weak colonies and fill the brood-chamber with capped brood from these top stories, and in a few days after this is done the capped brood will be hatchet out, and these weak colonies will be full of bees.

The combs that I take out of the brood-chambers of the weak colonies I put in the top stories where I took the capped brood out of, and let them have that in place of the brood I took from them. The bees in the strong colonies feed the larvae given them from the weak colonies well as before.

Locating and Starting an Apiary.—Mr. G. M. Doolittle works up some very interesting and profitable apiarian conversations with himself in each number of Gleanings in Bee-Culture. In the issue of Dec. 1st, it happens to be about locating and starting an apiary. His responses to questions may be summed up something like this:

Unless a prospective bee-keeper has some knowledge of the business, 25 colonies would be too many to start with. He recommends reading one or two of the standard bee-books, and the taking of one or more of the best bee-papers. So much for necessary literature on the subject.

As to placing hives, Mr. Doolittle would have them level from side to side, and slanting just a little toward the front, providing the frames run the usual way of the hive—from front to rear. If the frames run from side to side, then the hive should stand level both ways.

Mr. Doolittle recommends placing the hives three inches from the ground—to prevent the bottom-board from warping, and also to give the bees a better chance to get in on cool, windy days in early spring, thus preventing loss of bees at a time when one is of more value than a hundred afterwards.

On the nearness hives should be together, Mr. Doolittle says his apiary is laid out on the hexagonal plan, the hives being ten feet apart in the rows from center to center, and the rows ten feet apart. This is how he would proceed to arrange the hives, supposing, as suggested by the apiary finally to contain 100 colonies:

"To get the hives arranged in the hexagonal form, get a line 100 feet long, having a pointed stake tied on each end. Five feet from the stake at one end tie to the line a white thread or string, four or five inches long. Five feet from this white thread, tie a red thread or string, and likewise five feet from the red, and so on until you have red and white threads alternating at five feet from each other the whole length of the line.

"The line is to be stretched where you wish the first row of ten hives to stand, then you are to stick a little stake at every white thread. Now move the line ahead ten feet, when you will stick the little stakes at the red threads. Then move ahead ten feet again, sticking the stakes at the white threads, and so on until you have stuck the 100 stakes for the stands for your 100 hives or colonies you expect to have in time. Having your stakes all stuck, level off the ground about each stake until you have a nice broad level, and then ready to put your hives on them any time. Having it completed, and each stand occupied with a hive of bees, if you are like me you will consider that for convenience and beautiful appearance this plan is superior to any other."

On the facing of the hives, he prefers to have them toward the south, so some of the best bee-keepers in New York State advise southeast, for then the morning sun will cause the bees to gather earlier in the day. He comes out very strong against facing hives to the north in a cold latitude.

Contributed Articles.

Next—A Machine For Uncapping Honey, BY "OLD GRIMES."

THERE seems to be some stir in the busy world of bee-keepers, and the ingenious fellows are determined to place obstacles in the path that has been beaten by us old fellows. We must needs use them, stumble over them, or make new paths around them.

Just now the uncapping-machine is rocking the brains of these geniuses and Old Grimes wants to have his say about the matter. Off and on for a number of years I have wielded the Bingham knife, and quite successfully too, and I expect still to wield it for an indefinite period, but if we are to have a new-fangled way of uncapping, the Grimes family wants a practical, up-to-date machine.

The first idea that enters the brain of the uncapper inventor is to shave off both sides of the comb at once; but looking at such a machine from a practical point of view, how much time will be gained? For a slicing machine to work nicely the combs should be quite uniform in thickness and with a smooth surface, but the average bees will make more or less hills and hollows upon the combs, and these defects are more or less according as the season is a good or poor one, or as the honey-flow is slow or rapid. With many combs the machine would have to be set to take off all down to within a quarter of an inch of the bottom of the cells, and that would never do, for it would be taking away too much of our combs, and the tank would have to be placed under the uncappping-box instead of under the extractor.

If we try hard to get really nice combs for the machine, this is equally nice for rapid work with the knife. To get nice, fat combs for extracting, the Grimeses use 8 combs in a 10-frame super. It does not take an expert long to uncap nice combs; then we save much uncapping by extracting when the comb is one-half or two-thirds capped; two strokes to a side usually finishes it. From actual timing a comb can be uncap in from five to fifteen seconds, or an average of five combs per minute.

We must take into consideration the time for adjusting the machine, and the time to change the knives for a water-bath, for no form of knife will run long without getting that gummy edge; then there is bee-thread to clog the machine, and more or less broken in the way. Perforated, I would prefer the latter.

But let us figure a little. A machine would necessarily cost from $15 to $20. There are but few of our extensive bee-keepers who use perforated metal. In order to use the $20 machine a hundred dollars or more will need to be spent for exclusors. The large apiarist would be the one having the most interest, and a machine to become a success with him should be a very radical improvement.

A new paper came out of the California Bee Keepers' Association by "Rambler", and afterward published in this journal, it seems to set the pace for a machine to uncap several combs at once. That is a radical improvement in the right direction, and while we are inclined to say that it can't be done, it is very unsafe to say it, for more wonderful things than that are being done every day in this age of improvements.

I hope inventors will not take the above comments in the nature of a wet blanket. They are intended to lead
DURING one of the sessions of the International congress of bee-keepers, a French bee-keeper, Mr. Giraud, exhibited a frame containing dipt queen-cells, reared by the Doolittle method. This was a new thing for many present, and I wish that Mr. Doolittle had been there to take a little of the praise that was bestowed upon this practical demonstration of the success of his teachings. Mr. Giraud and his three sons are practical, wide-awake apiarists, and have been for several years readers of an American bee-paper, and it was in this that they found the Doolittle method. They stated that they had reared 314 queens during the season of 1900, in the best one of their colonies, while the queen was laying and the bees working in the customary way, and they reared them in the same frames that were used, except that zinc was substituted for the lead, and the dipt cells were covered with two, or three frames of zinc, and the queen was placed between them and the frames above and below to make them out of the outside of the hive. The queen was enclosed in the dipt cells, and kept adding more queen-cells as they removed the ones that were reared, and which were from a minute made by our method. An account of their doings so interested Mr. Calvert that he gave them two photographs of the artificial cell-breeding, and furnished him with a statement in French that I translated for him.

On the last day of the session the secretary of the committee on Apicultural Statistics made his report on apicultural cost throughout the world. He had received so voluminous a correspondence from the different countries of Europe, and from America, on this subject, that it was impossible for him to get it all into the report of the committee. But the detailed report will certainly be very interesting, and I hope to be able to give extracts from it to the readers of American Bee Journal whenever the printed report reaches me. The most interesting bit of the report, from our own country, sent by the Department of Agriculture at Washington, was quite extensive. He also had reports from some of the States of South America.

During the afternoon session of the last day, the congress decided to hold its next meeting at Bois-Le-Duc, Holland, in 1901. Mr. Secor was elected the executive committee as for this congress. Messrs. Bonnier, president; Sevalle, vice-president, and Calais, secretary.

That same afternoon, as the business of the congress was about over, and the sky was clear, as it had not been since our arrival at Paris, we ascended to the top of the Eiffel Tower—Mr. Calvert, my daughter, and myself. Going up into a monument a thousand feet high is not a thing of very great interest after one has been on mountains eight or nine thousand feet above sea level, but there is certainly no mountain in the world from which one can see as great a gathering of civilized people, as many mountains, or as many houses. The ascent may be made either in an elevator or by a stairway, but we selected the former with our money. The view from the top is rather pleasing, but the stairway was not enough to make us dizzy, and it costs just as much to walk as it does to ride. The elevators are large enough to contain some 60 persons, and they were full entire time. And they are run very smoothly, and start with a jolt, which is not unpleasant at all, the sensation of falling down into a bottomless pit, as one feels when let down with a jerk from some of Chicago's sky-scrapers.

From the first platform, 230 feet up, one can view all the city of Paris, some 50 or sixty of them being very conspicuous because theyloom up above the houses. The H shape of the Exposition grounds also shows itself plainly, and in the background, on one side, the heights of Mont-Magny, and on another the fortress of Mont Valerian stand in full view above the sea of houses. But when one attains the third platform, at a thousand feet of elevation, everything flattens down—the monuments, the hills, the white ribbon of the Seine, the Bois de Boulogne, the dozen villages, seem only like a living map. A trip in a balloon would probably give a similar impression. The houses make a sea of red tiles, the river is a silver thread, and the parks are green spots here and there.

Speaking of parks reminds me that I failed to mention my visit to the experimental apiary of the Garden of Luxembourg. It was a disappointment. The spot is unique, for it is the only apiary in the heart of one of the largest cities in the world. It is a very quiet corner, among the trees, and the shrubs and flowers, in the aristocratic garden of the palace of the French senate, and the bees fly back and forth untroubled and busy. But the hives were in a rather dilapidated condition, and it is evident that no pains are taken with them. The keeper very kindly permitted us to look at everything. We found half a dozen practical hives, roting without occupants, while a half-dozen straw hives with two or three occupants seemed the only experimental feature. I enquired for an observation hive, and he showed me a hive with eight or nine frames with glass all around. What one could observe with such a hive is more than I could say. I was told that some new culture were given every two weeks, in this place, during the summer. I doubt that any experiments of value are ever made there. France can afford something better.

In the evening of the last day, the apiarists of the congress were gathered at a banquet, in one of the restaurants of the exposition grounds, and numerous toasts were offered to the visiting delegates, who returned the compliments as best they could. On leaving, we opened our purses to pay our share, but the secretary, Mr. Calais, informed us that the luncheon delegates were given and that their expenses, even to the tips for the waiters had been paid by the management.

The following days' excursions were arranged with special pains for the delegates to visit the apiaries of two of the members, all expenses paid by the association, and I regretted very much that I could not take advantage of this; but my time was limited, and I had to leave Paris that very day.

If the Europeans are behind us in the matter of convenience of railroad cars, they are certainly ahead of us in securing cheap transportation. If I remember rightly, the amount paid by the association for these two excursions was less than a cent per mile, per person. Perhaps we will also get cheap transportation here, by the end of the season. But if we need not be afraid of the cost of traveling in Europe, after we are accustomed to travel in this country. But I earnestly hope that we are not going to take the habit of 'tipping' the waiters and servants as they do over there. It is sickening. You eat dinner—tip. You ride half a mile and discharge the cabman, pay—and tip. You go to the theater, buy your ticket, and tip the ushers. You leave the hotel, tip the servants, the bell-boy, and the bellman. The European is not afraid to do what we do not expect silver in every case, and this is the principal use of coppers. Two cents, three cents, make a very passable tip. If you give a dime, you get a smile. If you give a quarter, you get a bow. But if you give a dollar, there is no use looking behind, for a look of contempt will follow you till you are out of sight.

The Hum of the Bees is the Apple-Tree Bloom is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best composition written by Mr. Secor and Dr. Miller. It is, indeed, a hummer. We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at $1.00.

Our Wood Binder (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journal can be issued to your subscription address; and it is thus preserved for future reference. Upon receipt of $1.00 for your Bee Journal subscription a full year in advance, we will mail you a Wood Binder free—if you will mention it.

Please send us Names of Bee-keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.
CONVENTION PROCEEDINGS.


By Dr. A. B. Mason, Sec.

(From page 4.)

COMB FOUNDATION—EXPERIMENTS, ETC.

Prof. Gillette—I have been experimenting some the last three years with the British foundation sold by the company at Fort Collins, to determine the manner in which the bees handle the foundation that is given. It seems to me on so very important a question we ought to have more light. What weight foundation is best, for example, to use in the brood-chamber, and what is the best weight to use for comb honey? and to what extent does the giving of the foundation lessen the wax secreted by the bees? Do the bees really take the wax from the foundation and build it up both in the cells and down in the midrib of the comb? If so, to what extent? The experiments that I want to report upon are chiefly along these lines, and before proceeding, I might say what I say to you was published last year in the British Bee Journal at Fort Collins, which any of you can obtain, so long as they last, by simply addressing a letter to the director, and requesting Bulletin 94, or "Experiments in Apiaries." First, I thought I would endeavor to determine definitely whether or not bees do use the wax in the foundation. Everybody believes they do; no one doubts it; but I wanted absolute proof of it. I went to Mr. Elliott, who makes comb foundation, and asked if he could make for me some rather light foundation, I mean, that would work into a large comb, 1 lb. from the experiment station, to show you, but I will simply have to tell you, and you will have to take my word for it. Where foundation like that was used, about one inch, it was worked into at a large comb, so that it would show nearly to the ends of the cells. I happen to have a little piece here from the full-piece foundation. This was fully drawn at the center; this comes out here near the sides. The cell-walls this far [indicating] are black, and the foundations used are nearly.

A Member—Do I understand you to mean the black work down from the strip of lampblack foundation at that part.

Prof. Gillette—Yes, so that in cutting thru the comb and looking at the edge of it, the black nearly faded out at the ends of the cells.

A Member—What was the object of getting that black to stick to that.

Prof. Gillette—To see to what extent the bees did take that wax, and whether they used it right there where it was placed, or whether they carried it all over the hive and used it in the foundation. In some places, a small amount of a black wax was taken up by the colonies and used in smear, but not to any great extent did they carry it away into any other section—used it right there; drawn right down into the midrib of the comb. Having proved definitely that they do use the wax, I am going to try to find out to know whether or not they get that wax from the midrib of the foundation, or whether they get it from the cell-walls. For example, let that represent a section, the foundation, as you look at it, like this; the midrib is here, the edges are there. In any foundation there would be found, or in nearly all the foundations, there would also be a short cell-wall as shown there. Now, do the bees get this wax that they build the cells out of, wholly from those little short cell-walls, or do they go down into the base and midrib itself, and use it in building the cell-wall and extending the midrib? First, do they use the wax that is in the midrib? This I determined by three or four different means. First, I determined the weight of the comb and the cells taken out again. Here is a sample of the foundation, on which that comb was built. Then I took pieces of foundation and of the midrib from the comb on that foundation, cut them in and different lengths, and found that the weight of the original foundation was considerably more than the weight of the midrib taken out of the comb built upon that foundation. But now it might be possible that the difference in weight was due to a great extent to these little short cell-walls. The very heavy foundation weighed 11 grains to the square inch. Septum from the comb only weighed eight grains to the square inch after the bees had built the comb upon it and the comb-cells had been removed; then there were three grains to the square inch of the septum that had been used. In case of medium foundation, of which I have a sample here, and a sample of the midrib of the comb built upon this foundation—the foundation itself weighed 8.4 grains to the square inch; this midrib out of the comb weighed 5.18 grains to the square inch, being a difference there of about 3½ grains to the square inch of the midrib that these bees had used in the deep-cell foundation was also used; the foundation weighed 5.46 grains to the square inch. After the comb had been built upon the foundation and the comb-cells removed, then the midrib weighed only 3.4 grains to the square inch; but if I should take this foundation and cut it out off of the comb where it is built upon foundation, I could, this foundation midrib weighed only 2½ grains per square inch. It actually weighs less right here in this foundation than it does after the bees have built the comb upon it. And as they do not use any wax in this, and make it a little heavier, and the natural-comb septum, taking comb the bees have built entirely, without having given them any foundation at all, removing the cell-walls and taking the midrib of the comb from amongst the wax, you see the difference to the square inch. The difference in weights here was evidently more than could be accounted for by the removal simply of these small cell-walls.

A Member—Were all those tested alike, by being immersed in water.

Prof. Gillette—No, sir, not in all cases. There were cases where there was no honey at all. Those were not put in water. In all cases they were thoroughly dried before using: very frequently two or three days elapsed before they were used. The method which I used for determining whether or not they got the wax was to fill the comb with plaster, and that was suggested to me by Pres. Root. I filled the comb with plaster of Paris, and making sections of it and measuring the width of the midrib, and the depth in that, it was determined. This paper, this holds the midrib; it is perfect, it is not spread out at all. I found by measuring the midrib of the comb built upon a foundation—it was in all cases where heavy foundation was used—the comb was very thin. In cases where light foundations were used, foundations in which the midrib does not exceed seventeen one-hundredths of a millimeter, that they did not thin the midrib to any extent, usually not at all, which seems to me quite an important matter. If the midrib of the foundation does not exceed seventeen one-hundredths of a millimeter in thickness, the bees will thin it but little, if any, very little indeed; very often scratch it over to make it opaque, but very little used; if thicker than that, they thin it, and thinning it down to the thinness of the midrib in the natural comb. Is that clear? If you use a heavy foundation the bees never thin the midrib down to the thinness of the midrib in the natural comb. The natural comb I have found. I have placed upon the table here some of the different midribs that have been taken from combs; here is a specimen of midrib from natural comb, all made by the bees, and they thin it down to the thinness of the comb that forms the foundation when combs are used. In some of those cases it is as thin as the natural. Do the bees thicken these midribs in the combs they have built upon foundation? I think there has been a difference of opinion in regard to that, some thinking that no matter how thick—how much wax you may put in the little short cells of the foundation, the bees will always thin it down to the thinness of the naturally built comb. To determine that point I proceeded in
this way: I took a goodly number of pieces of comb that had been removed from the bee-boxes. I weighed each of the samples of comb that had been built upon different kinds of foundation. And care was always taken in this case not to use a comb that had been kept, because, if the comb had been kept, it would have to be unkept and the honey extracted. In that case, the ends of the comb would have to be removed, so I always took a comb that had not been kept.

I found that by taking these samples of comb, scraping the comb-cells all off the foundation, the wax of the midrib being thicker in both cases—10 grains to the square inch in the natural built comb, where it was 11 grains to the square inch in this foundation itself. Those are samples of comb one inch thick [indicating:]

Prof. Gillette—It is a comb one inch square. The comb built upon these heavy foundations, built out one inch thick, weighed 181/2 grains to the square inch. Natural comb, as I told you, averaged only 10 grains to the square inch. The bees, having the comb built, would have put on the wax that they needed, added to that foundation 8 1/2 grains more of wax. In other words, you gave your bees 18 1/2 grains of wax to save their secreting 2 1/2 grains of wax, because 2 1/2 grains of wax was added to the 10 grains of the comb, if they built this themselves. Take the lighter foundation, the medium Root foundation, running, I think, about 7 sheets to the pound, that foundation averages 8.4 grains to the square inch. The comb built upon it weighed 16% grains to the square inch; that is, comb one inch thick, the bees added to that foundation so as to make it weigh 6 1/2 grains to the square inch more than that natural comb would have weighed if they had made it all themselves. You gave the bees 6.4 to save their secreting 3.5 grains of wax. Without going thru the figures of the different weights, I found, I might say, that held thru all the tests I made, that, to all these heavier foundations the bees still applied a very little more wax than they might have applied without those secretions,altho they did not need to do it. It seems to me that we only economize the secretions of the wax on the part of the bees to a very small extent by giving them wax in the foundation. It seems to be the nature of the bees when building comb to secrete wax, they do more or less, I have no doubt, and secreting the wax to a very large extent, even the wax was given them to begin with. Then what kind of a foundation can we use that would be most economical in cells? I might simply say I found the greatest economy apparently from my own measurements to be in the foundation which has, as measured, as nearly the weight of the natural comb midrib as you can get it—the foundation made near the end of the natural as you could get it, and with not a very large amount of wax in the cell-walls of the foundation.

I presume you have all used, to some extent, this rather short deep foundation. It seems to me that contains about, a Mason—was in the cell-wall one inch can be given with the greatest economy in the building of the comb. I believe that is all that I will take time to tell you about now, unless you wish to ask questions, except simply to call your attention to some of the samples that I have here. In these little paper boxes, I have placed samples of sections of comb and of foundations, and many of them are arranged in this way—one of them showing the section of the foundation and the other the section of the comb built upon that foundation, which would like perhaps to compare them, and see if you can see with your naked eye the comb built upon the foundation and midrib thinner than that built upon the foundation. Some samples show plainly, and I have marked it in the following manner: A would be a sample of a foundation cut thru; a sample market A A would be a sample of the comb built upon that foundation. The same is true of B, C, D, and so on. By bearing that in mind, you can compare the sections of the foundation and also of the section of the comb built on it. I have also one or two sections here of the comb cut at right angles to the cells, and I would like to have you see how very delicate and beautiful the section of the natural comb. This is one of the points of interest. I have a sample of foundation and also a sample of the section of comb built upon that foundation, and you can make comparisons of them. These can be put around.

D. H. Coggshall—I have noticed where we run for extracted honey, in increasing my amount of comb for-
tracting purposes, that by slipping a sheet of foundation in with the other combs, the bees will use their surplus wax that they produce on this foundation, and it saves me labor. They don't crowd the extracting place; where there is a surplus place they fill up, they don't crowd so; where there is no foundation in there, they will crowd every spot and fill it all up with bar-combs. To overcome that which might be the case, I cut deep slices from the combs; that wax goes in with the cappings, and I have it in wax. That is the way I overcome the bar-combs. Otherwise I claim the wax would be wasted. They will produce wax when they are gathering honey fast, and they must have some place to put it.

Pres. Root—With regard to this matter of foundations, we have Mr. Rankin here of the Michigan Experiment station who wishes to relate some of his experiments, which I think will bear out the experiments already given by Prof. Gillette.

Mr. Rankin—We had some samples of foundation which were made by the A. I. Root Co., of different weights, ranging from 7 to the pound. The sheets were the size of the Langstroth frame; we used these foundations in different ways thru the hives, and I used different methods of wiring. We used the vertical wires, some wires only, some wires only, and some wires and foundation. The wire was 13 sheets to the frame and the foundation stretched from one side to the other and stretched at a right angle to the foundation. With the horizontal wires, the wires stretched from one side to the other and left a perfectly straight comb. I was showing it to Prof. Gillette when he was at the college. I think he would bear me out in the statement. It seemed a little bit stronger because I thought, and I might say too, that the foundation with 13 sheets to the pound seemed to give just as good satisfaction as that of 8 sheets to the pound. I think that the lighter we get our foundation the more economical, and it will answer the purpose just as well. Two years ago we had an experiment in surplus wax. The advantage of full sheets or half starters has been clearly analyzed. It is shown there is just a little over one percent more wax in the sections which had the full spread of wire, than in the sections which had half-starter. The foundation used was Root's extra-thin, also the Dadant. There is no difference in the two foundations.

Pres. Root—The experiments which have been given, are quite interesting; they show bee-keepers have been using too heavy foundation. There has been too much wax in the midrib certainly, and, probably, too much in the walls. The experiment which Mr. Rankin gives, that 13 sheets to the pound, wires horizontal, give as good results as 8 sheets to the pound, wires horizontal, is quite remarkable. It isn't our experience, but it is possibly correct. I think it would be well for bee-keepers to begin using four sheets to the pound. If you are using too much wax, you ought to know it. The experiments shown before me do indicate that if one can use thin foundation in the brood-frames we have been working, and so have all the foundation-makers, towards lighter foundation. Several years ago, heavy foundation was used by bee-keepers, and later they have been using lighter foundation, which has been a great economy to the bee-keepers and saved a great deal of wax as well.

Dr. Mason—Mr. Rankin stated in putting in vertical wires, they don't have the experience. I use vertical wires and make my foundation on the wall. I have tried the horizontal wires, and with me it has been a failure every time; a good deal more to say it than with the vertical wires.

Mr. Rankin—Have any tried foundations milled at different temperatures, and found any difference in the working of the bees upon them? Which do they find best—the wax that is hard and stiff, or the soft, pliable wax?

Dr. Gillette—I have made wax that has been milled.

Mr. Rankin—I don't know anything about that.

Mr. Taylor—In reply to this question, I may state that at the time I was conducting experiments for our experiment station in Michigan, I made an experiment on that very point; I used wax in making foundation when it was at a very low temperature, just as low as it was possible and get to press it at all properly, and also at a high temperature, and I compared them and I could see no difference in the results. One seemed to be worked out just as well as the other.

Mr. Rankin—I would like to ask Dr. Mason how many sheets of foundation of the Langstroth size he says he gets to the pound with a Given press.

Dr. Mason—That depends altogether on how thick I make the sheets. From 4 to 10 sheets.

Mr. Taylor—You can make them 4 or 11, just as you are a mind to.

Continued next week.)

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER

Racine, Wis.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail. Editor.)

Drones in Worker-Cells.

Last fall I bought a 5-banded queen, and after commencing to lay I noticed that about half of her brood in worker-cells were drones. Do such queens ever get over this drone-laying business? Or should I take off her head at once? She appeared to be laying less drone-eggs and more worker-eggs after being in the colony a few weeks.

MASSACHUSETTS.

Answer.—It sometimes happens that a young queen, or one that has been thru the mails, lays more or less drone-eggs in worker-cells, and afterward lays as a good queen ought. Don't be in too much of a hurry in deciding against her.

Bees Leaving the Brood-Chamber—Best Hive for Extracted Honey, Etc.

1. I have had bees for four years in Langstroth hives, and they always have been breeding below, but this year they all went up into the supers; some hives had no bees and other supers were over run with bees. We had a very hot summer. Was it too hot for them below?

2. I am working for only extracted honey. Which is the best hive for the purpose.

3. Should I save 10 supers with 8 or 10 frames and what kind of frames are the best?

4. My best honey-flow is in September, and the first part of October. From what flowers could that be?

5. In what hive can bees be handled the best and the easiest?

New Jersey.

ANwERS.—1. The heat would hardly account for the bees going above, for generally it is warmer above. In the cases where there was neither brood nor honey below, it looks as if they might have had the super or upper story all winter. In that case, they might move above in the spring because it is warmer above.

2. There is probably nothing better for you than the Langstroth size of frame.

3. For extracted honey, you will like ten frames better than eight. As already said, the Langstroth size of frame, 17%, is not excelled. If bee-glue is not troublesome in your locality, you may like the Hoffman frame, but if bee-glue is plenty, it will be better to have frames spaced with staples or nails. In the upper story shallow frames not more than 6 inches deep. The objection is that such frames can not be used in the brood-chamber.

4. Hard to tell without being on the spot. Possibly as ters or hindered.

5. There isn't much to choose. Perhaps nothing better than the common dovetailed hive. Remember it isn't the hive that makes a difference so much as the man, the locality, and the bees.

Managing Swarming in Out-Apilaries—Bees Fanning at the Hive-Entrances.

1. On page 808 (1900) "Ind." asks how you run your out-apilary for comb honey. You say your latest plan was to visit the yard from 5 to 7 days. How do you go to work then—take out every frame and see if there are any queen-cells on them? And then you say, Destroy the eggs or grubs so as to keep them from swarming. I should judge that would be quite a job, to look over an apilary of 100
colonies or so. Now, some bees will swarm without having their cells cast; where will your swarm be if you don’t go there within 5 or 7 days? Anyhow, the queen would be gone. As I understand that you clip your queens’ wings, I think it would be the safest way to have somebody right along with you to have one ready.

2. Why are there always some bees fanning at the entrance? Some say it is for ventilation. I hardly agree with that, because my bees had a flight yesterday, and then some were fanning. If that is to cool the hive, what are they going to do when it is about 100 degrees in the shade? ILLINOIS.

Answers.—1. You are right; it is quite a job to look thru a lot of hives for queen-cells; you are also right in thinking it would be a safer plan to have one watching for swarms. But it would be a good deal of expense to have an extra hand at each apiary to watch for swarms. Of course, there’s no law against others having a watcher on hand all the time.

Y. some colonies will swarm, and the swarm will be right there in the old hive (except in a few cases where it may enter another hive.) Then the thing needed is to destroy the extra cells, or in some way provide against a swarm issuing again.

I’m not insisting that the plan is satisfactory, and as soon as I learn something better I’ll drop the present plan.

2. In nearly all cases bees ventilate at the entrance for the purpose of changing the air in the hive. Even if the air was none too warm it might need changing on account of its impurity. In fact it is just possible that the air in the hive was warm or foul, notwithstanding the fact that the outside air was not above 50 degrees. After being confined to the hive quite a number of days, the bees may become very much excited upon the occasion of flight, and that excitement may run up the inside temperature above the desired heat. It is quite likely, however, that you had one of the exceptional cases in which bees ventilate without any need of ventilation. I’m not certain whether the book tells about it, but one may often notice a bee ventilating at the entrance because it has accidentally got to the wrong hive, or for some reason is afraid of the reception it will get. A bee afraid as to its reception falls to ventilating, apparently because it thinks it will show it is willing to go right to work helping as one of the members of the colony, and ventilating is the first work that comes to hand. When a strange bee goes to ventilating it is not likely to be ill-treated by the guards.

Grading Honey by Tinted Glass.

I notice on page 88 some comments on the grading of honey by color, by the use of tinted glass, and I wonder if the idea originated among the British bee-keepers. It was advanced something like a year ago in the columns of the Progressive Bee-keeper, and, by following instructions there given, bees of a number of glasses of different tints can be graded by numbers from the darkest buckwheat to water-white. NORTH CAROLINA.

Answer.—Yes, perhaps as long as two or three years ago, there was some discussion in American bee-papers as to the matter of grading by samples of glass, celluloid, etc., and the British idea may have started from that, or it may have been an indigenous product. At any rate, our British cousins seem to have gotten the start in the matter of actual application.

**Does Sweet Clover Cause Bloat, or a Bad Flavor in Milk or Butter?**

Does sweet clover ever bloat cattle or sheep as alfalfa or red clover does? Does sweet clover give a bad flavor or odor to milk or butter? NEBRASKA.

Answer.—I do not know why, under favorable circumstances, sweet clover might not cause bloat as well as alfalfa or red clover, but I do not remember seeing any report of the kind, or any report as to its giving bad taste to milk or butter.

**Worker-Comb’s Rejected by Bees.**

I have a large quantity of good worker-combs, but being empty and not in use, they were laid aside for a season in a damp place. On this account they got hard and brittle. The bees now reject them, tho placed in the very center of their hives on a warm summer day. They pass over them, or destroy them. Can any one suggest a remedy? Is there any way to soften them, or make them acceptable to the bees. ONTARIO.

Answer.—I don’t know of anything to help, if the combs are so bad that the bees destroy them. Who does?

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**The Afterthought.**

The "Old Reliable" seen thru New and Unreliable Glasses.

By E. E. Hasty, Richards, Ohio.

POLLEN AND HONEY AT THE SAME TIME, ETC.

Most of us know, notwithstanding scientific doubts thrown at us, that bees often gather both nectar and pollen at the same time, but I suppose few had right in hand the positive proof to reply with which a scientist would require. I am glad Mr. Davenport is able to say he has taken hundreds of bees laden with both. I see no reason why a good colony scant of stores might not be given a super of unfilled sections in a warm cellar. Glad to hear that this style of feeding marks well on a considerable scale. If honey that has been fumigated with bisulphide of carbon will kill a colony of bees in the cellar, said honey is pretty sure to be of no particular good to deliver from human stomachs. That experiment ought to be repeated until we know whether the death of the bees was from poison or from fortuitous circumstances. Page 776.

SELECTING A HOME BEFORE SWARMING.

"Rip" is undoubtedly right that bees do not always select a home before swarming. We may suspect as much when they have a long distance from the home hive, and take a decidedly different direction when they start again. Also when a prime swarm comes out on a desperately hot afternoon, with little or no preparation visible in the hive. It is not likely that invisible preparations have been going on when there were no visible ones. That virgin queen got so tired in flying 50 feet that it took three days to rest her enough to start again, the “born-tired” record may be conceded to her, altho some human parlor-virgins could doubtless run her close. Page 777.

HONEY-DEW IN WINTER STORES.

McEvoy’s experiment of wintering with honey-dew is instructive, especially that part of it where part of the combs held good honey, and the bees lived somewhat longer for it but perished eventually. Page 779.

CORING A HONEY-FUNNEL.

The cork on a wire to stop and unstop a honey-funnel from the inside looks like one of those trifling but very valuable little inventions which sometimes come along. Page 787.

SILVER LINDEN NOT GUILTY OF KILLING BEES.

Notwithstanding the reliability of the journal that makes the accusation, I strongly think the silver linden is not guilty of killing the bees. Bees died of disease otherwise contracted while the accused tree happened to be in bloom, I think. Such disease need not be much different from some we sometimes called “footing it.” When we see multitudes of bees not able to fly crawling on the ground about the apiary. It is not impossible, moreover, that the same fungus which injures the linden, and keeps them from yielding as they used to do, also injures the bees, which get more or less of the spores of mycelium. Page 788.

BURNING COMB TO SETTLE A SWARM.

Most of our veterans will smile at burning comb to make a swarm settle. And yet more unpromising things than that have turned out well. In famine times the other flying bees of the apiary would be drawn by the smell of wax; and a swarm long on the wing might come, not to the smell, but to the crowd. For just once in their lives the bees belonging to the swarm don’t want to gather anything—or do anything except “scicgle.” At least that’s the “orthodox” view of it. Page 788.
The "Know It All" Kind.

I have been trying to get new subscribers to the American Bee Journal, but the bee-keepers around here seem to "know it all," tho' they find there is something lacking when they compare their honey-yield with mine, which is usually two or three times larger than theirs. H. C. Binger, Shiwawassie Co., Mich., Dec. 29.

Bees in the Cellar.

My 36 colonies of bees have been in the house-cellar since Nov. 17th, with the temperature from 38 to 45 degrees. The bees are quiet and dry, and there are perhaps a quart of dead bees on the cellar-floor. I have been looking at the bees and imaginations three times this low-power magnifying glass, and feel that what a high-power microscope would reveal must be wonderful. The bees and the bee-hive are a constant source of wonder and surprise to me.

F. W. Hall.
Sioux Co., Iowa, Dec. 25.

Bees in Fair Condition.

I commenced keeping bees two years ago, getting my start from a colony of bees that was in a knot-hole in the side of the house.

This year was almost a failure here. We secured no surplus, but our bees are in fair condition for winter. I think this locality is all right; I am going to give it a fair trial, anyway.

The American Bee Journal is just what every bee-keeper needs in his business. Success.

Dan X. Haskin.

Gathering Pollen and Nectar.

During the forepart of the past season we had such a drought as was never known here, bee-keepers, as well as those in other lines of business, were very much discouraged, and expected very little profit but the July and August rains brought new life, and the result was better than expected.

My yard contained 29 colonies, spring count. They increased to 50, and stored a surplus of over 1,000 pounds.

On page 776 (1900), Mr. Davenport refers to a statement made some time ago that bees do not gather both honey and pollen on the same trip. I noticed the same statement, and thought if it were true at all it most certainly was not universally so. My observation confirms what Mr. Davenport says. I never thought of making a test at the hive-entrance as he did, but have observed closely the bees on the bottoms of the hives. Their every movement and appearance were convincing that they were loading with both honey and pollen. This was especially noticed on the bloom of the high bush cranberry. This bloom is a cluster formed by a number of small blossoms, whose petals touch each other, forming a beautifully arched sur-
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MODERN REMEDY COMPANY, Kewanee, Illinois.

Please mention Bee Journal when writing.
and if so, I wish there might some day be published an article giving his experience with it.

We have a honey-plant here that is a good one. It is a biennial, and has only a few long narrow leaves the first year; the second year it has a long stalk and commences to bloom. The flowers are blue, and from June until frost you should see the bees on it; I have seen them fairly busy over it, like a lot of school boys just let loose. I do not know the name of it, but the flowers are not larger than a Canadian five-cent piece. I have seen them growing only in two places in Canada, and it seems to me we must have gotten them in some brewery refuse in some way, as they were growing around breweries.

W. D. HARRIS.
Ontario, Canada, Dec. 21.

Did Fairly Well.

Bees did fairly well in this locality. I secured about 4,000 pounds of comb honey from 57 colonies, with an increase of 20.

C. A. STANNARD.

A Discouraging Season.

In the spring we started with the expectation of having a good honey season, and our bees were out in good time and went to work. The weather was warm so that we soon had plenty of bees. White clover bloomed in abundance the last of May, but the bees did not store any honey from it. Basswood has been our main source for honey, but the worms destroyed that two or three years ago, and last fall they stripped the trees of their leaves again. Our crops this season ran all the way from 0 to 50 percent of a crop, so far as I can learn of my bee-keeping neighbors. Some sell their comb honey at 10c per pound, and the extracted at from 5 to 8 cents. It is hard to keep up a home trade where we run across some one else peddling it at 50 cents per gallon, and three sections for 25 cents. I get 8 cents per pound for extracted honey, and that is the only kind I have.

F. C. SMITH.
Pierce Co., Wis., Dec. 19.

A Successful Beginner's Report.

Two years ago I became interested in bees by hiring a large swarm that alighted near my home. I put them in the back yard and began to study their habits. I found the subject so interesting that I gave it all my spare time. Not knowing exactly how to care for them the first winter killed so many that I started in this year only a handful, and it was all they could do to get ready for last winter, but they came thru in fine condition. I took off the first surplus honey they produced last summer, and fixt them for this winter leaving them about 35 pounds of honey. I use the 10-frame Langstroth hive. A bee-keeper living here who saw the bees last summer said it was the finest colony he had ever seen. Having just the one colony, and buying the very best of everything, I have kept to keep it as neat as a pin, and I also profited by the valuable suggestions found in the American Bee Journal. As soon as possible I hope to increase to 3 colonies, which will be as many as my business will allow me to care for.

W. D. HARRIS.
Ontario, Canada, Dec. 21.

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If you want something that is really serviceable, reliable, and thoroughly comfortable, you should get this "Barler Ideal" Oil Stove, as it can easily be carried by any woman from one room to another, and thus have all the heat you want right where you want it.

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Please mention the Bee Journal when writing Advertisers.
The white clover was a total failure here last summer. All the honey our bees harvested was from sweet clover which is very abundant in this locality. The late Mr. Muth, I believe, is given the credit of being the one who covered over the clay and stone hills with it.

Altho I am only keeping bees for the enjoyment I derive from it, I could not have succeeded as I have without the help of the Bee Journal.

A. W. MACRAE.
Hamilton Co., Ohio, Dec. 19.

The Novelty Pocket- Knife.

Your Name and Address on one side—Three Bees on the other side.

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This cut is the Full Size of the Knife.

You may have a Knife which looks like this, but it will not be as sharp as the pocket Knife shown above. The Novelty Knife is indeed a novelty. The Novelty Knife is the handle. It is made of a beautiful picture of one of the leading bee-keepers. I always read an article with more interest when I know what the author looks like. The pictures of the different localities all over the country are also very interesting feature to me. Keep the pictures coming, even if you have to ask a little more for them. I found out that I think you are giving us a most excellent paper for the price we pay for it.

O. B. GRIFFIN.

Loss From Diseased Brood.

This has been another bad year for bee-keepers in this part of the country. Foul brood, black brood, or pickled brood—call it what you may—is doing its work. It looks the same as the comb of infected brood shown at the National Bee-Keepers Convention in Chicago last August. I had nearly 50 colonies and nuclei affected with it. I treated them accordingly to the Memorial Plan, but the disease reappeared in some colonies, while others dwindled away in spite of my efforts to strengthen them. The “glue-paper” was changed in all cases. But the dead brood was sour and had a very offensive odor after it commenced to turn black. There were only two colonies that had the “glue” smell, and in which the decayed matter had become ropy. I purchased 11 colonies and transferred during fruit-bloom, and at that time I saw signs of the disease. In June I detected the disease among them, and by fall all were dead. I sacrificed several good colonies trying to build them up. Not one of the infected colonies stored any surplus, but twenty colonies alongside which were not infected, stored from 20 to 60 pounds per colony of beautiful comb honey. The disease first appeared here in

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Every Manufacturer, Miller, Carpenter, Cabinet Maker, Machinist, Wheelwright and Quarryman, Farmer, or anyone using a grind-stone, should have one of these Tool-Holders. One boy can do the work of two persons, and grind much faster, easier and with perfect accuracy. Will hold any kind of tool, from the smallest chisel to a draw shave or ax. Extra attachment for sharpening saw-blades included in the above price. The work is done without wetting the handles or soiling the clothes, as the water flows from the operator. It can be attached to any size stone for hand or steam power, is always ready for use, nothing to get out of order, and is absolutely worth 100 times its cost.

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Directions.—The Tool is fastened securely in the Holder by a set-screw and can be ground to any desired bevel by inserting the arm of the Holder into a higher or lower notch of the standard. While turning the crank with the right hand, the left rests on an inside the Holder; the Tool is moved to the right or left across the stone, or examined while grinding, as readily and in the same way as if held in the hands.

Grinding Round-Edge Tools, the holes in the standard are used instead of the notches.

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Scientific ** Queen-Rearing,

as practically applied, describes and illustrates a method by which the best Queen-Bees are reared in perfect accord with Nature’s ways. It is written for the amateur and veteran in bee-keeping, by Mr. G. M. Doolittle, the leading queen-breeders of the world.

Bound in cloth, price $1.00, postpaid; or we will mail it FREE as a premium for sending us TWO NEW subscribers to the American Bee Journal for one year, at $1.00 each; or for $1.00 we will mail the book to any one and credit a year’s subscription on the American Bee Journal. Address, GEORGE W. YORK & CO., 118 Michigan St., CHICAGO, Ill.

1894 or 1895. The next year after its appearance I lost 70 colonies. That was a genuine foul brood, and I showed it no mercy but burnt everything. Since then I have suffered but little from its effects, until the past year and then I was puzzled. I do not know whether I will stand another full season, as I believe every apiary in the bottoms is infected more or less. If I remain in the business the coming season I will fall back on the fire remedy, as I know that is sure.

The season here was fair for honey, and the good colonies stored honey until at least the end of October. Out of 70 colonies I have about 30 left, and will lose more by spring.

Good套装. I began the bee-business 7 years ago with one colony, I now have a month’s supply of honey, which has been very useful to me, and I have as many as 15. During the past summer there was no clover of any kind, and the two colonies did not cast any swarms, nor did they store enough honey for winter, and so had to be fed. I have got 1000 pounds of honey from one colony, spring count, as was reported the other day, from my two new summer I might get 300 pounds, which would be some encouragement to continue, but the way things look now I shall have neither bees nor honey left by fall. When people tell about having to feed their bees for winter, I know how to sympathize with them, but some of the stories that get into the papers are big enough to choke me.

Hennepin Co., Minn., Dec. 25.

The Lightning-Bug Bee!

While the long and short tongued bee is being so much discredited I wish to say that I bought a strain of bees from an old fellow that kept few bees in this neighborhood years ago, and they do say they cast with the lightning-bug and work by night! (No queens for sale.)

DANIEL JONES.


A Drought for Three Years.

An unprecedented drought of three successive years has visited southern California, and the beekeepers and the grain farmers’ interests suffered very severely, we are reduced in numbers to a minimum of a few apiaries, and we had to work out to make ends meet. We all hope for a better season to come.

This is the land of perpetual sunshine, but farmers and beekeepers have been scanning the sky only to be disappointed, and a radiant hot sun pours forth on the hills, valleys, and meadows.

GUSTAV VOSS.

Riverside Co., Calif., Dec. 22.

Hardly Paid Expenses.

The bee-business has hardly paid expenses the last three seasons, and it is hard scratching to spare the change for more subscriptions which you can’t run the “Old Reliable” without money, and I can’t do without the paper. I will try to keep bees one more year before I give it up.

T. M. BARRETT.

Orange Co., Calif., Dec. 20.
Good Honey Crop.
We had a good honey crop in the spring, securing an average of nearly 70 pounds of comb honey per colony, but our fall flow failed entirely, and we found feeding necessary for the first time in six years.

We have had a lovely winter so far—frosty mornings, but warm enough for the bees to be active in the daytime. Now our bumble and halmy, and the bees are in full flight now. Maple will be in bloom in a few days, and pollen-gathering will begin.

I feel as tho I cannot do business without the American Bee Journal, which, I think, is the best of all bee literature.

F. M. CREIGHTON.

200-Egg Incubator
for $12.00

Perfect in construction and action. Hatches every egg perfectly, incubates from 50 to 100 eggs at one operation. 200 eggs. For $1.00 extra, incubates for 250 eggs. Call at Geo. H. STAHL, Quincy, Ill.

Please mention the Bee Journal.

260 Varieties.
I breed fine poultry on one of the best equipped poultry farms in the State, and have an extensive sale of fine poultry, hatching eggs, and chickens, dealing in all varieties and in large quantities.

B. H. CREIDER. Florin, Pa.

WANTED!

A WHOLE GARDEN
For 14¢.
We wish to raise this year 50,000 new sets of plants for the market. This will be done with the nicest care by the best methods of cultivation, and we can offer the best and finest stock of any kind at a reasonable price. The seeds are offered for sale now, and will be ready for planting in a few weeks. The following are the kinds of plants we offer for sale:

Petunias—White, Rock, and Lavender
Scented Geraniums—Red, Pink, and White
Cineraria—Red, Pink, and White
Lavender—White, Pink, and Purple

The price is 14¢ per set, and the seed is offered for sale for $.25 per pound. We have a large assortment of plants, and can supply any quantity. The plants are raised on our own grounds, and are of the best quality. We are anxious to supply the market with the finest stock of plants, and are willing to sell at the lowest prices.

J. A. C., L. O. BEER, Co., Longwood, Wis.

Please mention the Bee Journal when writing.

To Last Ten Years.
Without reservation we warrant our Cyphera Incubators to do all the work required of them, or we will replace them, if necessary. Two large models are in self-repair and regulation, and the same for fire-proof, self-sealing; to produce stronger chicks in all sections of the nation, and at any price.

The Cyphera is a new and superior model, and is the only one used by beekeepers in the United States. The price is low, and the model is the best in the market.

The Cyphera Incubator Co., Chicago, Ill., and Box 50, Mass., Please mention the Bee Journal when writing.
We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR
Hives, Extractors
OR ANYTHING YOU WANT IN THE
BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are a thousand better and cost more than other makes. New Catalog and copy of THE AMERICAN BEE-KEEPER free. Address,

THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

W. N. Graham, E. M. Bingham, N. H., carries a full line of our goods at catalog prices. Order of him and save freight.

Please mention Bee Journal when writing.

PATENT WIRED COMB FOUNDATION
Has no Sag in Brood-Frames.
Thin Flat-Bottom Foundation
Has no Flubbone in the Surplus
Brogue.
Belong the closest is usually work the quickest of any foundation made.

J. A. VAN DEUSEN,
Sole Manufacturer,
Sproat Brook, Montgomery Co., N. Y.

Please mention Bee Journal when writing.

SWEET CLOVER
And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

<table>
<thead>
<tr>
<th>Clover</th>
<th>Price</th>
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<tr>
<td>Sweet Clover</td>
<td>$1.00</td>
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<td>Yellow</td>
<td>$2.25</td>
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<td>Crimson</td>
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<td>White</td>
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<tr>
<td>Alfalfa</td>
<td>$2.25</td>
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Prices subject to market changes. Add 25 cents to your order for cartage, if wanted by freight, or 10 cents per pound if wanted by mail. Address, GEORGE W. YORK & CO., 118 Michigan Street, CHICAGO, ILL.

IF YOU WANT THE
BEE-BOOK
That covers the whole Apicultural Field more completely than any other publisher, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his Bee-Keepers' Guide.

IF YOU WANT THE
BEE-SUPPLIES!
# Root's Goods at Root's Prices

Please mention Bee Journal when writing.

24th Year
Dadant's Foundation. 24th Year

We guarantee satisfaction. **
What more can anybody do? BEAUTY PURITY, FIRMNESS, No SAGGING, No OILY ROOTS.

PARENT Waxed COMB FOUNDATION.

Patent foundation, with waxed comb. Order from your dealers or address, CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

Why does it sell so well? **
Because it has always given better satisfaction than any other. Because in 23 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

LANGSTROTH on the HONEY-BEE—Revised
The Classic in Bee-Culture—Price, $1.25, by Mail.

Beeswax Wanted ***
AT ALL TIMES.
CHAS. DADANT & SON,
Hamilton, Hancock Co., Ill.

Please mention Bee Journal when writing.

MADE TO ORDER.

Bingham Brass Smokers,
chose of sheet-brass which does not rust or burn. We should last a lifetime. You need one, but they cost 25 cents more than in the same size. The little pen cut shows our brass huge cut on the three larger sizes.

No wonder Bingham's 4-inch Smoke Engine goes without puffing and does not DROP INKY DROPS.

The perforated steel签-plate has 20 holes to air the fuel and support the fire.

Prices: Heavy Tin Smoke Engine, four-inch Stove, per mail, $1.50; 3½-inch, $1.10; three-inch, $1.00; 2½-inch, 90 cents; two-inch, 65 cents.

BINGHAM SMOKERS
are the original, and have all the improvements, and have been the STANDARD OF EXCELLENCE for 22 years.

Address, T. F. BINGHAM, FARM, MICH.

Please mention Bee Journal when writing.

Sections—A Bargain.

We have 50,000 3¼ x 1½ inch plain sections, and as our call for them is light, we will sacrifice them. Prices very low. Write.

Aptaries—Glen Cove, L.I. J. J. STRINGHAM, 105 Park Place, New York, N. Y.

Please mention Bee Journal when writing.

Four Celluloid Queen-Buttons Free

AS A PREMIUM

For sending us ONE NEW SUBSCRIBER to the American Bee Journal for three months with 30 cents, we will mail you FOUR of these pretty buttons for wearing on the coat-lapel. (You can wear one and give the others to the children.) The queen has a golden tinge.

This offer is made only to our present regular subscribers.

NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one of the buttons as it will cause people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of more or less honey; at any rate, it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."

Prices of Buttons alone, postpaid: One button, 8 cts.; 2 buttons, 6 cts. each; 5 or more, 5 cts. each. (Stamps taken.) Address, GEORGE W. YORK & CO., 118 Michigan St., CHICAGO.
YELLOW OR WHITE

**Sweet Clover Seed**

**Free as a Premium**

For Sending us One New Subscriber for a Year.

There has been so much written about both the white and the yellow variety of sweet clover, that we will simply say here that if one of our present regular subscribers will send us $1 with a new name for this year, we will mail, postpaid, to the one sending the new name and the dollar, either **one pound** of yellow sweet clover seed, or **two pounds** of the white sweet clover. This is a good chance to get a start of both kinds of these honey clovers. Better send two new subscribers (with $2.00) and get the three pounds of seed.

Address,

**GEORGE W. YORK & CO., 118 Michigan St., CHICAGO, ILL.**

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**Weekly Budget**

Mr. J. A. Golden has an advertisement on page 46, offering his stock of Golden combination Hives for sale. Write him at once if you want to try his system of producing comb honey.

John H. Martin, better known as Ram-ber, has been keeping bees for some time in Fresno Co., Calif. He is now in Los Angeles county again, and wrote us as follows, Dec. 22nd:

"I have returned to the south after a successful season in central California. There was a grand rain here about Nov. 29th, but since then the skies have been clear. Bee-men who smiled broadly then now look sober. It is time for another rain, and if it does not come soon there will be a lot of blue bee-keepers. It is the old, old story—the bee-men here never know where they are at respecting a honey season till well towards spring. After nine months absence from my old apiary, I find them flourishing and the bees are anxious for a good honey season. And for which we all devoutly hope."

Walter S. Ponder, of Indianapolis, Ind., writing us Jan. 4th, had this to say:

"I regret exceedingly that you have been so unfortunate as to lose a fire in your establishment. You have my sympathy, and I hope the loss and inconvenience will be less than expected. I have often wondered what I would do in case of fire here, but in your case, with the Bee Journal on your hands, I know the situation must be very serious and troublesome.

"I have had no bill for my last quarter's advertising, but think the little amount might do you more good right now than later. Find check enclosed."

Thank you, Mr. Ponder, for your kind words of sympathy for us in our "food" of troubles. We hope you may never be visited as we were; but, as the saying goes, "a bad beginning makes a bad ending," we may end the 20th century all right—though we will not likely see its end.

O. L. Hershiser, superintendent of the Pan-American Exposition, wrote us as follows January 7th:

"My Dear Mr. York:—A letter from E. R. Root has informed me of your loss by fire, of the offices of the American Bee Journal. No particulars were stated, but I trust you had insurance protection, and that the only loss to the readers of the American Bee Journal will be some necessary delay. I regret the inconvenience you will be occasioned, but I have no doubt of the future of your excellent publication, even against the scourge of fire. It would be quite un-Chicago-like for anything in your enterprise city to be subdued by that or any other calamity. The enterprise of the American Bee Journal is well shown from the fact that, although the office was burned on the evening of Jan. 7th, we were informed, we had the initial number of the new century before learning of the disaster.

"Wishing the American Bee Journal a prosperous century in the hands of its present proprietor, and his successors, believe me,
Yours very truly,
O. L. Hershiser."

As noted in last week's Bee Journal, our loss was occasioned by a fire, that was thrown on the fire which was above us. It was almost a miracle that we were not burned out also.

We wish to thank Mr. Hershiser for his kind letter.
Yellow Wax and Slow Cooling is a subject which receives considerable attention in the first number of the American Bee-Keeper for the new century. Editor Hill seems to understand that this journal teaches that any sample of wax, no matter what its color, and no matter what may have caused that color, may be changed into bright yellow wax by simply cooling it slowly. This journal has never pretended to claim for slow cooling anything more than that it allowed the foreign particles time to settle. The average beginner will have a cake of wax that has been rapidly cooled, and so of dark color because of its impurities. If nothing has been done to affect the color of the wax except the rapid cooling, slow cooling will clarify it, of course, it may be made still brighter by acid.) That's the whole thing in a nutshell. The editor of the American Bee-Keeper has emphasized the necessity for slow cooling, and nothing that he publishes in his last number militates with the teachings intended to be given here. It is a regrettable circumstance if lack of control of the English language has allowed any meaning to be given that was not intended.

The Long-Tongue-Short-Tube problem is still on. J. Warren Arthur, in Gleanings in Bee-Culture, reports advance at the red-clover end. The interesting details are as follows:

In 1896 I noticed bees going and coming in one direction, namely, southwest. Thinking to find what they were working on, I followed in that direction, and found very few bees at work on or near the ground, and no timber of any appearance on which they could work. About a mile and a half from home I found a clover-field fairly swarming with bees, while a clover-field of 20 or more acres one side of it, not 50 yards apart, and not more than 40 feet from the remainder of my lot of 30 acres, had very few bees on it. Some two or three days after, I noticed the bees stopping work about noon, and taking my wheel I rode around and found my clover-field laid low. When the second crop came in bloom I again noticed the bees in particular, and found them working on this same field, although the field across the road from my home contained many more bees than on the first crop. This fact alone caused me to decide that I wanted seed from that particular field. When the neighbor hauled his seed, by offering a few cents above the market price, I obtained it, but had to take the entire crop to get any. I managed to sell some of it to some of my neighbors, and some more to my father, who lives about ten miles southwest of me.

The crop of seed soon near me in 1899 was almost a failure in catching, and what did catch was winter-killed last winter, while some fair fields were left over at my father's. My prospects for honey last spring were from thing but bright for 30 colonies, so I decided to divide up territory. I took five of my weaker colonies and one strong one to my father's; four were taken to a place where there were a fair number of basswood trees, altho badly cut by the canker-worm. Well, this fall I had 24 colonies to feed, nearly all being at starvation's door.

My father said when he cut his hay he never saw bees thinking of a buckwheat patch than on his clover. I made a trip to see how they were doing, and had the pleasure (I?) of helping him haul up his hay; but when that clover-field bloomed for seed, those bees filled up everything tight; and I was surprised, on going down one day, to find them so. Now, I feel that that clover had something to do with it. But the weakest colony taken down there built up the strongest, yet could not have been fuller of honey than the other five.

It has been suggested in Gleanings that wherever there were bees with tongues long enough to work on red clover there would be seed matured on the first crop. The possibilities that lie in this suggestion are worth consideration. It is well known that seed from red clover is secured only from the second crop, altho the reason therefor is not so well known. It is a very simple one. The fertilization of red-clover blossoms is effected mainly by bumble-bees. Unlike our hive-bees, bumble-bees start in the spring, not with several thousand bees in a nest, but with a single bee. It is well known that seed from red clover blossoms, bumble-bees are so few that not enough blossoms are fertilized to make a crop of seed worth harvesting. By the time the second crop is on, the number of bumble-bees has multiplied many times, and a full crop of seed is secured.

Now, if hive bees are secured with tongues long enough to work on red clover, it is easy to believe that they may fertilize the first crop. From this first crop it will be easier to obtain seed of the short-tube kind. A little explanation will make this clear. In the second crop of red clover there will be tubes of various lengths. Hive-bees may work on the shortest of these, or the bumble-bees on the rest. So it will happen that the seed from this crop will produce blossoms having tubes of different lengths, with perhaps a constant tendency to revert to the original and longer type. Only by difficult and careful selection under such circumstances could a flat type of short-tube clover be secured.

Now, instead of waiting for the second crop, let fall attention be given to securing seed from the first crop. The hive-bees will fertilize the blossoms with short tubes, and those with long tubes will for the most part be unfertilized. So whatever seed is secured from that first crop will be of the short-tube kind. The next year it will produce red clover with blossoms, all of which can be utilized by the hive-bees, and by saving seed each year from the first crop the long tubes will be automatically weeded out.

Tim Cans vs. Barrels for Honey.—We think most of our readers are aware that we strongly favor tim cans for holding honey. And we have not come to this conclusion hastily, but after considerable experience with handling honey in both kinds of packages. We are free to say that we don't care to handle any more honey in barrels, no matter what the grade of honey is.

Some of our good friends in Wisconsin—which, by the way, is a great barrel state—enjoy opposing our stand on the can, of course doing so in a good-natured way. But it is our turn now to refer them to the following, by Elias Fox, of Wisconsin, which appeared in a recent issue of Gleanings in Bee-Culture:

I can truly indulge all that was said in favor of tim cans as against barrels for the shipment of honey, at the Chicago convention. I have had quite a little experience along this line myself, and have decided never to use a wooden package for extracted honey again. I began putting it up in wooden packages with wooden hoops; and I found by letting them stand a short time the hoops would loosen up, and, unless watched very closely, and hoops tightened, there would be a leak, so no matter how good the coopage; and, even in shipping, the hoops would loosen.

Then I had my cooper use iron hoops, and my experience was the same, by letting the packages stand for any length of time, notwithstanding we selected the choicest and most carefully seasoned staves and the coopage was perfect; and the packages were made up a year before using, and kept in a dry place and a little heavy, no almost invisible knots, no larger than a pinhead. Of course, so far as the loss was concerned from leaking, it was nominal. But if you count the amount of honey absorbed by the wood, and the leakage together, it would equal, if not overtake, the difference in the cost of the two packages.

Then, again, think of the nasty, sticky packages to handle, and hands and clothes fumbled with it; and barrels are in this condition, and rolled along, as advocated, dust and dirt will stick to the leaking spots, and make an unsightly package aside from souring depot platforms and car-builds, to attract bees, flies, etc.

The barrel side of the debate say if a case is dropped, the soder will brown, and a leak would result, and that the cans are too widelv and too heavy to handle. A man should not be so awkward as to drop a package. But suppose he is, and the package should be a barrel. Also, the hoop of the wooden barrel goes in and out the can, and it will burst open, which would leak the worse. To the cans being a little heavy, I might say they are; yet I have moved, alone, 5,000 pounds in two-cans cases in a day; had ten rods to carry it to the
wagon, two miles to bind it, and piled it up five cases high, and my consultation paid me for the extra work in knowing there was not a drop of leakage, and no booj to bunch while I slept.

We can not be too neat in handling and making neat, everything to be done in a short space of time and to look as good as we can. My new 18-pound cans, and I will guarantee my honey to reach any market in such a condition as will not need cleaning in the market. I have found them, and no loss from leakage or absorbing. If we use a cheaper package for dark honey, there are plenty of them in all the cases and cases to be bought as cheaply as barrels.

We welcome Mr. Fox, to the tin-can side of the debate; and if he will be present at the Madison meeting of the Wisconsin State Bee-Keepers Association, on Feby. 5th and 6th, next month, we (Mr. Fox, Mr. Hatch and ourselves) will simply 'do up' those wooden-helmed-barrels, like P.T. Barnum, Wilson, McNay, and others. Of course, we'll treat them square, to be sure, but will see that they don't roll any of their honey-soaked and leaky-dusty wooden barrels over us! We'll just 'honey-can' those boys so that 'they'll keep like any other kind of canned goods.

**The Case of Utter vs. Utter.**—As mentioned in a former number, we give this week something further about the celebrated peach-bee case of Utter vs. Utter, which came to its final issue before the jury of Benton, N. Y., Dec. 19, 1900. Gleanings in Bee-Culture contains quite a full report of the trial, from which we take the following, written by Editor E. R. Root:

The case was a peculiarly hard-fought one; and was no ordinary case. The bees were placed on both sides by the plaintiff in a very practical way, in a beehive in the front room of a farm, and the bees were fed on the same side as their handles. Need I say that the National Bee-Keepers Association took an active part in this case—-one that was in the very life of bee-keeping in New York. It pledged 810 to Bacon & Merritt, two of the leading attorneys of Orange County—lawyers who have been retained in some of the most important cases that have been tried in that vicinage.

But, the bees, as the witnesses testified, and some queer statements on the part of the witnesses for the plaintiff, as to how the bees did and didn't do anything, and how the bees used their "horns" (antennae) to make holes, etc. In the lower court, several of the witnesses, I am told, got seasick from the "sight" of their "horns and legs" and "swung the fruit" when the bees had punctured the peach and put them in the trees. This was thoroughly in the trees. And, if this was the case, these trees were going to die, and the trees would have to put them up, and this was before the bees are allowed to have visited the fruit.

I do not need to rehearse here the testimony that was introduced by expert bee-keepers, but I can not omit reference to the testimony of Professor E. C. Brandes, Entomologist, Department of Agriculture, Washington, D. C. Prof. Benton had been sent by the National Bee-Keepers Association to render expert testimony on the mouth parts of the bees, and he certainly was the star witness for the defendant. He was a splendid witness and dead specimen of bees, and also charts which he had brought for the occasion, that in his opinion would put an end to the idea of the bees being to puncture fruit with their mandibles or jaws; that the bees of jaws were very different from that of the"bees of their kind". He chloroformed some bees and then past them around to different persons. The bees have obtained consent from the court to do so. He showed them that the delicate tongue, so far from being a "beetle's" which is used to puncture a sound piece of fruit, was more like a canele's hair; that it would be absurd to suppose that they would be used on the skin of any fruit. He admitted that bees could tear by picking away at fiber, but denied the possibility of doing much damage to the skin of any fruit. The jaws or mandibles, had smooth rounding edges, which, he showed by charts, were different in the case of bees and the jaws of bees would have to be brought to a temperature of about 90 degrees before such work could be performed. The professor's testimony, so far from bearing evidence of prejudice, was what might be termed in legal phraseology, "candied," the kind that weisgins with a jury. There was no evasions, and no attempt on his part to make a "testimony of the wrong of the bees. When asked whether he regarded the experiment of confining a few bees in a box with a peach as "nonsense," he replied that he could not or could not puncture sound fruit, he said, that in his opinion, it did not count for much, as he had seen in a box with bees that were able to go out of doors. He said yes, in very good order. This testimony was produced, probably, to show that the trees did not have much damage, and to guard the plaintiff by the defense. But Mr. Bacon, in his final plea before the jury, called attention to the fact that his trees had been destroyed, and that now they were good and sound, and yet be desired compensation for the trees which he at first said were destroyed! Mr. Bacon made a strong plea, picking up all the important things of evidence and pointing them at the jury in a most forcible manner.

The attorney for the plaintiff, while he did not make the testimony against the bees, turned his guns upon A. L. Root, shaking his fist in his face, and calling him the great "bee-fool" of the west. We do not intend to relish the compliment; but the rest of us enjoyed the joke immensely, and I hope the Bee-Foolers of the west will not take the compliment amiss. We consigned A. I. by saying that it signified something big, and told him not to feel so proud.

Of course, no one could tell absolutely what the jury would do; but it seemed to be made up of a "fruit man," and that faces, of a lot of intelligent, thinking men.

The judge, in his charge, rehearsed very carefully the points that he believed that the bees were responsible; and, then said that the jury, in order to render a verdict for the plaintiff, must find that the bees in fact proved that the trees were killed by the trespassers; and that it (the jury) should further give very careful consideration to the habits of the bees, and in about ten minutes returned with a verdict of "no cause for action."

The National Bee-Keepers Association exerted a powerful influence in the case, in that it enabled Mr. Utter, the bee-man, to employ outside counsel on either side, and no lack of witnesses; but, thanks to the Association, we were able to show that the evidences adduced by the plaintiff was, for the most part, to put a most charitable construction on it, founded on misapprehension, ignorance, and the mistakes of the bees. There is no doubt that some witnesses for the fruit-man actually believed that the bees did more good than harm. They are, in fact, "bees of ill-sorts." If they did so believe, and if they heard our evidence, their belief must have been most severely shaken before they went away.

**The Delays and Interruption to our business, occasioned Jan. 1st by the water poured on the fire above our copy of the Bee Journal.** By another week we hope to know just what and how much of the Bee-supply stock was damaged by water. Some of it is a total loss, some slightly damaged, and some still in good condition having been well protected with tarpsaul covers.

We are not anxious to have another such a disturbance; but if it should happen, we will "settle the dust." it also quite as thoroughly unsettles things too much. However, these events bring home to the common man and we perhaps are getting only our share.

**AMERICAN BEE JOURNAL.**

Jan. 17, 1901.
The National Bee-Keepers' Association.

General Manager Secor's 4th annual report was sent to members of the Association last month with a voting-blank for the election of three directors and general manager. Mr. H. F. Moore and the Editor of the American Bee Journal were selected as the committee to receive and count the ballots. The result will likely be known in time for announcement next week.

In order that General Manager Secor's report may have a wider circulation we give it here:

**FOURTH ANNUAL REPORT OF THE GENERAL MANAGER OF THE NATIONAL BEE-KEEPERS' ASSOCIATION.**

*Forest Cty, Iowa, Dec. 11, 1900.*

*Fellow Members,—* At the last annual election the general manager and directors, Dec. 5, 1899, the question of uniting the two National societies was submitted to the members of both organizations, and the new constitution, which slightly changed the name of our society, was ratified and endorsed by a large majority of both old societies. It is therefore gratifying to report that what some thought to be two rival associations with similar aims have united, and the loudest interest augurs well for the now-named "National Bee-Keepers' Association.

There is no doubt about the usefulness of such an organization, if properly managed. The question of its efficiency under the present management is pertinent, and every member may rightfully express his confidence of this critic when he approves the present manager's report.

The present manager does not pretend that his judgment is infallible or that the efficiency of the organization can not be increased by other management than his own. But this must not do, because he has honestly and faithfully discharged the duties imposed to the best of his ability.

The board of directors and all other officers of the Association have heartily co-operated with the general manager in the business in hand, and therefore entire harmony prevails and a perfect spirit is noticed.

The kind and appreciative words received from time to time from members of the Association and friends generally are prized beyond compare. They are like sweet flowers found in desert places where one expects to find the hard thorns of bitter opposition. It is easy to labor when one is cheered on by encouraging words.

I have not in every instance been able to help those who have appealed to me. Some cases have been too hard. For example, it is not possible to collect a bad debt if the debtor is bankrupt and execution-proof, with no disposition to pay. Dishonest honey-dealers will sometimes evade their debts and escape punishment just as a thriving bank-teller will occasionally squander the savings of depositors and go scot-free. The suggestion is here emphasized that it is better to look up the financial rating of every man who buys honey, and the honesty of every commission man, before making a contract, rather than try to recover a bad debt hastily accepted.

**The Case of Utter vs. Utter.**

Several months ago, in the County of Orange, New York, two brothers fell out, the one a grower of peaches and the other a bee-keeper and member of this Association. The peach-growing Utter sued the bee-keeping Utter before a Justice of the Peace, and asked for damages done to plaintiff's peach-orchard by defendant's bees. The case was tried, and after a good deal of damaging evidence was introduced by the plaintiff, and astounding revelations as to what bees can accomplish, one of the bees disappeared, and the judge decided against the bee-keeper and assessed him $25 and costs. While there was a lack of competent evidence that the bees were guilty as charged, it seems that the fruit-growers had the sympathy of the court.

The case was sensationally written up by reporters and the matter was given wide circulation thr thr many papers. The coloring given to it was generally against the bee-keepers.

The Rural New Yorker, however, used its influence to show that bees are not guilty of injuring sound fruit. But a letter from its editor, besides communication from many bee-keepers, convinced me of the alarm that was felt if this decision should stand. A great deal of the information which I was able to give the public was in the future it was feared that other bee-keepers might suffer. The general manager, therefore, with the concurrent judgment of a majority of the board of directors, ordered the case appealed to the county court, and it is proposed there to try the case over again on its merits, with enough expert witnesses to get the facts before the jury.

Mr. H. F. Moore is an able man, and, as in the judgment of the general manager, the matter was one which had to be fought out sooner or later in the interest of truth and justice, he pledged $100 toward a favorable verdict. The Association will be glad to list the names of several expert witnesses while attending the trial. The results can not be ascertained in time to go into this report.

**Bees and Horticulture.**

During the past year the general manager has compiled and published a twelve-page pamphlet showing the value of bees as pollinizers and fruit-producers. This was thought to be a necessary because ignorance is believed one of the part of orchardists relating to the work done by insects in their interests. Spraying is becoming more and more common. When to spray and what preparations to use are shown, quoting competent authorities. Laws of several of the states in relation to spraying are also quoted.

This pamphlet has been forwarded to several members who feared trouble from neighbors who threatened to spray with poisonous substances while trees were in full bloom, and it is hoped and believed that this timely publication has had a sedative effect, being the result of a heavy protest to this office of damage done to bees by spraying where it was distributed. It has always been my policy to try to prevent law suits rather than to win them. If by educating the people who respect each other's rights—it is better than winning victories at the end of bitter legal battles.

The above pamphlet was sent to several agricultural and horticultural journals and in every instance was favorably noticed.

**The Fight for Pure Honey in 1899.**

It will be remembered that the Association put up a fight against adulterated honey in Chicago last year. A statement of this matter was in my last annual report. While the outcome of the suit was not satisfactory to us at the time, later developments seem to indicate that it was not an isolated case. The following extracts from Gleanings of Sept. 15, 1900, may be of sufficient interest to warrant copying here. It is as follows:

"At the Chicago convention we had the pleasure of hearing Prof. E. N. Eaton, chemist, and Commissioner A. H. Jones, of the Illinois State Pure-Food Commission. Both of the gentlemen express themselves as being highly pleased to meet so representative a body of bee-keepers as assembled for the purpose of discussing ways and means for purifying the honey. They told how the work they had already begun; how they had compelled the dealers throughout Chicago (the very hotbed of adulteration only a few months ago) to sell all food products under their legitimate and real name. Some of honey mixtures contain a word 'pure' which has never appeared in the place to conform to a recent law enacted at a session of their last legislature. All kinds of honey, if they are sold at all, have either been relabeled or else the word 'pure' has been scratched out and the word 'imitation' in bold letters put in its stead.

"It will be remembered that the United States Bee-Keepers' Association, under the direction of General Manager Secor, and thru the personal efforts of George W. York and Herman F. Moore, (a well-known honey-man and an attorney,) gathered up, a year or so ago, a number of samples of honey and other products and before the city prosecutor, and certain suits were begun against the vendors of the samples. It created quite a furor among the dealers, for the Chicago papers were full of the matter for the time being and altho the suit resulted in a verdict of "not guilty" for one of the parties on a queer sort of technicality before the justice, the result of this prosecution, while apparently a failure, was a far greater success than the Association could have hoped for. Prof. Eaton and Commissioner Jones stated before the convention that the suits begun by the United States Bee-keepers' Association made such a stir in the city that it helped in no small degree toward the enactment of the new law against "false labeling."

"I wish to acknowledge the hearty co-operation of the Division of Entomology, Department of Agriculture. Mr. Frank Benton, assistant in the Division, has rendered valuable service by replying ably to enquiries directed to the
Department on the subjects relating to bees and fruits, and has put into my hands copies of correspondence in several instances where litigation was threatened, which but was averted by prompt and prudent action.

Carlisle, January 3, 1897. Mr. Abbott was reported to the entomological Division stating that the city authorities proposed to pass an ordinance prohibiting the keeping of bees within the city limits and for four miles outside. The matter was referred to me, and such literature as was available was forwarded for the attention of the beekeepers, and they were also referred to McLain’s experiments. No doubt the matter was dropped by the city, as nothing further was heard of it.

Several other cases have been reported to me during the past year, of cities and towns threatening to rule the bees out, but copies of the celebrated Arkadelphia decision sent, no doubt had a restraining influence.

The general manager has written more than a hundred official letters during the year, besides horticultural copies sent the directors at different times, and besides the regular routine of official notifications and receipts.

Many of these letters have been lengthy legal opinions in answer to members who have been threatened with lawsuits.

The Association sent Mr. Abbott as delegate to the Third annual convention of the National Pure Food and Drug Congress, which convened in the city of Washington, March 7, 1897, and paid a small portion of his expenses. The object of this trip was to add interest of purity and honesty of all foods and medicines consumed by man. It is laboring for the enactment of laws to protect innocent purchasers from deceit and fraud. The board of directors believe such efforts worthy of aid.

THE HAKES ADULTERATED-HONEY TRIAL.

January 22, 1900, Secretary Dr. A. B. Mason, at my request, forwarded copy of agroceryman at Jackson, Mich., who had been arrested by the State Food Inspector on the charge of selling adulterated honey. The suit was in the circuit court of Jackson county, and it appears to have proven beyond doubt that the honey offered for sale by the accused, Mr. Hakes, was largely adulterated with glucose syrup. The court instructed the jury to return a verdict of guilty, which was done. I have no doubt that this trial will have a wholesome effect in Michigan and in all other States where pure-food laws are in force.

If impure extracted honey can be driven from the market, and consumers led to believe that what they buy as honey is really the product of the hive-bee, a better price may be realized by the producer of a first-class article. It may therefore be well at this critical juncture of the commercial season to call the attention of the beekeepers to the case of Mr. Hakes, and to encourage a demand for pure honey. A good single-lift honey ought ever to be offered for sale.

In conclusion I wish to admonish our members to keep out of trouble if possible. Don’t get the idea that this Association can do everything. Beekeepers must keep within the law if they wish to have the protection of law. Bees may become trespassers like other domestic animals, and beekeepers may be liable for damages done by bees in some instances. It is therefore wise to avoid any conflict with near neighbors which your care can prevent. Infuriated bees in a thickly settled neighborhood may bring legal contests which this Association can not win. The Golden Rule is the highest law.

EUGENE SECOR, General Manager.

Mr. Secor closes his report with a financial statement showing a balance on hand of $53.15.

The Association has numbers 560. It is unfortunate that so large a number of beekeepers have not yet discovered the personal benefit and security there may be for them in uniting with the National Bee-Keepers’ Association, yet it is pleasant to know how much has been already accomplished by organization, and the present number of members gives hope that it may continue to increase. There ought to be a large gain in membership with the beginning of the new century, and now is a good time to act.

The American Fruit and Vegetable Journal is just what its name indicates. Tells all about growing fruits and vegetables. It is a fine monthly, at 50 cents a year. We can mail you a free sample copy of it, if you ask for it. We club it with the American Bee Journal—both for $1.10.
these goods are only too willing to use that to assist them in selling the product. One of them is called, I believe, "Malt Honey." There is no honey in the preparation at all. There is another name for it; they don't care to call it by that name; they would rather call it by the name of "honey." That company has been asked to leave off using the name "honey." It is probably the only sample of that preparation, that is labeled "Honey Syrup." There is no honey in that sample, either, and that was taken by one of our regular inspectors out over the State, and since the law went into effect. The word "honey" has been scratched off. We hope to prevent the use of the word honey altogether on the goods which do not contain honey, unless there is some honey in the preparation, or unless the word "Adulterated" accompanies the word "honey." Of course, they can use the word honey if the word "adulterated" appears in large letters equally as prominent.

Mr. Green—I have seen honey on the market which was labeled "Imitation Honey," with the word "imitation" very small type, and it was not in any law?

Prof. Eaton—No, sir: that does not comply with the law. The law requires that the word "adulterated" shall be in large and conspicuous type. I have noticed that myself, but the company that has been putting out the most of it in this State intends to use the word adulterated. This indicates you the way it should not be, but it gives you an idea of the way the law requires it to be labeled "Adulterated Honey." You will notice they put this [indicating] small type on a package that looks very hard to practice not to show up as well as they ought to. Hereafter they have agreed to put on better letters. This is the label the gentleman referred to, probably, where the word "imitation" occurs, and you will notice it is in prominent letters: that is illegal. It will be hard to prevent, I presume, the use of the word honey in the way I have spoken of, because it will be impossible to apply the same principle to other goods. For instance, selling coffee, where the word "coffee" is used on the can; that word is so commonly used and there is so little fraud in it, perhaps there is no great objection to its use. A little more objectionable, perhaps, are the words "Fruit Cocoa" which some of them are using. I am very much obliged to you for your kindness. [Applause.]

Mr. Abbott—I want to call attention to the statement on the label. I want these bee-keepers to see how people trade on that reputation, and the check and gal of it. This reads: "With this preparation is free from the deleterious properties of this and similar sweets,"—free from the deleterious properties, it says, of honey. I wish some of you would tell us what deleterious properties of honey are. The people who are producing that article say that honey is free from the deleterious properties of honey; if there is anything on God's earth that honey would hurt, I would like to see the thing.

It seems to me the world is moving when the time comes in the State of Illinois, and perhaps in Chicago, that they have come to the point they are scratching out the word "honey" when it is obviously on a can of bogunstuff. We are making progress, whether the National Bee-keepers' Association can do anything to do with it; it may have had some little influence.

Prof. Eaton—It had a good deal.

Pres. Root—It is encouraging to think we have done a good deal. I would like to have that thing photographed, that word "honey" being crossed out, compelling the people who sell goods under their own names. The committee on resolutions will now report.

REPORT OF THE COMMITTEE ON RESOLUTIONS.

Resolved, That this Association urge upon the Congress of the United States the importance of enacting into a law the House Bill known as the Brosias Pure Food Bill; that we would impress upon the individual bee-keepers of the United States the importance of addressing their Senators and Representatives, asking them to give their support to this bill.

Resolved, That the thanks of this Association are due, and are hereby heartily tendered, to the Chicago Bee-keepers' Association for its success in soliciting the efforts of their Senators and Representatives, asking them to give their support to this bill.

Resolved, That the thanks of this Association are due, and are hereby heartily tendered, to the Chicago Bee-keepers' Association for its success in soliciting the efforts of their Senators and Representatives, asking them to give their support to this bill.

Resolved, That the president appoint a committee of three on legislation, looking to the securing of uniform laws throughout the honey-producing States, touching such matters as are of interest to bee-keepers, such as the eradication and prevention of contagious diseases of bees, and the prohibition and punishment of adulteration of honey, and the injuring of the honey-producing States, touching such matters as are of interest to bee-keepers, such as the eradication and prevention of contagious diseases of bees, and

Orel L. Hersher, Emerson T. Abbott, Committee.

R. L. Taylor.

The resolutions were adopted unanimously.

Mr. York—I would like to propose that this body extend an invitation to Commissioner Jones of the Pure Food Commission to attend our session to-night, and Mr. Moore be delegated to notify him, and come with him.

The motion was unanimously carried.

Mr. Burnet—I understand a communication came from Dr. Miller, explaining that his absence from this convention is caused by his sickness, and death in the family. I moved a telegram be sent acknowledging his letter, and sending the regrets of this convention and the hope for his speedy recovery.

The motion was carried unanimously.

Mr. Benton—I want to bring before this body a question which will perhaps require the president to step down from the chair a moment, and may I ask Dr. Mason to take it? He ought to have done so last night. I proposed last evening a vote of thanks for him, for what he has done in providing such fine stereopticon views and also his brother, Huber Root, who also assisted him. Mr. Root was so modest last night he would not put it, and Dr. Mason was so deaf he could not hear, so I now move that the thanks of this Association be tendered our friend Ernest Root, and his brother, Huber Root, for the splendid entertainment they have furnished us in showing the stereopticon views that we have had.

The motion was seconded and unanimously adopted.

Dr. Mason—Mr. President, I am a little bit slow on resolution matters, but I want to have the Committee on Resolutions put in one thanking the Chicago Association for their splendid effort in the direction of doing away with adulteration of honey in Chicago. Some of us know they have been in dead earnest and thoroly at work in this respect, and I offer that as a resolution, to go with the others.

Pres. Root—Have you one to offer now?

Dr. Mason—Yes.

Resolved, That this Association thank the Chicago Bee-keepers' Association for the splendid effort it has made and congratulate it on the splendid success it has met with in fighting the adulteration of honey in Chicago.

The resolution was adopted unanimously.

Continued next week.)

Contributed Articles.


BY J. M. BANKS.

The question of double and single walled hives has been a matter of discussion for many years, and there have been strong arguments on both sides. To determine for myself the value of protection from the direct rays of the sun during the honey-flow, the following observation was made.

In 1900, five 8-frame dovetailed half-frame and five 8-frame single-walled dovetailed hives were watched. The entrances on all the hives were 3½ x 12 inches and all were fitted with one super each. The single-walled hives were fitted with a flat board cover, while the half-frame hives were covered by a telescope cover having a ventilator in each end and an air space of about 2½ inches all around the super. There was no noticeable difference in the strength of the colonies. All were equally exposed to the sun and all hives were painted white.

In the morning the bees were working freely in all the super, and no difference could be detected.

At 9 o'clock the thermometer registered 89 degrees Fahr., in the sun, and the bees were all working the same as earlier.

At 10 o'clock the mercury had reached 94 degrees and the bees were still working lively.

At 11 it had warmed up to 96 degrees and the bees were beginning to cluster around the entrances of the single-walled hives, but were still working in the supers.
At 12 o’clock the column of mercury stood at 110 degrees and the bees were beginning to cluster a little around the entrances of the chaff-hives, and had formed a cluster of nearly four feet from the front of each single-walled hive. No difference could be seen in the height of the chaff-hives from their appearance when first opened in the morning. Those on the single-walled hives, however, were comparatively quiet.

At 1 o’clock the thermometer registered 111 degrees, the highest for the day, and the conditions of the inside of the hives were practically the same as an hour before. There were a few bees above the entrances of the chaff-hives, while the whole floor of each single-walled hive was covered with bees. The conditions remained the same until toward evening, and no more work was done in the sections on the single-walled hives that day, while the bees in the store hives continued to store honey in the surplus cases all the afternoon.

Altho one experiment will never absolutely prove anything, it would seem that if hives containing bees must stand in the sun, it would be a paying investment to see that they are in some way protected from the heat.


No. 3—Extracted-Honey Production.

About Getting Stores in Proper Shape For Good Wintering—Brood in Extracting-Combs a Help at the Beginning of the Flow—Manipulating Extracting-Chambers to Discourage Swarming, Etc.

BY R. C. AKIN.

In the previous article was discus the size of hive and effect of conditions upon the strength of the colony and swarming. We learned that a larger brood-chamber was necessary for an extracted colony than for section honey, over the whole of the hive was used, more care and feeding for winter and spring. I showed you that some seasons and localities would change the conditions, and I will further illustrate. Suppose the flow closed in June or July, and you have taken off the surplus combs, shutting down to the brood-chamber. If so, and there is a little honey gathered—sufficient to stock the brood-chamber—your colony gets in condition for winter; but if the extracting-combs are left on till all late honey is gathered, then you may still expect the honey to be almost all in the super, if the colony is strong. A weak colony would store in broods-combs more. Also the size of the brood-chamber makes considerable difference in some things, and as well more or less free communication between brood and super.

Suppose the scouts and the extracting-combs are all worker; after the main flow is over when you extract, a very good plan is to take one extracting-chamber and place it under the brood-chamber. You may ask why under, arguing that if on top it will catch the honey as it comes, and saves lifting the brood-chamber. You are right so far as that applies, but you stop too soon. Place the extra on top after the main flow is over, and if there are enough bees they will occupy the extra, and if the weather is warm and some honey comes in, they will be after putting it into the extra. More than this, if there be a vigorous queen, and especially a young one recently begun laying, together with a light flow and warm weather, not only will those bees which flow from the fields, but other previously stored below be moved up to allow the queen to lay freely. Remember that strength of colony, age of queen, temperature, nectar coming in, etc., intensify or diminish the storing above.

But here is another trouble with that extra on top instead of under: Leave your colony thus to go into winter, and before, or by early spring, at most, the colony shifts upward into the top chamber. Once the cluster is established at the top, there is little use of one or two stores, and they may not go downward for honey, your colony would perish by starvation. I know this by actual experience. If the extracting-combs are to be given when the flow is probably over, put the extra comb between the hives, and put it into the stores, in which may be stored later is crowded in close above the brood, and thus the stores are made more instead of less compact. The large wintering of a colony is very materially aided by a very compact condition of stores, and the stores very close to the cluster. In extreme cold there ought to be honey within or very close above the cluster. Placing the extra under gives room for the colony to cluster down as much as they please, without fear of being crowded upward only just enough to let the honey in above the brood.

But what about getting brood in the extra if under? Well, unless put there very early in the fall it is not likely any brood will be put in it; but if there should be some in the stores, you can put them in the stores, and you will be there until the colony becomes quite strong. But what if there is some brood in the extracting-combs just before the flow? It is one of the best things that can happen. Rearrange the honey in the comb so as to make a division between it on a queen-excluder, and the extra with its brood on top. This will cause the colony to occupy the entire hive, and being stretched so are less likely to get the swarming-fever. This very arrangement—helping to give the weak, storage of whatever honey comes in from the very start to be put in the extra, thus the queen has the brood-chamber to lay as much as she pleases. As soon as storing has well-filled the extra, lift it and place a fresh chamber between it and is directed to get the honey in the extra, leaving the queen full swallows. This will almost extinguish swarming in most seasons. It will also leave the colony again without winter stores unless the extra can be put beneath, or a late flow fills up after the extra is off.

I believe there is no better way to keep extras over winter and spring than by this method of placing them under the colony. It makes the stores that may fall away from the cluster; it protects the combs, and it also protects the colony against robber-bees. Of course I am speaking of outdoor wintering; if bees are cellared they do not need so much room, or is it so imperative that stores may be in very close proximity to the colony. I am sure that for best results stores should be very compact and close to bees all the time, both indoors and outside.

This kind of management anticipates only worker-comb in the extracting-chambers, at least in such as are put beneath the brood-chambers. A drone-comb there in late fall or winter, even in early spring, makes no difference as it would not be used; the time trouble would come be in the last two or three weeks just before the summer flow. The extra may be put on top when the colony has become strong enough to desire and use drone-comb, using an excluider between; but the objection to this is that there is so much extra care needed. It would be so much more simple, and a great saving of care and time. If every colony can be left as they are with their-two-story hives until the flow is just on, when one job can be made of the entire yard, in rearranging hives. There is also this in favor of all remaining as they are till the flow is on—the operation of making the stores swarming-chamber, the honey in the chamber, and that if preparations for swarming have been begun they would be discontinued. Every colony should be inspected to know if swarming is already anticipated, and cells cut from two-hive that the possibility of swarming.

I will add here, parenthetically, that if any queen is failing—and weakly ones will (many of them) be at about this time—you will discover it. If there has not been enough nectar coming in to encourage to swarming, the colony that has cells at this time, just at the opening of the early summer flow, are preparing to supersede. If the number of cells built run from two to five six, it is a strong indication of supersEDURE, but if the colony is of good quality and strong, and the hives are past prime, I am thinking this, you can well understand that if you have only young and vigorous colonies there will be much less swarming. A colony having a vigorous queen, stores normal, and room for nothing in the stores from the fields, will have little tendency to swarm until the season for swarming with its encouraging conditions arrives; but aged or feeble queens may be expected to swarm under quite less favorable conditions than young ones swarmed with.

I would not think of producing extracted honey without queen-excluders—they are necessary to confine the queen lest there be brood in the extras when not wanted there. A little brood just before the flow begins—say a week or a little more—that it be all sealed—serves as the put to of the colony up to work there, yet does not interfere about extracting. An extra having brood in it when ready to come off for extracting, is much harder to get the bees out of.

It is well to give special attention to this matter of having the stores in close, compact shape for winter, especially in outdoor wintering; it makes a colony winter more safely, and build up better in spring—more safely because stores
are easy of access, and because if brood is closely bound
with honey some of that honey will be moved to get it out of
the way of the brood-nest, thus better feeding of queen
and the brood results, that would not otherwise be obtained ex-
cpt by a flow of nectar or by feeding.
If the foregoing management be applied in an intelli-
gent and scientific manner there can be no doubt of good
results. And, as it is only necessary to see the hive plan in
the spring and early summer, the greater the necessity
of the better preparation and obtaining of the con-
tions relating to stores and strength of colony for winter.
Larimer Co., Colo.

The Afterthought.

The "Old Reliable" seen thru New and Unreliable Glasses.
By E. E. HASTY, Richards, Ohio.

FINISHING A QUEEN BY FANNING BEES.

Yes, sir, I guess McNeal has a bright, new idea for us.
It is according to the probabilities; and if he has tested
the matter and found it correct it is worth while for us to test
it too. If Queen Victoria was at your house, and you had a
movable mechanical arrangement for cooling off things in
sultry weather, the mechanism would be run right straight
to the room she was in. So first look at the fanning bees
outside the hive when you go for a queen in fanning weather.
Page 792.

PROPOLIS ON FLOORS AND BOOTS.

That parasite, or incubus, or stick-tight-ibis on the bee-
man's sole—who has not worried his brain more or less for
some scheme of relief? Propolis scraped off must needs fly
somewhere to a fly crepe place and when a boil
steps he has annex a lot of it—annex it on constitution-
follows the flag principles, too. Mr. Wilcox, page 793,
seems to think that down in a cool cellar, which has moist
sand only for floor, he can trap around on propolis scrap-
plings and not have them follow him off. Don't more than
half believe he can do it as a regular thing—may be he can.
Those of you who can rub in a dram of enthusiasm and a
few scoops of faith-cure into the ointment may try it—
remedy worth something if you succeed. I scrape sitting,
hold feet still, keep a broom in reach, and sweep me a path
before rising. How is it, brethren? Which way is ortho-
doxy, and which way is heterodoxy? and who will come
with a better-odd don't.

WIRE-RING THE QUEEN.

As to capturing the queen, the wire ring to surround
her with suddenly, and lift her up when she steps on
it, will be new to many of us. Quite a number of trials we
may need before fully deciding about the exact value of it,
but it may be that we shall decide that it is very great
help in that line of work. The idea is capable of modific-
atations; and it may be that it will yet be improved quite a bit
from the way McNeal has it. Page 792.

CRUDE PROPOLIS AS A MARKETABLE ARTICLE.

I think I should look out for a trap, or a swap, or a rap of
some kind, if a man wanted to buy crude propolis of me
for 50 cents a pound. Price much above the cost of obtain-
ing it, and rather a few propolis amounts on the cost of similar
articles. As to this I put myself over the cost. When I
resins before saying that? Anyhow, if a man came around
and wanted to buy the waste dish-water of your kitchen at
5 cents a gallon, you'd let him have it; but if he proposed to
pay for it at 5 cents a gallon you would postpone things until
you could form some opinion as to what the fellow was
really up to. It wouldn't be easy for any one apiary to fur-
nish great amounts of propolis; but section scrapings, to
the amount of quite a few pounds, could be furnished cheaper
than that. We have more to waste it than it would to save it—it
has such a won't-be-peaceably-wasted disposition. Those
of us who use the wide frames to hold secretions can get a
few good pounds and keep them in a place (usually in the honey season) by
scraping our frames. Page 790.

TWO BAD SLIPS OF THE PROOF-READER.

Seems to me the proof-reader must have been making
New Year's calls shortly before he read the last After-
thought. Butter is sold, not "said," and the anti-progress
monster was fought, not "bought." Nobody not already
in his claws would ever buy him. Page 11.

A BEE AND FRUIT PAMPHLET NEEDED.

A little pamphlet which is not yet in existence was evid-
cently what that legal man on page 803 needed—"The Hab-
bit of Bees in General; Fruit Irresistibly Stated by Au-
thority." It should be gotten out by some government ento-
ologist, and be reviewed and endorsed by Uncle Sam's head
fruit-man. Then lawyers (and courts, too, to some extent)
would accept it. You see, we're all apt to state things
pretty strongly on our own side—and if we didn't we would
be suspected of doing so so sharply that our pamphlet
wouldn't count much.

THE ITALIAN BEE "NOT THE WHOLE THING."

In Mr. Dadant's letter, on page 806, I was particularly
interested to see that Swiss bee-keepers (as well as many of
the British) do not give the preference to the Italian bee,
ly and by the whole actual fact about races of bees will get
to the surface; and it is quite possible that the best bee for
one locality will not be the best bee for another locality.
Bees that could be depended upon always to crowd the queen
with honey, and check her laying in times of plenty, would
be very desirable wherever there are all the one short flow;
but where moderate flows are scattered all thru the season
such bees would get so weak as to be worthless. And the
Italian is the worst of a queen-crowder that we have. I be-
lieve.

Mr. J. B. Hall, of Canada.

The man whose portrait we are permitted to present on
the next page, is one of Canada's very brightest and
best bee-keepers. We had the great pleasure of meeting
Mr. Hall at the convention of the National Bee-keepers'
Association held in Toronto, Ont., in September, 1895—the
last convention which Father Langstroth attended.

Editor H. E. Hill, of the American Bee-Keeper, was at
one time an apiarian pupil of Mr. Hall, and to this day takes
much pride in that fact, as well he may. Recently Mr.
Hill had this to say of his former teacher, in his paper which he so ably edits:

We have pleasure in presenting in this number a most
outstanding portrait of Mr. J. B. Hall, of Ontario, one of
the Dominion's acknowledged leaders in things apicultural.

While Mr. Hall is a very earnest and popular associa-
tion worker, it is to be regretted that, for some years past,
all persuasion and force, in their oft-repeated applications,
have proven inadequate to the purpose of eliciting from his
pen contributions to the bee-keeping press. This is the
more to be deplored when we consider the fact that Mr.
Hall's pen productions have a style at once interesting and
instructive, peculiarly methodical and painstaking bee-master than Mr. Hall can not be found—
more a successful one. Too many futile efforts have
steadily been made to remove the "bushel" in which so
much "light" is confined, to leave any hope for the future
in that direction; but, were it not for the profound respect
which we feel for this esteemed instructor of our youth, we
should not hesitate to suggest the trial of a quicker method of
publishing his "jottings." This might be done more equa-
ly effectual, and we shall neither try nor recommend the kick-

Mr. Hall is a producer of honey, and, being such, he
says he has nothing but honey to sell. His favorite bee for
the production of comb-honey is an Italian-Carniolan cross,
of which he has an excellent strain. He is the originator
of the thick top-bar and of the wood-zinc excluder; too
modest to assert his right to the honor.

In the conduct of his business, Mr. Hall's operations
are governed by attendant conditions and their immediate requirements, from the standpoint of independent reason, and not according to any set of stereotyped rules, as is too frequently the case with bee-keepers. He is, obviously, a case of "the right man in the right place," and there is ample evidence on every side, of the wisdom of his choice in adopting apiculture as his profession.

At the present time a week seldom passes in which we do not have occasion to recall some of the advice and admonitions given with his characteristic earnestness and kindly manner, 15 years ago, when he labored to eliminate the erroneous ideas which we had previously acquired, and to establish in their stead a clear understanding of what they appeared to be a most obscure subject.

That our younger readers may fully appreciate the picture, we have pleasure in reproducing a few paragraphs from the Canadian Bee Journal’s report of the meeting of the Ontario Bee-Keepers’ Association, held at Toronto, in December, 1899. Mr. McKnight’s motion was evidently a spontaneous outgrowth of the same sense of obligation and high esteem to which every man is subject who has been intimately associated with the gentleman whom he sought to honor. It is a sense of obligation and esteem which, as we know by actual experience, constantly increases by long and very intimate association:

"Mr. McKnight—There is a little matter which I would like to bring up. We have a gentleman with us during this convention who is here only by the solicitation of a great many members. This Association has been a great success right from the first until now, and that is something creditable. There have been men who have done more than Mr. J. B. Hall has for this Association in a purely business way, but I want to tell you there is not a man belonging to this Association now, or ever did belong, who has made its meetings so interesting and practical as our friend Hall. [Applause.] He has been the life and soul of our Association meetings for the last 19 years. Like myself, the world is largely behind him; he has not many years to be here, and I think it would be a graceful thing to do anything in our power to show our appreciation of the value of his services. Altho he does not say very much outside of this Association, Mr. J. B. Hall is known all over the continent of America. I would like to move that this Association make J. B. Hall a life member—that is all. [Loud applause.] I would like, if it were in my power, to confer some higher honor upon him, but I know he does not want it; and I am not sure whether he would appreciate even this; but I know it is our duty to show Mr. Hall some mark of the appreciation of the valuable services he has rendered to the bee-keeping interests of this Province. I hope this will not be made a precedent; it would be very little honor if all the old men were associated with him; I would like to see Mr. J. B. Hall the one and only life member of this Association during my lifetime.

"Mr. Brown—I have very much pleasure in seconding Mr. McKnight’s motion. I can indorse every word he has said with reference to Mr. Hall.

"The motion was carried by a rising vote, and the singing of ‘He’s a Jolly Good Fellow,’ after which Mr. Hall briefly and suitably replied."

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper’s song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a gem. We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at $1.00.

Queen-Rearing is a very interesting part of bee-keeping. Mr. Doolittle’s book tells practically all about the subject. See the offer we make on page 30 of last number.

Questions and Answers.

CONDUCTED BY
DR. C. C. MILLER, Marengo, Ill.

The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—Entom.

A Beginner’s Questions.

This is my first year with bees, and I would like to know how to keep them successfully. I want to increase as well as to work for comb honey.

We have cold weather and snow usually from Dec. 15th to March 15th. It has been from 5 to 10 degrees below zero here for 10 days, and lots of snow on the ground.

1. What kind of hives and supers should I use for best results?

2. I took the third frame of brood from an 8-frame dove-tailed hive last summer, and put it into a hive with foundation, in order to get the swarm to stay, as well as to strengthen them. The colony was strong at the time with bees and honey. On examining, before I put them into the cellar, I was surprised to find how few there were dead, and I now have a colony with eight brood-frames of honey.
On removing the frame of brood, I brushed all the bees from it. What caused them to dwindle and die? 

2. Can I feel then the loss of honey by two weak colonies I have, or should I give them sugar syrup? I am wintering 20 colonies in frame and box hives.

4. I had five colonies last spring that gave me 20 to 30 pounds of surplus comb honey each. The swarms gave no sign of breaking up with one frame of brood and seven frames of foundation 3 inches wide. What could I have done to make them do any better?

NEW BRUNSWICK.

ANSWERS.—1. The kind of frame hive you already have is to be continued, unless they do some good reason for making a change, for it is a very troublesome thing to have two kinds of hives in the same apiary, especially if they have frames of different sizes. The size of frame most generally found in use is any, measuring 17⅞x⅞, outside measure. This is the frame used in the dovetailed or Langstroth hive.

2. Very likely they were queenless.

3. It will be all right to use the comb of honey, unless the bees were diseased, which is not likely.

4. If you all your honey from the old colonies, and none from the swarms. It may be that you would have had more honey if you had depended more on the swarms, putting them in the old hives for 2 or 3 days and then on the old stand, setting the old hive close beside it. A week later remove the old hive to a new location. That will throw the whole field-force into the swarm, and allow you to get nothing from the old colony, you will have a strong force in the swarm, and your total yield may be greater.

What Killed the Bees?—Other Questions.

The season of 1900 opened the best in many years, with a big flow from fruit-bloom, mostly from plum and wild cherry, the scales showing a gain of four to six pounds per day. Then the great drought commenced, which lasted until Aug. 4th. It was too dry for basswood to yield nectar. It was during that time that there was a daily rain. The stores from the spring-flow were about all gone, and it looked as if every colony would have to be fed, or starve. The rain brought an immense growth of weeds on the wheat stubble, and with a few fair days the bees filled their hives with the most villainous honey you ever saw, almost black, and the flavor was worse than anything I ever met with before. It was from what is called wild buckwheat—a vine that has a seed shaped like buckwheat. A few cold, rainy days followed, when the bees commenced throwing out dead larvae and young bees. Examining, I found frames of brood being uncapt, with not an egg or young bee alive. This was the case with every colony (about 24), and there was not a dead one, as the best of my knowledge, and I examined them frequently.

1. Now, the question is, what killed them?

2. Will they rear brood in the spring on such stores?

3. Will it be best to take away the honey away and feed as soon as taken from the cellar? They seem to be wintering all right, with no unusual number dying.

CENTRAL MINNESOTA.

ANSWERS.—I don’t know. It looks as tho that villainous black imitation of honey killed them. Yet from what you say they must have been living on the same stuff since, and it does not hurt them. It is just possible that they got something poisonous that killed them, and none of it is now in the hives.

3. Keep a close watch in spring, and if everything goes straight, and brood appears healthy, let it be; but if the brood dies, or there is no brood, then change the stores.

Spring Feeding—Two Apliaries or One?

1. Do you know of any objection to the following plan of feeding and strengthening a colony in the spring? Would bees object to the partial division of their home when in two hives? If not, would they be less likely to swarm, being on 16 Langstroth boxes? I am feeding an entire colony early in the spring, and before the queen gets crowded put them in a 10-frame hive. Go on feeding, and then transfer them to two 8-frame hives set close together, with the adjacent sides perforated every few inches, and with a bee-way top and bot-

tom. Go on feeding gently until a week before the honey-flow, and then put on two supers, side by side.

2. Will bees which have been carried by syrup to be fed, so long as the queen is not crowded?

3. Do you think there would be any advantage, so far as yield of honey is concerned, in dividing an apiary of 140 colonies into 28 smaller colonies? Is it possible that the bees are 1 mile distant from the home-apiary, assuming, of course, conditions equal all around as to bloom? MINN.

ANSWERS.—1. The probability is that the queen would not go readily from one hive to the other, when you had the two hives side by side with holes for passageways, and if she should for some reason, there would be some likeness of the bees starting queen-cells in the one she left had.

Instead of changing from the 8-frame hive to a 10-frame, and then to two 8-frame hives, better to start at once with the two 8-frame hives, putting one hive over the other. As soon as you think the bees are in danger of being crowded with only eight frames, put the second story under the first. Even if this is done before the bees are at all crowded, it will do no harm. The heat of the hive rises, and an empty hive below would not cool off the brood-nest as it would with the empty hive above or at the side. Then when the bees became crowded above they could work down into the lower story; or, if you thought they were too lazy about it you could put a frame of brood from the upper story in the lower story. But when it comes time to put on supers, I have always found it better to take away one story, crowding the brood then.

2. Yes, the bees will store in the brood-combs anything fed to them, so long as there is plenty of room there. But it is not wise to crowd the brood-nest at any time, for there is a possibility that the combs may fill up so rapidly with brood that the bees will feel obliged to empty some of the cells in the brood-combs of their stores, carrying the same up into the super, altho when the stores were given there may have been abundance of room in the brood-combs.

3. Most surely, in any ordinary location. The only exception would be in some location so remarkably rich in resources that 140 colonies could get all they could gather without going farther than ½ of a mile from home.

Using Extracted Honey-Dew Profitably.

How can extracted honey-dew be used in the apiary to good profit and advantage? What other uses can there be made of it?

KANSAS CITY.

ANSWER.—It can be fed to good advantage in the spring to be worked up into brood. It may also be sold for manufacturing purposes.

Getting Extra Extracting-Combs.

Being short of extracting-combs, I am thinking of filling the supers next spring with comb, and the frames with starters, half and half, alternately. How would it do?

I extracted my fall aster honey in November, and got about 40 pounds to the colony, which makes about 70 pounds for the year—about an average with us here. I winter my bees outdoors, of course, and up to this time they have had a good flight every day, if not raining.

SOUTH CAROLINA.

ANSWER.—If I understand you rightly, there will be a fully-drawn comb, then a frame with a starter perhaps an inch deep, then a drawn comb, then a starter, and so on. An objection to this, especially if the harvest is at first a little heavy, is that these combs which are the fully-drawn, will and will make the newly built combs very thin. It may be better to have all the drawn combs together on one side, and all the starters together on the other side. Then the new combs will be more uniform in thickness. If the extracting-combs are of the same size as the brood-combs, you might like the plan of having the new combs built in the brood-nest instead of in the super. In that case you can alter the frames, for when used for brood there will not be the same danger of having the combs unequal in thickness. Moreover, if you prefer worker-combs, you will have less drone-comb built in the brood-nest than in the super.

The Premiums offered this week are well worth working for. Look at them.
Bees Did Fairly Well.

My bees did fairly well the past season, averaging 50 pounds per colony, but it was very dry all summer, and one of my neighbors did not get any honey at all. There are very few beekeepers around here, and our bees have a large range. They are wintering finely so far; Dec. 23d and 24th they had a good flight, and look healthy and strong in numerous colonies.

I am going to try the fences and plain sections next season as I believe they are an improvement.

J. Wm. H. SHERMAN.
Suffolk Co., N. Y., Dec. 29.

Report For The Season of 1900.

We have had another poor honey season in Texas, altho there was considerably more honey produced than in 1899. We commenced the season with 500 colonies, had but a little increase, and harvested 21,600 pounds of honey, divided as follows: Extracted 11,500 pounds; bulk comb, 7,540 pounds; section honey, 1,464 pounds. We have had abundant fall rains, and vegetation is up; we therefore expect a good crop for 1901.

A few days ago we sent our renewal to the American Bee Journal, which we can not do without.

O. P. HYDE & SON.

Bumble-Bees in Winter.

On page 809 (1900) a beginner asks, “Where do bumble-bees winter?” I am pleased with the question, and would like to have some naturalist tell us all about it.

In Canada we have several kinds of bumble-bees, some very small and others all the way to very large. They

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AMERICAN BEE JOURNAL

Jan. 17, 1901.

DR. PEIRO

34 Central Music Hall, Chicago.

The wrapping-label theory of this paper indicates that the end of the month is when your subscription is paid. For instance, “Dec. 6th” on your label shows that it is paid to the end of December, 1900.

Subscription Receipt—We do not send a receipt for money sent in to a subscription, but change the date on your wrapper-label, which shows that the money has been received and duly credited.

Advertising Rates will be given upon application.

Retained Spelling.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Entomological and the Philological Society of England: Change “th” or “st” to “fth” when pronounced, except when the “th” affects a preceding sound. Some other changes are used.

Maule’s Seed Catalogue

YOU should, by all means, have this most modern catalogue of modern times. It is peculiar and interesting, having good lines in vegetable, farm and flower seeds, flowering plants, fruits, bulbs, etc. It contains 45 novelties in vegetables and flowers and new and choice selections, large pages, seven handsomely colored plates and hundreds of illustrations. It gives the latest, up-to-date, cultural directions and offers many cash prizes. The first edition alone cost us $1,000, so while we send it free to all customers, we must ask others to send 10 cents for it, which amount they may deduct from their first order. You will make a mistake if you do not write to-day for this the Novelty Seed Book of the year. Address, WM. HENRY MAULE, Philadelphia.

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Michigan tomato seed is best on earth. Hammond’s Mammoth makes a splendid last year weighing 5 lbs. Largest tomato that grows. Hammond’s Earliest Tomatoes have been copyrighted by others in southern, Hammond’s earliest Tomatoes and Hammond’s Golden Heir and Hammond’s Profuse Bush are named of some small merit. Handsomely illustrated catalog of Tomatoes, fine in prices for 1901, and all leading cities. Hammond’s Earliest Tomatoes and Vegetable seeds mailed FREE on request.

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are variously and beautifully marked with pleasing colors. The smallest of all are the rarest, but their nests are the richest in honey. The medium sizes winter generally in the woods under old logs, where there is a large accumulation of old leaves. The smallest and largest may winter in the same fashion, but I don’t know about that. I have often wondered if it could be that they migrate to the South like the birds, and speculate a season there and return North the following spring. Only the queens live thru the winter. I have handled a good deal of wood, logs, and timber in my day, but never found any of the smallest or the largest kinds in winter. Who will tell us all about it, in the columns of the “Old Reliable,” just by way of direction and information?

Ontario, Canada.

S. T. PRETTIF.

Beads Didn’t Do Well.

I have 20 colonies of bees, but they didn’t do well last season. They will need next season will be a better one for bee-keepers.

I appreciate the Bee Journal very much, and can’t very well get along without it.

H. C. ROBERTS.

Lawrence Co., Ohio, Jan. 8.

Bee Wintering Nicely.

Bees are wintering nicely in the cellar, but no snow on the ground is hard on the clover.

N. STAINEGER.

Cedar Co., Iowa, Dec. 12, 1900.

No Honey Last Season.

I have 29 colonies of bees in good condition on the summer stands, but I got no honey the past season. There

...
were plenty of blossoms, and I never saw bees do better on fruit-bloom. I can not do without the American Bee Journal as long as I keep bees, which will probably not be many years more, as I am 71 years old.

S. H. ARPS.

Prospect Fair For Next Season.
The honey crop last season was an entire failure in this part of Ohio. Bees are enjoying a flight today. Mine are to be all right, the lake to feed for winter.

White clover is plentiful and the prospect is fair for the coming season.

G. C. ALLINGER.
Marion Co., Ohio, Jan. 10.

How to Sell Canned Honey.
Years ago I came to the conclusion that the proper way to dispose of extracted honey was to sell it in tin packages in the canned form, and I began putting up honey both by the winter trade in raised-cover tin pails, and for my trouble I met lots of opposition, but I determined that the battle must be fought along that line. I first had to overcome the prejudice to canned honey by guaranteeing my honey to be strictly pure, and that it would candy in 24 hours. The chief trouble was that the packages were too dear for my customers, and I began using 3-pound tin fruit-cans and sealing the lids with wax (grafting wax is best). I get 23 cents per can, or $2.75 per dozen; this is for fall honey, mostly touch-me-not. I buy the cans by the gross, and stick on them a neat label. For the summer trade I use the one-pound glass jars to a small extent. I get $1.32 per dozen for pound jars. My crop of honey was 1,675 pounds of extracted honey from 63 colonies.

C. A. BUNCH.

Wintering First-Rate.
There was not a blossom of white clover or linden the past season, and my bees did badly. They are wintering first-rate.

The thermometer is 8 degrees above zero this morning, and weather clear. We have had but little snow, and fine weather.

H. MESSER.

Not Much Surplus Honey—Foul Brood.
The bees did not store much surplus last season. They store in the spring during maple, elm, box-elder and locust bloom, and also during fruit-bloom of all kinds. I expected to get a large amount of honey, but you know how often we are disappointed in our expectations, and I did not get over 25 pounds of surplus honey, all told. Swarming commenced the latter part of April and continued until June 20. My bees never were, in better condition for work, being very strong. I sold 40 colonies the latter part of May to a bee-keeper in the county, and he secured considerable honey.

I have about 80 colonies left, which are in good condition for winter. I winter my bees on the summer stands, and they are always packed, summer and winter—"what will keep out the cold will keep out the heat," you know. The covers are sealed down tight, and soft-maple leaves are packed on the top of the queen frame, and it will keep warm. I have had very little winter loss for a number of years, or since I got rid of foul brood.

I lost hundreds of colonies from foul brood. I bought some bees that had it, and once it got into the apiary I had a time of it. I did not then know what it was, but tried everything to get rid of it, and burned a great many colonies, hives and all. That was about 8 or 9 years ago, and I do not remember when I got rid of it.

Some of the old hives that were in use during this season, and the old hives with their covers put on after the bees were dead, and were left in the apiary. I cleaned out some of them two or three years ago, and put them away; but they got booted up in a box, and I boiled some of the frames so as to be on the safe side, and tried a few without boiling, and there was no difference—no signs of foul brood in either case—so I scraped all the old hives and frames and they are now in use. I sent specimens of the foul brood to A. I. Root and Dr. Howard. I detected the odor of foul brood, but work with it until I got rid of it.

D. C. McLEOD.
Christian Co., Ill., Dec. 29.

Bees Did Poorly.
Bees did poorly in this neighborhood last season, but mine gathered enough for winter and stored an average surplus of 12 pounds per colony, amber extracted, from fall flowers. May the American Bee Journal long prosper, and if beekeepers can't afford to send in the dollar we might as well give up trying to keep bees.

S. O. LARKSON.

Report for the Season of 1900.
We run about 250 colonies for comb and extracted honey the past season, and averaged 50 pounds to the colony. We hope to do better in 1901. We winter our bees and the summer stands with sawdust on top of the frames.

W. J. STEWART.

Aster as a Honey-Plant—Introducing Queens.
The honey-crop in 1900 was about as much of a failure as 1899, if not worse, but we should be thankful for what little we did get, and hope for better things the coming season. I plan with two colonies, spring count, increase to five, and secured 168 pounds of honey.

I also had charge of an apiary which we began with two colonies, spring count, increase to 24, and secured 1,200 pounds of extracted honey, mostly from aster.

Mr. W. W. McNeal certainly gives

G. W. YORK & CO.
118 Michigan Street, CHICAGO, ILL.
the aster a much-deserved good name on page 793. I would advise "Mississippi," page 783, to try this, as he advises growing for good ornamental plants. It has proven a boon to beekeepers here. It comes into bloom the very last of September, and gives us a fair size crop. I received an order of young bees for winter, and bountiful winter stores. It granulates very quickly, however, especially when extraneous or unripe honey is solid in 10 days, and when mixed with no other kind of honey it has much the appearance of land.

Last June I received a tested queen from a noted queen-bred in the East. She arrived all right, and I put her away until the morning, as I was very busy at the time. The next morning I destroyed the reigning queen, and as I had so much work on hand I did not take time to separate the new one from her escort, but pulled both the wire-cloth, exposing about an inch of candy, and set the cage on the top-bars of the hive. Some honey was coming in at the time, but I was also feeding them. I examined the hive 48 hours after the queen was released, but in a day or two when I looked again there were numerous bunches of queen-cells, but no queen to be seen. L. WILLEY MOUNTJOY.

Anderson Co., Ky., Dec. 22.

Bee in Good Condition—Swarming. Bees went into winter quarters in this locality strong in numbers, and plentiful supplies of food. The hives were left on the summer stands until late in November, owing to the mild weather. They stored an average of about 50 pounds of surplus honey, and some colonies stored as high as 100 pounds—I think mine did, spring count.

In my apiary, some years ago, a large swarm issued in June; without making any attempt to clutter they put for the woods, which is but a stone's throw from my apiary. They went slowly, flew to the tops of the trees past I was quite certain they had a tree look up in which they were intending to settle, and, sure enough, after going about 80 rods they settled and a half of them from a pine, which was about 3/5 feet in diameter. The next morning I cut down the tree and safely hived the bees. Does this look as if the tree is a choice one to fly directly from the hive to the tree? The "Old Reliable" continues its weekly visits, and is a most welcome guest, as he brings many good things. Long may it and its editor live to bless the fraternity which they represent.

L. ALLEN.

Clark Co., Wis., Jan. 5.

Honey and Beeswax

MARKET QUOTATIONS.

CHICAGO, Dec. 21.—The demand has fallen off very much of late, but prices have not declined to any great degree from those prevailing for the past 60 days, but any probable to sell would cause a decline. Fancy white comb, No. 1, 5.25; No. 2, 4.50; No. 3, 3.75; No. 4, 2.25; 10 cents per pound, dark and buckwheat, 70 cents. Extracted, white, 71 cents; amber, 75 cents; buckwheat and other dark grades, 68 cents. H. E. BROYCE.

R. A. Burnett & Co.

KANSAS CITY, Dec. 21.—Honey market firm, demand steady. Fancy white comb, 2-section case, $3.50 to $3.75; 12-section case, $7.50 to $8.25; marble case, $12 to $13.50; comb, $3.75 to $4.25; 10 cents per pound, 35 cents. Extracted, white, 80 cents; amber, 75 cents; buckwheat and other dark grades, 68 cents. R. A. Burnett & Co.

BUFFALO, Jan. 4.—Honey market is very quiet, and demand at 73 cents for white, 75 cents for amber, and higher prices are not obtainable. Fancy white comb sells for 70 cents; lower grades do not want to sell. Extracted, white, 70 cents; amber, 75 cents; 10 cents per pound, 75 cents and higher; fancy white clover brings 80 cents. L. S. S. BATTISON & Co.

ALBANY, N.Y., Jan. 5.—Fancy white, 175 cents; marble case, 240 cents; 12-section case, 320 cents; 10 cents per pound, 35 cents. Extracted, white, 88 cents; and amber, 78 cents. C. W. WEBER.

BOSTON, Dec. 22.—Fancy No. 1 white in cartons, 15c.; A No. 1, loco. No. 1, 105 cents, with a single case for 75 cents; B No. 1, 100 cents, with a double case for 75 cents, and for 65 cents; C No. 1, 90 cents, with a single case for 70 cents, and for 55 cents. No. 2 white, 54 cents. Extracted, white, 76 cents; amber, 80 cents; 10 cents per pound, 80 cents. L. S. S. BLAKE, SCOTT & Lee.

CINCINNATI, Jan. 4.—The market for comb honey in this locality is strong, but alibo higher prices are not obtainable. Fancy white comb sells for 50 cents; lower grades do not want to sell. Extracted, white, 70 cents; amber, 75 cents; 10 cents per pound, 75 cents and higher; fancy white clover brings 80 cents. L. S. S. BATTISON & Co.

NEW YORK, Dec. 22.—Fancy white, 185 cents; No. 1 white, 14c.; No. 2 white, 12c.; No. 3 white, 10c.; buckwheat, 105 cents. Extracted, in fairly good demand, at 50 cents, 40 cents, and higher; for amber, off grades and Southern in barrels at 15 cents. Not much demand for extracted buckwheat at present. Some little selling at 50 cents. Beeswax firm at 25 cents. C. W. WEBER.

New York, Dec. 22. —Fancy white, 180 cents; No. 1 white, 14c.; No. 2 white, 12c.; No. 3 white, 10c.; buckwheat, 100 cents. Extracted, in fairly good demand, at 50 cents, 40 cents, and higher; for amber, off grades and Southern in barrels at 15 cents. Not much demand for extracted buckwheat at present. Some little selling at 50 cents. Beeswax firm at 25 cents. C. W. WEBER.

Detro1T, Dec. 22.—Fancy white comb, 150 cents; No. 1 white, 12c.; No. 2 white, 10c.; No. 3 white, 8c.; buckwheat, 105 cents. Extracted, white, 75 cents; amber, 70 cents; and dark, 60 cents. HONEY and BEESWAX.

M. H. HUNT & SON.

SAN FRANCISCO, Dec. 19.—White comb 14 cents; amber, 115 cents; dark, 80 cents. Extracted, white, 75 cents; light amber, 60 cents; dark amber, 55 cents. Beeswax, 200 cents. C. H. WEBER.

SAN FRANCISCO, Dec. 19.—White comb 13 cents; amber, 115 cents; dark, 80 cents. Extracted, white, 75 cents; light amber, 60 cents; dark amber, 55 cents. Beeswax, 200 cents. C. H. WEBER.

Honey market slow with light stock, sell ing at concessions, especially on extracted, which have been holding too high for some time. H. W. RYHER.

BOSTON, Jan. 4.—The market for comb honey is strong in this locality, and alibo higher prices are not obtainable. Fancy white comb sells for 50 cents; lower grades do not want to sell. Extracted, white, 70 cents; amber, 75 cents; 10 cents per pound, 75 cents and higher; fancy white clover brings 80 cents. L. S. S. BATTISON & Co.

FARMERS' MARKET.—We may have a customer within a short distance of who wants your honey or beeswax, or how to reach all the markets; therefore write us regarding your supply, condition, quality, and lowest cash price. References—Either check or money order, any business man in this city.

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I've just sampled the honey you sent, and it's prime. Thank you. I feel that I'm something of a heretic, to sell several thousand pounds of honey of my own production and then buy honey of you for my own use. But however loyal one ought to be the honey of his own region, there's no denying the fact that for use in any kind of hot drink, where one prefers the more wholesome honey to sugar, the very excellent quality of alfalfa honey I have received from you is better suited than the honeys of more market flavor, according to my taste.

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Order the Above Honey and then Sell it.

We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others who want to earn some money, can get this honey and work up a demand for it almost anywhere.

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GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.
Bee-Keeping at the Pan-American.

The busy bee will be in big business at the Pan-American Exposition the coming summer. It has been decided to construct a special building for the proper display of the working colonies of bees and the great variety of bee-keepers' supplies which will constitute this exhibit. It is expected that this will be the most extensive bee-exhibit ever prepared in this or any other part of the world.

The exhibits will be so arranged that the bee-may enter their hives from the exterior of the building, and carry on, their work undisturbed by visitors, yet in full view thru the glass sides of the hives. As the successful management of an apiary requires a knowledge of botany as well as the habits and requirements of the bees themselves, this exhibit will illustrate the operation of an apiary, and will show the common honey-producing hive in a way to be understood by all who may be interested. The relation of bees to horticulture and agriculture will be clearly shown, and the many uses of honey illustrated.

Since the invention of the movable-frame hive by Langstroth in 1851, the application of labor-saving, honey-saving, and bee-saving devices has been very interesting and important, as is well known by up-to-date bee-keepers everywhere. It is intended to make the most complete display ever seen of things aparian at the Pan-American Exposition.

Amateur Bee-Keepers is the heading of an article by Rambler. In Gleanings in Bee-Culture. He contends that to the amateurs the bee-keeping world owes quite a debt. He begins with Samson, who founded a colony of bees in the canvas of a lion, "some writers going so far as to claim that Samson invented the movable-frame hive, from the supposition that the bees built the combs to the ribs of the defunct lion; and it was the comb attached to one of these ribs with which he sweetened himself."

Rambler then mentions Virgil, of later time, followed by Huber, and notes in passing that contemporaneous with him were many German investigators who were amateur bee-keepers.

Then coming across the ocean he finds Langstroth, who was not an extensive bee-keeper, yet it was he who by the invention of the movable frame opened to view the mysteries of the hive, and made it possible for bee-keeping to become a remunerative business.

After that, again jumping back over the ocean, it was Hruschka who discovered the idea of the honey-extractor.

Returning to this country, among the many amateur bee-keepers who have been of great service to the bee-keeping world, he names A. I. Root, Prof. A. J. Cook, Samuel Wagner (founder of the American Bee Journal), Thomas G. Newman, F. Danzebaker, and Arthur C. Miller, the inventor of the hot-plate foundation-fastener.

Skipping across the ocean once more, Rambler turns to the Mahring, A. W., who invented comb foundation, also Prof. Che-shire, and Thos. Wm. Cowan, editor of the British Bee Journal, and inventor of the Cowan honey-extractor.

As Rambler intimates, the foregoing are only a few of those who while only amateurs in the pursuit of bee-keeping, yet did much to bring it up to its present high place among the useful businesses of the world. Surely, no amateur bee-keeper need be ashamed of his place or efforts, either in the past or present. May his tribe increase, and continue to bless the craft with bright and helpful ideas.

Pure Stock vs. Crosses.—A Stray Straw in Gleanings in Bee-Culture is as follows:

A 8x8 strain of bees is very desirable for the sake of combining good qualities without change. But the "8x8 strain" idea may be worked too hard when it comes to the matter of improvement. With a strain so 8x8 that there is no possibility of variation, there is no possibility of improvement. Continuation of good traits comes from fixation. Improvement of traits comes not from fixation, but from variation. The trouble with a cross is that its characteristics are not 8x8, but that does not argue against the possibility of greater improvement in the cross, and then it is the province of careful breeding to make that improvement 8x8. I am an advocate of pure stock; but if I had the purest and best Italians on earth, and a cross that would beat them in storing by 50 percent, I'd drop the purity and try to fix that 50 percent. I'm sure you will find that crosses would have a very strong tendency to sport back to the original stock, either one of which would be better than the mixture."

There is a somewhat sharp conflict between the Straw and Editor Root's comments; but not an irreconcilable one. Both views are correct. The progeny of pure or thorouged stock is likely to continue the qualities of the parents. The progeny of a cross is likely to back to the qualities of one or the other of the parents, selecting perhaps some of the best desirable traits, but there is a possibility also, that there may be a sporting toward good as well as bad qualities. In the hands of the ignorant and careless, a cross is likely to run much more rapidly to the bad than pure-bred stock. In the hands of the careful there may be more poor than good in the progeny of the cross, but by careful and severe selection there is a possibility of something that may be an improvement on the pure stock on either side from which the cross originated. It is a question for each one to decide for himself whether he will try the more hazardous plan of breeding for improvement from an unstable cross, or the safer plan of breeding from pure stock.

"Bees Do Nothing Invariably" is a saying attributed to Mrs. Tupper, and there is much truth in it. To establish any general rule about bees, there must be no little observation. Because you see bees do a certain thing on a certain day, you are not safe in saying that all bees invariably do the same thing every day. What is true at one time may not be true at another time. What is true one season may not be true the next. What is true in one place may not be true in another place. Laugh as much as you will at the frequent recurrence of the phrase, "in this locality," in many cases locality has a large influence.

As illustrating this matter, one man, having made careful observations, says he has found that when a bee brings in a load of pollen it brings no nectar, and vice versa. Another man, observing just as carefully, finds a full honey-sac in bees carrying pollen. In order to establish a general rule on the subject, there must be repeated observations, all the better if made by different observers in different places and at different times.

C. Davenport says on page 775 (1900), that he has found hundreds of bees carrying both pollen and honey, while an Ohio professor found bees carrying only one at a time. Which was the more exceptional case? The general opinion has probably been in accord with Mr. Davenport's view, but it is doubtful whether many have closely observed. If it is safe to venture an opinion, it is that careful observation will show that the popular opinion is in general the correct one, and the coming season may find many to substantiate Mr. Davenport's testimony.

Another illustration may be found by referring to pages 530 and 777 (1900). The observations of "Rip Van Wrinkle" do not entirely agree with those of Prof. Cook, as to the matter of scouts, and as to the reason for clustering. The questions are interesting, and may possibly be of practical importance. There is no lack of testimony that scouts are sent out by some colonies before the art of swarming. In apiaries where swarming is anticipated by dividing or other means when the condition of the colony shows that swarm-
Weekly Budget

SOMETIMES.

"The hand that rocks the cradle is the hand that rules the heart."—Marlowe.

But the hand that rocks the cradle, sure Is the hand that spans the baby.

Mr. T. F. Bingham, of Clare Co., Mich., wrote us Jan. 4th:

"The weather is fine, and the wintering prospect outdoors is better."

Mr. N. D. West, of Schoharie Co., N. Y., wrote us Jan. 3d:

"It is zero weather this morning; no snow, good wheeling, and bees are quiet."

The Australian Bee-keeper is guilty of the following:

 Jogging him: "Ello, Stumpy! What's de matter wid you? You don't got de hives." "No, I got de bees!"

Editor Hutchinson, of the Bee-keepers' Review, says:

"A pun, if a good one, is often quite enjoyable. For instance, at the banquet held at Niagara Falls during the Ontario convention, there was a sallie given to the green color of the water in the rapids just below the falls, and some curiously express us to what this color was due, when some one suggested that it was green because it had just come over."

Mr. W. A. Seiber, of Philadelphia, we learn in a letter from him dated Jan. 13th, lost his beloved sister, by death, last month. We had the pleasure of making her acquaintance when stopping at Mr. Seiber's home a year ago last fall, while attending the National Convention. Among other things in his letter, Mr. Seiber says:

"She was so helpful to me in my business; from the very first the hives seemed to take a liking to her. Ten years ago, when I first began the idea of bottling, there was no end of mishaps and drawbacks to my experience on my part, and loss of hundreds of dollars in little accidents from the lack of knowledge as to how to do anything. She became discouraged, and feel like giving it up, when she would cheer my heart with encouraging words, and then go away, and try to show me where I was wrong. We would work side by side with my wife and man, weekly, to make it go. For the first few years she did all the labelling, then as my business increased, and I had to employ a larger force, she took charge of the molding of some four tons of beeswax in 1 ounce, 4 ounce, 5 ounce, and 1-pound cakes, packing them in beautiful, attractive boxes and getting them in shape to ship to my trade in Baltimore, New York, and Boston. She also put up many series of sections for my made-up hive-sales in spring and summer. And in all the years she would never once fail for her services; and upon the anniversary of her birth, when I would desire to remember her in a substantial way, she would say, 'Do not, my dear, you are doing too much for me!' Her life was one of usefulness, and the very idea of pay would take her real pleasure out of her service."

The pecuniary loss is the smallest part to me, but her bright, sunny, Christian disposition, so encouraging at every turn, will be one that I shall treasure in a heart that never can be filled. We laid her body away on Dec. 23rd; her Christmas was with Christ, the Lord. She had been in the office to bring her home on account of appendicitis; she was sick only six days."

In addition to our own sympathy. Mr. Seiber will have that of all the bee-keeping friends in the departure of his sister. But his loss must be great on the other side, where only character is valued. And then there is no little gain in those who are left behind, for the influence of her devoted life and example will ever remain to bless those who knew her, and to be her memories as pleasant as the sweet fragrance of beautiful flowers."

HONEYED BAKED APPLES.—Mr. A. E. Willett sends us the following which he elipt from some paper:

"In baking apples, honey for sweetening is truly delicious. Wash the apples and core them, but do not peel; a bit of cinnamon may be put in the holes made by removal of the cores. Put the apples in a baking-pan with just enough honey to cover the bottom of the pan. When the apples are baked for 20 minutes, add the honey and baste them frequently until the apples are half full of honey to every six apples. Eaten hot or cold, with or without cream, they are delicious."

We publish this same information several years ago, and we were quite certain it originated with the bee-keeper who then sent it to us.

Mr. W. L. Coogshall, of Tompkins Co., N. Y., writes us that it does not look very bright for his bee-keeping in Cuba, as signs of diseased brood are appearing. On page 29 (1900) it was mentioned that Mr. Coogshall had shipped a lot of bees to Cuba, expecting to carry on the business there.

Mr. J. E. Crane, of Vermont, has an article in the Bee-Keepers' Review telling how his bees helped to build his beautiful home, a picture of which forms the frontispiece. He says that when young he was quite an invalid, and the doctors advised living on a farm, but he was not able to do heavy work, nor had he the capital to employ someone to do it for him. No one in his locality had made a business of bee-keeping in those days—about 40 years ago—the some of his neighbors kept bees, and were able to sell some honey in good seasons. He read the books of Quinby and Langstroth—there were no periodicals devoted to bee-keeping in those days, but he believed in saving every penny he could to employ the needed help to work on his farm, even if he did not produce enough to make a living at the bee-business. He began in a small way, as all beginners should do, and did not get a pound of surplus the first season, as it was a very poor one. The next year his colonies averaged 100 pounds. He then increased his apiary until he had six or seven hundred colonies all his own. He used frame hives from the very first, and had Italian bees. The price of honey averaged 30 cents per pound about the cost of selling, being fully double what it is today.

He thinks that more failures in bee-keeping come from increasing too rapidly than from any other cause. He believes the beekeeper should turn all kinds of seasons, and believes that they will pay as well, ordinarily, as any other branch of rural industry. After 35 years of work with them he is more interested than ever. He thinks that it pays to persist in the business rather than to sell out when a poor year comes or bad luck befalls. He realizes that many parts of our country are not for keeping bees profitably, the same as would apply to wheat-growing or fruit-raising, and that there is nothing to be gained by trying to believe that bees can be made a success everywhere. The way to discover a good location is to investigate the flora, and come to the conclusion that you have kept bees some years in such localities.

The Ontario Bee-keepers' Association elected the following as its officers for 1901, at its meeting held at Niagara Falls last month:

President, John Newton, of Thamesford; 1st Vice-President, J. E. Provost; 2nd VicePresident, Jas. Armstrong; Secretary, Wm. Couse, of Streetsville; Treasurer, Martin Ennig, Foul-Brood Inspector, Wm. McEvoy, of Woodfords; Assistant Inspector, F. A. Gemmill of Stratford.

Woodstock, Ont., was selected as the next place of meeting. We learn that the last meeting was the best ever held by the Association. We hope soon to find room for an epitome of at least a portion of the proceeded.

Mr. G. M. Doolittle has been down in Arkansas for several weeks, looking after a farm in which he is interested. He expects to be at his home in New York State again about Feb. 1st. Among other things he says this in a letter to us dated Jan. 12th:

"I do not see why bees ever need to die in wintering bees here (Srabton Co., Ark.), if they have food enough, for more than half the days since I have been here have been warm enough for them to fly, and the sun has shone every day but two."

By Dr. A. B. Mason, Sec.

(Continued from page 39.)

Pres. Root—We will next listen to the paper by George W. York, on

HOW TO SHIP HONEY TO MARKET, AND IN WHAT KIND OF PACKAGES.

While this subject is ever one of greatest interest to those bee-keepers who make the production of honey a real business, still it is also a topic on which it is almost impossible to say anything new—especially for me to do so.

Unquestionably, the “how” to ship honey to a distant market is by freight, every time, and for two very important reasons, viz.: First, the transportation charges are much less than by express; and, second, the comb honey so shipped is more likely to arrive at its destination in good condition.

SHIPPING COMB HONEY.

In the shipping of comb honey great care must be used in its preparation to withstand the necessary handling in transit. Judging from personal experience, and also from what extensive observation in the Chicago market, the only safe way in which to put up comb honey to stand shipping successfully is first to put it into non-drip cases, having a follower-board at the back of the sections, with newspaper or cardboard laid on the back of the follower. After that, the cases of honey should be placed firmly in a large crate whose upper side-pieces extend out and beyond each end of the crate about six inches, to be used as handles for carrying between two men. In the bottom of the crate should be put a bed of straw or hay, to act as a cushion under the honey-cases. Then, when putting the cases in they should be so placed that the glass side of each shows thru the crate. This will be an aid to the freight handlers, revealing the contents, and thus suggesting care in moving the crate.

It is not a bad thing to put hay or straw on top of the cases before nailing the top slats on the crate, so that should it accidentally be turned upside down, the honey would not be injured.

But in addition to all the above care in packing comb honey for shipping, it is also well to mark or tack on this precautionary notice, in large letters, COMB HONEY—HANDLE WITH CARE.

If comb honey is prepared for shipment as above directed, precious little of it will suffer any when shipped, no matter what the distance, nor how often it may be transferred from one railroad to another.

CAR-LOAD SHIPMENTS OF COMB HONEY.

For car-load shipments of comb honey no crates are necessary. Simply see to it that the cases are placed solidly in the car in such a way that the combs are parallel with the railroad track. This is necessary in order to avoid breaking down of combs from the sudden starting or stopping of the cars. The bumping of freight-cars is simply an awful thing, hence every case of honey must be securely fastened. It is a good plan to put a light bed of straw or hay on the floor of the car before putting in the cases of honey. Even if not really necessary as a cushion, it would serve to keep the bottoms of the first row of cases clean.

If you wish to keep the tops of the top tier of cases neat and clean in the car, I have a device which will keep them, the cases, and the railroad car ‘clean’ at all times. It is simply a large canvas covering which can be used, and after the honey is unloaded, this canvas can be returned by freight to the shipper, and thus used over and over again. It pays to keep comb-honey cases absolutely clean. We all know how dirty and dusty one becomes when traveling even in the comfortable upholsteret passenger coaches; but how much worse it must be in a rough old freight-car!
pump. I poured and poured; thinks I, that holds an awful sight of water. I thought I would examine it, and I went around the barrel and there it was coming out in a big flat stream. I then lifted the neck and out it shot. It was a sample, not regular stock. If that was the case with samples, what would his regular goods be? Only last year I bought five-gallon cans and on taking some of those to market, the man wanted to down them as fast as I could have rolled them right out. I would like to ask Mr. Hatch, Who buys our honey? Where does it go? Where does the honey of the world go—to the table? I don't find it so. I find our manufacturers, too. They put the honey in the market and I don't find them. I would give you a cent a can for honey; barrels are cheaper, and, as Mr. France says, if you keep water out of barrels you won't have any leakage.

D. H. Cogshall—in our vicinity, the last ten years, we had a kegs, and I don't want any second-hand kegs. They hold 210 pounds. Now, we get them hoop with flat wooden hoops, 12 on a keg. We got our kegs last February for this year; they are scattered around. The process, in our manufacturing purposes, wouldn't give us any more for it in cans than they would in the kegs, which are made of white poplar, as I understand it. They are thoroly put up every reed very covertly.

Mr. Moore—My experience in this respect has not been very satisfactory. I notice there isn't any certainty that there would be no loss either in barrels or cans. I know that [the] few years ago it seemed to be barrels, and now it is coming more and more in cans. My own personal experience has been more favorable with cans. The first year of foam brood with us dates back to leaky cans. The cans came to the farmer, and before they could get them off, the honey leaket down on the car and about two weeks after that foul brood started in our apiary. That would not be an argument against cans.

Mr. Chandler—We had considerable experience with tin cans. I would advise those going to use tin cans not to use second-hand ones. [Applause.] If you use second-hand cans, and lose one can of honey, you have lost enough to pay for the difference between quite a number of second hand cans, and how much a few barrels of honey lost in one can and lost more in one year than would have paid for the difference between second-hand cans and new cans for five years; I put up 400 or 500 cans a year.

J. A. Green—I want to count myself among the barrel men. One after another has made most of the points I expected to speak on. I will say that my experience has been, with Mr. France and others, that the barrel is almost absolutely certain, while I lost considerable honey in filling new cans, and from honey that was shipped to us in tin cans. There is one barrel that hasn't been spoken of, the hardwood barrel that Mr. Dadant has used for years: it is a second-hand alcohol barrel. You can get them at all drug stores. They make them 500 to 600 gallons. I have about 350 pounds and the other about 550. Of course, it depends upon your market; my market demands, or at least will take just as readily, those large barrels. When I get an order for a barrel I send one of those 550 pound barrels that will hold 400 pounds, and the other about 550. If they have kept a long time in a perfectly dry place, put them in the sun and then tighten the hoops. Somebody said you could not use barrels in Colorado, the climate is too dry. That is not so; I have them in Colorado where it will get perfectly dry, then drive down the hoops and hasten them, and you have something that will hold.

Mr. Dunne—Old alcohol barrels are coated with glue, and it is not off glue, and what else would it be? Mr. Chandler—I think it is shilac. Mr. Dunne—No, it is glue.

Mr. Chandler—I used to wax the barrels inside, or use paraffin, but late years I have not done it.

Mr. Moore—My brother has used alcohol barrels for a
Contributed Articles.

Rearing Queens in Early Spring—Some Advice.

BY G. M. Doolittle.

A CORRESPONDENT writes as follows: "Will you please tell us thru the columns of the American Bee Journal how early in the spring we can commence to rear queens, taking the stage of advancement in drone-rearing as a guide? I wish you would give me a period from which to work; I rear queens when we see larvae in drone-cells, will drones from that larve be on hand to meet the queens when they are ready? If so, in this way we can tell just when it will do to commence queen-rearing, no matter whether we are located in Canada or Florida."

If the correspondent, or any one else, uses any of the plans by which larvae from 24 to 36 hours old are given to the bees from which to rear queens, said queens will perfectly matured, when their cells in from 11 to 12 days from the time they are started, as a rule, for, by an experience covering a period of 30 years I find the average time, taking the seasons as they come, and the season from early spring to late fall, for a queen, is three days in the egg form, nearly six days in the larval form, and seven days in the chrysalis, making a period of nearly 16 days from the time the egg is laid to the time the young queen emerges from her cell. Very warm weather retards the development during all stages, to a slight extent: while very cool weather, or inactivity with the bees, as in the fall of the year, retards this development. I have never known this development to be hastened to a greater degree than having the queens emerge from their cells 15 days; but I have had it so retarded in the fall of the year, especially where queens were reared in upper stories, that they did not emerge from their cells, or become fully matured, till 20 days from the time the egg was laid by the mother queen. But, as I said before, about 16 days is the rule, and it is one which can be depended upon in nine cases out of ten.

Then, as a rule, the young queen does not go out to meet the drone till she is from six to eight days old, and one or two days being about the average during the summer months, so we have the time as being not far from 17 to 20 days from the starting to rear queens to the time they would naturally fly out to meet the drones, where everything is favorable. Occasionally a queen will fly from the hive, especially if it is a queen that is not as yet fully developed, when 5 to 7 days old; and I have known them to be 25 days old before becoming fertile, but in nine cases out of ten queens are fertilized when from seven to eight days old, when the weather was favorable.

If the above is correct, and I believe it is, then it will be seen that we shall want flying or mature drones in 17 days, at least, from the time we start our queen-cells.

I have not as carefully observed the time of the maturation of drones as I have that of the queens, but from the same observations I have made along this line, I find that the drone is in the egg and larval form about 10 days, or one day longer than the workers, and about 14 days in the chrysalis form, making a period of about 24 days from the time the egg is laid to the emerging drone.

From six to eight days after the drone emerges from the cell it goes out for its first flight, to void excrement, mark its location, etc., similar to what the worker-bees do, which is called their first play-spell, during which they mark their location also. After this first flight they go out every pleasant day from 12 to 3 o’clock, p.m., to meet the queens, if they are to be found, so that we have about 32 to 34 days from the time the queen lays the eggs in the cells, the drone-egg should be laid 17 days, and the court starts the time to which the drone-brood would have to be sealed from six to seven days.

Of late years I never commence to rear queens until plenty of sealed drone-brood appears in my drone-rearing colonies. Usually, I wait longer than this, the rule which I usually follow is, that if the chrysalis drone commence to change from the white

The Premiums offered this week are well worth working for. Look at them. (Continued next week.)
color of said chrysalis while in its first stages, to the purple color of its later stage.

And now pardon a word regarding very early queen-rearing. My advice is, don’t do it, unless you are willing to treat the colony as a new nuc, and set it up just as you would a new nuc. I have done this, many times during this past season, and I catch a king treats a new-born heir to the throne, for any neglect on your part will almost surely result in very inferior queens. Very early queen-rearing generally results very unsatisfactorily in this locality, and I have found in this respect of the colonies used for this purpose have to be petted and pampered, by way of feeding, often in very unsuitable weather for the breeder to be out in; carried indoor on cold nights, so as to keep up their sugar content, etc., while the colonies used for this purpose are very much neglected by the breeder. The young bees and the queens do not come up to the standard of perfection, unless the care of an old veteran is used in seeing that all the requisites of a perfect development are present, which are very much neglected. This locality has been March, April, and the first half of May. June, July and August are the months, during which the rank and file can rear good queens with the least trouble here at the North.

Onondaga Co., N. Y.

What is Meant By “Cooling Beeswax Slowly”? by J. G. Griner.

It will now seem as the whole difference that existed on the matter of how to produce nice yellow wax will be laid by, or at least as soon as we fully understand the meanings of the terms used. I do not think there would have been any difference at all but what has been clearly defined where the cooling is to commence and where to end. An illustration of the status would be this:

The little mountain stream passing by my house answers many of the purposes of the city water-works. We use this water for washing, rinsing, etc. When it is a little more painful of this water I can notice particles of foreign matter, perhaps soil, vegetable matter, etc., in it, and I have found out, by experience, if I give the water a little time after the hills are passed, the pail settle down to the bottom of the pail. Along comes a gentleman from another clime.

"Nonsense," he says; "after the water has become solid, no amount of cooling will cause any of those impurities to settle. It will remain just as it is forever." And he is right, perfectly right. All the difference is, I was experimenting with liquid water, and the other gentleman had the frozen article in his mind. As soon as we find out what the other means we agree perfectly.

Beeswax “freezes” at a much higher temperature than water, but that does not alter the case any. Particles of dirt or other substances cannot settle any more after it has become solid. I don’t think any person of sense had expected the beeswax to freeze and settle down to the bottom of a pail. Among comes a gentleman from another clime.

"Nonsense," he says; "after the water has become solid, no amount of cooling will cause any of those impurities to settle. It will remain just as it is forever." And he is right, perfectly right. All the difference is, I was experimenting with liquid water, and the other gentleman had the frozen article in his mind. As soon as we find out what the other means we agree perfectly.

In my 25 years’ experience as a bee-keeper it has happened at least seven times that the wax had not melted up wax. With my facilities I have never been able to melt a batch without its coming to the boiling-point. This is exactly the point where the cooling commences, with me. I have explained a number of times in other papers how this cooling (slowly) should be managed. The impurities in the wax must have time to settle while the latter is in a melted and quiet state. I consider the cooling process ended when the wax solidifies, altho my idea may not be expressed properly.

Ontario Co., N. Y.

Naturally Built Combs, vs. Comb Foundation—A Reply.

I am only sure to return home from Europe that I have noticed the two articles of Mr. Deacon. of South Africa, published August 10th and 23rd, 1909, in reply to some articles from me publisht in 1897. I had concluded to allow a similar length of time to the next reply, as were put between our former discussions; but some of our friends seem to be impatient for a word from me now.

I still leave aside the very important facts that the use of comb foundation secures straight combs and worker-combs exclusively, altho all who have tried these matters know the importance of them, and Mr. B. A. Hodsell, on page 630 (1909) has already covered these points.

Mr. Deacon lays great stress on Simmins’ experiments as to the cost of beeswax to the bees. I must acknowledge that if I ever read of these experiments I had forgotten them. But they seem to me to be faulty from the start. From experiment to experiment there is a marked difference—just as Simmins himself states—and it is not possible to take these experiments in a similar way to which a king treats a new-born heir to the throne, for any neglect on your part will almost surely result in very inferior queens. Very early queen-rearing generally results very unsatisfactorily in this locality, and I have found in this respect of the colonies used for this purpose have to be petted and pampered, by way of feeding, often in very unsuitable weather for the breeder to be out in; carried indoor on cold nights, so as to keep up their sugar content, etc., while the colonies used for this purpose are very much neglected by the breeder. The young bees and the queens do not come up to the standard of perfection, unless the care of an old veteran is used in seeing that all the requisites of a perfect development are present, which are very much neglected. This locality has been March, April, and the first half of May. June, July and August are the months, during which the rank and file can rear good queens with the least trouble here at the North.

Mr. Deacon is not the only man who has made experiments concerning the cost of wax. Huber, a Swiss, found the nearly 20 pounds were needed, and an additional 30 pounds, according to circumstances. Since that time experiments have been tried over and over, and the lowest report I remember, made on a practical test, is that 30 pounds in freedom, with a swarm, and a new foundation, can, with two swarms of equal weight; but he forgot to take into account the amount of honey spent for the brood reared by the hive to which full combs were given, when comparing that with the cost of wax, and yet he put the amount at 7 to 8 pounds. The quantity would probably have been raised to the general average of 11 or 12 pounds had he taken the brood-rearing into consideration.

The authorities confirm the high cost of comb. Prof. Cook says that his own experiments confirm Huber’s test of 20 pounds being needed. T. W. Cowan (English) puts it at 13 to 20. Cheshire (English) says it takes “many pounds.”

The assertion that wax secreted is wasted when foundation is furnisht, does not hold together. Bees do secrete wax while foundation is being made, and they always have good use for it, for no one ever can furnish them foundation in such shape that they can fill every part of every comb. Any bee-keeper who uses foundation has seen where they put the wax secreted, for it is whiter than the other. There are always plenty of nooks and corners to fill, and combs to seal. But when there are no combs at all, we all know that they have to hang in festoons and remain idle, probably because they have never had the wax secreted, or the wax is secreted, and because there is no room for more honey till some comb is built. So does the queen lose time, when they are hived upon empty frames, and they have to build combs before she can lay.

Mr. D. makes the point made about the expression “drawing out” the foundation. He implies that we mean that the bees get behind each other, and, pulling at each other’s jacket, thus stretch the foundation, by pulling on it. But he surely knows what we all understand by these words. I use them because everybody does, and we all know that the bees manipulate the wax with their mandibles, and that it is quickly done. A comb of foundation given to a strong colony in the evening will often be drawn out and eggs placed in it the next day. Bees are also always remodeling their naturally built combs? When combs are whitened, at the beginning of a harvest, it is very difficult to tell just where the bees began, and we can see that they have remodeled a portion of the old comb to make the new wax out it.

Mr. Deacon denies my assertion of the Americans being practical, and says that they “take an amazingly long time to realize the uselessness of a thing.” I must say that in the matter of comb foundation we are also constantly deluding ourselves, for, besides what they make, they import thousands of pounds of this useless foundation into Great Britain. They are badly in need of a few arguments from our South African friend.

But this manner of denying the correctness of progress, after a long a time as this, is what I call the Hamet, who, 20 years after the invention of the movable-frame hive, still persisted in calling it “a puppet show,” and the honey-extractor “a useless toy.”

And as to the practical tact of our Americans, I feel
free to speak of it, being a foreigner myself, by birth. The honey-extractor, by the way, is a most important acquisition, and came to the American beekeeper with the foundation, are all European inventions, but take the bee-journals of 25 years ago, and see who took hold and improved and made these things practical and put them to use. Americans, of course. The European bees only followed. Hancock Co., Ill.

The Afterthought.

The "Old Reliable" seen thru New and Unreliable Glasses. By E. E. HASTY, Richards, Ohio.

THINK NEITHER HONEY NOR SUGAR CAUSED IT.

That life-insurance doctor on page 809, he was presumably wrong in crediting sugary urine to the consumption of honey. Moreover (altho a defiance of authorities, and possibly a sad sight of legs to agree with the honey-extractor), he makes a pretty decided statement of my private opinion that neither sugar nor honey had anything to do with it. Pestilential old-grannyism has not all been eliminated from medical practice yet.; and I don't feel that the present war had any better founded than the warfare of 60 years ago against drinking water. At that time almost any patient could be depended upon to die if he succeeded (by bribery or otherwise) in getting a cool drink of water.

A THREE-SCORE-AND-FOUR BEE-KEEPER.

Most of us will have to take off our hats and make a bow to Dr. Besse, with his 64 years of continuous beeking. We can't even 8½ about it when the boys all know that our cradles are not yet 64 years back. And the boy who earns a hive of bees this summer, and continues in the business 64 years, with a sort of hive and manipulation will be arrive at A. D. 1965? Page 811.

TONGUE MEASUREMENTS VS. HONEY-STORAGE.

Ancient the paper of J. M. Rankin, of the Michigan Agricultural College, I will confess that I have felt all along strong suspicions that dissecting bees and measuring their tongues was a deceptive and unreliable way of getting at things. I had a sort of idea that length depended much on the amount of injection with blood and other fluids incident to life itself. That would, of course, let all fluids loose, that there would necessarily be contraction, and that the amount of the contraction would not be at all uniform—temperature, length of time the bee had had, and other things, playing bewildering roles. Maybe I'm wrong. Don't want to be out of fashion. The idea is in the air—breed from bees whose tongues measure high. Measurement, if it is even approximately reliable, is much more to the point than honey-storage. The last may be hopelessly fortuitous, except to long and skilled experiment, while the former gives us something to go by at once if we want to improve our bees. Get the tongues, and sooner or later the tongues will get the honey. The way the public respects you with the honor of repeating that the colony seems to be reassuring. But the millimeters are rather grudging to us. Few of us have any mental picture within as to how short meters or how long meters they may happen to be. I'll come to my own case and you yours by figuring out that the best 24-pound bees were snouted up to over 23 hundredths of an inch, while the yellow 153 pounders scored less than 20 hundredths—the exact figures being .236 plus .197 minus, respectively. We think we have had but few published measurements of this sort to beat .236. And .197 is not a bad measure. Page 812.

SEEING ALL OF THE 20TH CENTURY.

"In all probability very few now living will see all of the 20th century," Editorial, page 519. That, tut, dear George W. ! That's not the way to talk it. To defeat the microbes and add 50 years or more to average human life, is not half so wonderful a triumph—not half so wonderful a medical triumph—as some the nineteenth century won for us. Don't start out by telling us that the twentieth century must, of course, do less.

Mr. O. O. Poppleton, of Florida.

We are pleased to be able to present on our front page this week a most excellent picture of O. O. Poppleton, of Dade Co., Fla. He was born near Green Springs, Ohio, January 13, 1853. In 1855 he bought a farm in Dade Co., where he lived until 1887, when he went to Florida, on account of his health. Excepting about two years at Oberlin College his education was obtained in the common schools. In October, 1861, he enlisted as a private in the 7th Iowa Infantry, and re-enlisted as a veteran in 1863. In February, 1864, he was promoted to a lieutenancy, and a few months later was made regimental adjutant. While performing his duties overwork resulted in eye-trouble, which has seriously affected his health ever since. After the war he went to farming in Iowa, and married a Miss Groom, who died 12 years later, leaving him two daughters.

Dec. 6, 1881, he married Mrs. Mattie Herrick, of Ft. Washington, Ind. Owing to poor health for two very severe Iowa winters, they went to Florida during the cold seasons for several years, where they found the change of climate, with outdoor living, greatly improved his health. In 1895 he married a Miss of Dade Co., and was first married he was given a colony of bees in a box-hive. It so happened that in the winter of 1869 he became acquainted with a bee-paper that is now extinct. He was very much interested in it, and very soon obtained all the literature there was. He then had a sense that there was a better way of handling bees than in box-hives. He soon obtained movable-frame hives, and in a year or so he had quite an apiary, which, in common with many others, was almost destroyed by bad wintering in northern Iowa. But he, of course, overcame the trouble by forethought. On account of such poor health he made no effort to do a large business with bees, but kept from 75 to 150 colonies, spring count, and devoted himself almost exclusively to the production of extra strong honey. For the last ten years that he lived in Iowa his annual crop averaged 110 pounds per colony.

More than 25 years ago he discovered the value of chaff as a winter protection for bees. He discovered what was a winter protector about the same time. For several years he was vice-president of the National Bee-Keeper's Association, president of the Iowa State Association, and honorary member of the Michigan Association. He has ever been a careful observer of his bees, thinking and adhering to plans which he had found successful.

Over ten years ago Mr. Poppleton kept bees for two years in Cuba, the Dussag apiary in his charge containing from 400 to 500 colonies. During the winter of 1888-89, 336 colonies gave a crop of $2,000 pounds of extracted honey, or about 130 pounds per colony—a larger gross yield from one locality, but less average yield per colony, than has been frequent with him both in Iowa and Florida.

On removing to Florida in December, 1889, and looking over the situation, he decided to practice migratory beekeeping, keeping his bees at what is now his home in Dade Co., on the banks of the St. Lucie River, from October to June, and Hawk's Park from June to October. His home was the best winter location, while at Hawk's Park was the best-known field for black mangrove in the State. The two locations were about 150 miles apart by water, and the bees were moved on lighters drawn by steam-tugs. His losses in all this moving were no colonies at all, about one-half dozen combs broken down, and a few dead bees in some of the hives. The four seasons he kept bees in this way gave him average yields per colony, spring count—27,188, 27,182, and 380 pounds; and fall count—314, 275, 194. The mangrove was frozen down so badly in the winter of 1894-95 that he has changed the location of his bees to a place 35 miles north of his present home—a location with some black mangrove, but much inferior to the Hawk's Park location.

His average yield since 1894 has been some over 100 pounds per colony—about the same as he used to get in northern Iowa.

Owing to the poor health which drove him to Florida, Mr. Poppleton has not tried to do a large business, but has kept only bees enough to give him a fair living. He also
has a small patch of pineapple, giving from 25 to 100 barrels of fruit annually. He will increase the acreage of this fruit in the near future.

Mr. Poppleton’s wife died about five years ago. His remaining family is a married daughter and her two children living in Florida, about 70 miles north of where Mr. Poppleton’s home is in Dade County; he has also an unmarried daughter living near his old home in Iowa, taking care of her aged grandfather.

Referring to his migratory bee-keeping and methods employed, Mr. Poppleton wrote us as follows:

**MIGRATORY BEE-KEEPING WITH A GASOLINE LAUNCH**

Moving bees on the water has been a favorite method since ancient times, wherever migratory bee-keeping was practiced. Nearly all the different kinds of boats known have been in use for that purpose. Of late years a favorite plan has been on lighters towed by steam-tugs. These are all right if one could always secure them just when needed. Some large sailboats, which are quite cheap to use, but quite uncertain and unsatisfactory. I have tried both methods within the past ten years, but found them faulty for the reasons given.

About two years ago I had built for me the launch “Thelma,” probably the first gasoline-power boat in America that was designed and built especially for general apiary work, such as moving bees from one location to another, carrying honey to the railroad, going from one apairy to another, etc. She is 26 feet long, 6 feet 5 inches beam, and is driven by a 3 horse-power “Globe” electric gasoline engine. She is what is known locally as a “skipjack” model, giving for a boat of that size a low and large floor space, some 50 square feet of the latter aside from the engine-space. She will carry at a time about three tons of honey, or about 30 colonies of bees in single-story Langstroth hives. Her speed is about six miles an hour on an all-day run. The engine-power is smaller in proportion to the size of boat than any other boat I know of. To have put in the next larger size of engine would have cost $300 more, first cost, and 30 percent more per mile to run, and added not to exceed 25 percent to the speed. It costs about 2½ cents per mile to run for gasoline, electricity, and oil, or less than the average railroad fare for one person. At least 20 people can ride in the boat at one-time with comfort.

The picture of the boat shown herewith was taken last summer at Fort Pierce, while on our road home from Indian River Inlet with a load of bees.

The boat can also be used for pleasure-trips. Within the past month a nephew and niece from Ohio were visiting me, and the three of us spent nearly two weeks in cruising a hundred miles down the coast and back, stopping along as we pleased, to hunt fish, view tropical scenery, etc. We had a gasoline stove, cooking utensils, dishes, and beds, in the boat, and made it our home while gone.

The boat is quite a different model from any other heretofore in these waters, but has been so generally successful for an all-purpose boat that one other has been built of the same style, and others soon will be. It would be very unpleasant for me now, if I should have to go back to the use of a sailboat or hired steam-tugs.

Dade Co., Fla., Dec. 18, 1900.

O. O. POPPLETON.

We might add in concluding this sketch of Mr. Poppleton, that we have had a personal acquaintance with him for some years, and count him as one of the best in all beedom. We have often tried to get him to contribute regularly to the columns of the American Bee Journal, but on account of his eye-trouble and general poor health he has been unable to undertake the work.

We hope that he may be spared many years to the remaining members of his family, and to the host of beekeeping friends who appreciate his character and his efforts in behalf of advanced and progressive methods in apiculture.

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**Questions and Answers.**

**Introducing Queens—Supers on in Winter.**

1. Will it do to introduce queens during the winter months where the old ones are too old to be of any use, or where the queen has died and left no brood? I am a beginner, have 30 colonies, and fear that there are some that need new queens.

Answers.—1. Better not do anything about introducing queens till spring. It will be very hard for you to tell now whether a colony has a queen or not, for there will be on brood in the hive in most cases, even with the best of queens, and you may lose queens by trying to introduce now.

2. They are probably all right so far as the bees are concerned. But if you mean you have left on supers with partly filled sections, it will be rather rough on the sections. They will likely be darkened too much for first-class sections. But it will be hardly wise to disturb them now.

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**A Question on a Honey-Deal.**

A sold to B 20 barrels of honey, B to pay A prompt cash on board the cars at A’s railroad station. A delivered the honey at the station in good condition. Was it a fair deal? We made a claim on B's station one barrel had the head knocked out, and the contents all gone. B made claim on the railroad company for the barrel of honey, and insists on A waiting for his pay for that barrel until he gets it from the railroad company. A insists that the honey was B’s as soon as it was delivered at the railroad station, and B should pay. A does not put on the rail for the barrel of honey, who should be the loser?

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**Judging Queenlessness and Winter Stores Externally—Management with More than Two Stories.**

1. Is there any way of knowing from external appearances if a colony is queenless? Are there any simple and quickly decided methods of determining if a queen is present or not?

2. How is a colony run with more than two stories—a body and a super? Does the queen circulate between the first and second, and a queen-excluder on top of the second, and the honey stored in the third story? Or should there be an excluder on the top of the first, and honey stored in the second and third? If so, is there any advantage in it? Why not use only the second story for surplus, and extract as often as is necessary?

Answers.—1. None. It is easy to tell the hive, and at this time of year it may not be easy to tell them, for queens are not likely to be laying now in the North. But you can judge something from the outside. If there comes
now a day when bees fly, and you find the bees of a colony may rove for the other side as if hunting for a queen, or if they continue uneasy after the other colonies have stop flying, and have settled down to quietness, you may at least entertain suspicions of queenlessness. If you pound on a hive while holding your ear to it, there will be no noise from the bees, and then a prompt quieting down if their queen is all right. It will be something more like a wall if they are queenless. In the working season you may be somewhat suspicious of a colony that appears very listless, and carries in the hive or no pollen when other colonies are carrying in big loads.

2. If you find out the weight of a hive with its combs and a good store of pollen, then add to that ten pounds for the weight of the bees, you will be pretty safe in counting that any excess over this is honey. One of the best ways to tell how much honey there is in a hive is by actually lifting out the combs and seeing how much honey is present. Even then you may not be so very exact about it, for you can tell how many cells have pollen under the sealed honey. The safe way is to make allowance for a liberal amount of pollen, for there is little danger of harm being done by too much honey in the fall or beginning of winter.

3. Sometimes one story is allowed for the queen, then an excluder, then one or more extracting stories. Sometimes the excluder is put over the second story, allowing the queen to use two stories. If 8-frame hives are used, the third story is often an upper hive and if double hives are used. You can use a single story for extracting frames, but that makes it necessary to extract oftener, and makes it more difficult to have the honey well ripened. If any residue is left after the frames are extracted, it may be a bad plan for you to extract only half the combs at one extracting, then the other half at the next extracting, and so on. That will give less chance for unripened honey, but will make you extract oftener than if you extracted all the frames at one time.

Removing Bees from the Side of a House.

A neighbor has a large swarm of bees in the side of his house, and wants them taken out. How could I drive them out and save them? I would like to drive them into a hive. I am told that some medicine will drive them out. They are very cross, but are wonderful honey-gatherers.

CA. LIFORNIA.

Answer.—The fumes of carbolic acid are very offensive to bees, and if enough of the acid is poured into the place it will drive them off. If this is not likely to be held at the place where they come out, they would probably occupy it promptly, and if it could then be put into a hive, and the hive be placed so that the bees could run right into the entrance of the hive as they come out. Other than this, the effort to drive them ought to be successful. There is a possibility, however, that there is so much room where they are that they would merely move to another place away from their comb, and you would be no better off than before.

If so, there may be no certain way to get them out without cutting away part of the wall and cutting out the combs, removing bees and comb together.

Sections Open on Four Sides—Packaging Material.

I am about to buy my bee-supplies for this year, and would like a few points.

1. Is there any advantage in using sections open on all four sides? I used them last year; my notion in doing so was that it gives the bees free access to any part of the surplus department easily and readily. With sections open on two sides the bees will go to the farthest part of the department if held at the place where they come out, they would probably occupy it promptly, and if it could then be put into a hive, and the hive be placed so that the bees could run right into the entrance of the hive as they come out. Other than this, the effort to drive them ought to be successful. There is a possibility, however, that there is so much room where they are that they would merely move to another place away from their comb, and you would be no better off than before.

2. Is excelsior good for the surplus department in winter?

3. Is the cork that grapes are packed in good or better than excelsior? I can get all I want of either cork or excelsior.

NORTH CAROLINA.

Answers.—1. Some think that sections open on all four sides are better, for the reasons you give. Perhaps there may be some advantage in it, but it can hardly make very much difference, for if I am not mistaken, most bee-keepers cling to the sections with openings at top and bottom, and sides closed; altho some years ago much was said about sections with four bee-ways, and if they were much better they ought to have come into general use. If a bee with a load of honey were to enter a super for the first time, and should get into a section already entirely filled, it would no doubt be a convenience to have a side passage directly into a section still offering room. But that is hardly the condition. Mr. Doob- lington has said that depositing the honey in the sections, but that the field-bees dump their loads in the first convenient place in the brood-chamber, and then a set of bees that do not go afield carry from below into the sections. Is it not probable that these inside carriers are quite familiar with the room upstairs, so that they may go generally to those parts of the super where they are sure there is room?

2. Excelsior, if dry, may answer for packing, but planer-shavings are generally preferred to excelsior, possibly because the planer-shavings are more compact.

3. Ground cork is one of the very best things for packing, and is considered away ahead of excelsior.

Feeding Bees in Winter.

What is the best way to feed at this time of the year? I have three colonies in the cellar, and three on the summer stands packed in chatt. Is it best to feed syrup, candy (if candy, what kind?), or granulated sugar dry?

ILLINOIS.

Answer.—The best way is to do your feeding as soon as possible after the bees have stop gathering, whether that be in August or later. But sometimes circumstances are such that we can not do what we would like, and then we must do the best we can. Certainly it would be unwise to waste a honey surplus that might not soon be seen. Don’t think of feeding syrup now. Giving combs of sealed honey is much better. But in all probability that’s about as good advice as telling you how to feed last August, for it’s a pretty safe thing to assume that you have any comb of sealed honey. Granulated sugar dry would be little better than so much sand. The bees couldn’t do anything with it. Candy is the thing, the best perhaps being the “Good” candy, made with powdered sugar and extracted honey. What I mean by it is that when you take it away, only you might then burn it, and that would make it poison for the bees, and stir into it all the powdered sugar you can. Then knead it like dough, adding all the sugar you can work in till you have a stiff dough. Put a cake of this, perhaps an inch thick, over the brood-frames, and cover up warm. Plain candy, made of granulated sugar, the same as any confectioners makes, will also do.

Robbing—Making Comb into Beeswax.

1. Will bees on the side of a hill rob those below, say about 50 feet lower, and about 400 feet apart?

2. How can one make old comb into beeswax?

MAINE.

Answers.—1. Such location would make no difference in the matter of robbing. Bees are just as likely to rob those below. Other conditions than those of position are responsible for starting robbing. A queenless or very weak colony is likely to be a victim, and the case is aggravated if there is too large an entrance, or if the appetites of the robbers are whether they having combs or honey exposed so as to give them a taste.

2. A good solar extractor is perhaps the best thing. You may have something to act much in the same way by having an old dripping-pan and a clothes-iron. Put one corner of the dripping-pan in the oven of the cook-stove, with the split corner projecting out. A little stone, or something of the kind, should be put under the end of the dripping-pan that is inside, so as to make the wax run toward the split corner. Of course, the pieces of comb must be laid in the dripping-pan, and the door of the oven must be left open. Whether you use the dripping-pan or the solar-wax-extractor, if you pile on a lot of pieces of old comb you will find that they will not melt at all, but will act like a sponge, and will be filled with wax that you will not get. There will be less waste in this way if you put in your pan only a single thickness of comb at a time. A good way is to soak the combs thoroughly before putting them in the pan. Then break them up and pile on what you like. The cocoons being already filled with water can not become filled with wax as they would if dry. A dish must be set on the floor to catch the wax as it drips from the pan, and it is well to have in the bottom of this outside vessel a little hot water.
Wintering Well—Prospects Good.

Bees are wintering well, while early snow preceded by soaking rains blan-keted the best start of white clover we have had for several years. The prospects so far are not too bright, however.

The "Nameless" Bee Disease.

The past year has been a poor one for bees, but I think mine gathered enough to carry them thru the winter. I had a little experience with the "Nameless" bee-disease last fall. One colony was so bad that it could not de-fend itself from robbers. I covered the hive with a sheet of glass and changed the stands, and the next spring there was no sign of the dis-ease left, and last fall they seemed to be as good as a colony of Have. A Bee-keepers' Institute.

The bee-keepers' institute was held at Johnstown, N. Y., Dec. 18, 1900, and a goodly number of bee-keepers were present.

The meeting was called to order by one of the State bee-inspectors, Cha. Stewart. Mr. W. Z. Hutchinson de-livered an able address on "The Use and Abuse of Comb Foundation," and an interesting discussion followed.

At the close of this meeting an associa-tion was organized for Fulton and Montgomery counties, and the following officers were elected: President, J. W. Hoffman; 1st Vice-President, G. H. Adams; 2d Vice-President, E. W. Ream; 3d Vice-President, G. W. Haines; Secretary and Treasurer, W. C. Dugdale, West Galway, N. Y.; and Treasurer, D. E. Floyd. A number of members were received, and the next meeting will be at Fonda, N. Y., the first Tues-day in May.

Managing Bees—Cariniolans.

I ran three of my colonies last season on a different plan from what I have been doing, and got $45 worth of No. 1 comb honey from the three, and I am going to try the same thing the com- ing season, and if it comes out all right I will give you the plan.

I had a colony of Cariniolans which had one super on early in May; I was thinking of slipping another one under it, and before I got ready to do so a swarm invaded our place with some dis-tance before it settled. After it clus-tered I hived it and brought it home.

It was a powerful swarm. In a day or two I was able to catch it and get it out on a line. It was a stream of bees going in and out at this new colony. I did not at first think much about it, because I knew it was a very large swarm and thought they were hustling, and concluded that those Cariniolans were dandies. When I finish my work I went over to look

Dittmer's Foundation!

Retail—Wholesale—Jobbing.

I make a PROCESS that produces EVERY ESSENTIAL accessory needed, and is most desirable in all respects. My PROC-ESS and AUTOMATIC MACHINES are an invention which enable me to SELL FOUNDATION and WORK INTO FOUNDATION FOR Cash.

Full Line of Supplies, prices and samples, free on application. BEES WAX WANTED.

GUS DITTMER, Augusta, Wis.

Please mention Bee Journal when writing.

FITNESS & MAGNIFICENCE.

To get new customers to test my Seeds, I will mail my 1913 catalog, filled with more Hargraves than ever, and a 100 GEY Hill bed of 1000 seeds for mail absolutely free. All the Rest Seeds, Bulk, Plants, Roses, Farm Vegetables and many others at lowest price.

G. H. Dintmer, and you will receive your order when you send in this new catalog, 'You'll love the surprise at my last effort and many new varieties. It is FREE to all. Tell your friends to send for, P. H. MIAN, Box 44, Montrose, Co., W. Y.

Dittmer's Foundation! Retail—Wholesale—Jobbing.

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SEEDS

We are distributors for ROOT'S GOODS AT THEIR PRICES for southern Ohio, Indiana, Illinois, West Virginia, Ken- tucky, and the South.

MUTH'S SQUARE CLASS HONEY-JARS, LANGSTROTH BEE-HIVES, ETC.

Lowest Freight Rates in the country. Send for Catalogue.

C. H. W. WEBER, Successor to C. F. Muth & Son, 216-8 Central Ave., CINCINNATI, O.

Please mention Bee Journal when writing.

Queen-Clipping Device Free.

For use in catching and clipping Queens we will send FREE, on receipt of 25 cents, or will send it FREE as a pre-measure of our NEW FREE subscription to the Bee Journal for a year at $2.00, or for $1.10 we will send you the Clipping Device and the Clipping Device Address.

GEORGE W. YORK & COMPANY, 110 Michigan St., Chicago, Ill.

1901—Bee-Keepers Supplies!

We can furnish you with The A. & C. Root Co's goods at Root's prices. We can save you freight, and promptly. Market prices paid for bee hives. New catalog free.

W. H. CREIDER, Fitchburg, Pa.

WE MAKE INCUBATORS

that hatch strong, healthy chicks and lots of them. Our failure in these facts is such that someone in the catalog runs a "Poverty Help." We are also sole makers of Simplicity Incubator.

COLUMBIA INCUBATOR Co., 5 Water St., Delaware City, Del.

Please mention Bee Journal when writing.

50 VARIETIES.

I breed fine poultry strains of the best equipped poultry breeders in the United States. Order one of any of the 50 VARIETIES for 50 cents, telling all about your soil, with special prices for a large lot.


Please mention Bee Journal when writing.

For Sale! 18 Colonies Italian Bees; also quantity new hives.


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Full Line of Supplies, prices and samples, free on application. BEES WAX WANTED.

GUS DITTMER, Augusta, Wis.

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WE ARE DISTRIBUTORS FOR ROOT'S GOODS AT THEIR PRICES FOR SOUTHERN OHIO, INDIANA, ILLINOIS, WEST VIRGINIA, KENTUCKY, AND THE SOUTH.

MUTH'S SQUARE CLASS HONEY-JARS, LANGSTROTH BEE-HIVES, ETC.

LOWEST FREIGHT RATES IN THE COUNTRY. SEND FOR CATALOGUE.

C. H. W. WEBER, SUCCESSOR TO C. F. MUTH & SON, 216-8 CENTRAL AVE., CINCINNATI, O.

PLEASE MENTION BEE JOURNAL WHEN WRITING.
at them. I had placed them about 100 feet from the parent colony, and I noticed that instead of going to the fields the bees were going in a circle to the parent hive. I look into the parent hive and found that the swarm had taken all the honey from that hive and stored it in their own in the old combs I had given them. I let them alone, and on the fourth day all was quiet. Before the parent colony had rallied, it came thru the winter all right, and the next spring I sold it for $9.00. I secured a fine crop of honey from the new colony this season.

JOHN W. BAUCKMAN.
Fairfax Co., Va., Jan. 7.

Not a Successful Bee-Year.

The past year was not a very successful one with bees in this part of the country. They did almost nothing, and stored so little surplus that we may as well say that the crop was a failure. They were so light in winter stores that I had to do a great deal of feeding. They may have done enough to carry them thru till next spring, and I may have to feed again. White clover failed to yield any nectar, but we look for better things next coming season.

Don't forget to send us the old American Bee Journal, for if the season was poor I think I can't get along without it, so keep it moving along.


Not Much of a "Greenhorn."

We secured about half a honey-crop here last season.

I began keeping bees in the fall of 1895, and last spring I had 31 colonies, spring count, which I valued at $4.00 per colony, which would make $124 invested; I then put in $15 worth of foundation, paid $4.00 for help, and

Langstroth on...
The Honey-Bee

Revised by Dadant—1899 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroughly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.25, or club it with the American Bee Journal for one year—both for $1.75; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

GEORGE W. YORK & CO., 118 Michigan Street, CHICAGO, ILL.

BEE-KEEPERS!

Owing to my health, I am compelled to abandon the manufacture of the GOLDEN COMBINATION HIVE, and bee-keepers wishing a perfect sample hive, complete, will do well to order soon, as my large lot on hand will soon be exhausted. Write for prices and instructions, free.

J. A. GOLDEN, Reinersville, Ohio. 3A2t Jan. 1, 1901. Box 61.

Please mention Bee Journal when writing.
BEE-KEEPERS' SUPPLIES
THE FINEST IN THE WORLD.
Our New 1901 Fifty-Two Page Catalog Ready.
Send for a copy. It is free.
G. B. LEWIS COMPANY
WATERTOWN, WISCONSIN, U. S. A.

DOES THE WORK BETTER THAN HENS.

OUR INCUBATORS
are scientifically accurate, 200 new hatching eggs average 600 young healthy bees, with a saving of at least 25 cents per box, no matter what the quantity. No incubator, we have found, compares with the Lewis. Successful Hatcher.

We are the largest exclusive manufacturers of standard equipment and supplies for bee keepers. Our catalogue, printed in 5 languages, Address,

LEWIS MONEY INVESTMENT CO., Box 27, QUINCY, ILL.

INVESTIGATE BEFORE YOU BUY.
We want our customers to be perfectly satisfied before they buy, and we do not want them to be disappointed when they use the SURE HATCH INCUBATORS
and common sense folding brooders. are given better satisfaction than any other mark. We are not in the business to sell bees, but in the business to sale bees. We want nothing but satisfied customers. Our catalogue is FREE. We don't want our customers to pay for it. We want them to have it free.

SURE HATCH INCUBATOR COMPANY, CLAY CENTER, NEBRASKA.

Four Celluloid Queen-Buttons Free
AS A PREMIUM
For sending us ONE NEW SUBSCRIBER to the American Bee Journal for three months at 15 cents, we will mail you FOUR of these pretty buttons for wearing on the coat-lapel. (You can wear one and give the others to the children.) The queen has a golden time.

This offer is made only to our present subscribers.

NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one (of the buttons) as it will cause people to ask questions about the busy bee, and may a conversation be started which would fill up with the sale of more or less honey, at any rate, it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees /"

Prices of Buttons alone, postpaid:
1 button, 8 cts.; 2 buttons, 6 cts. each.

Address,

GEORGE W. YORK & CO., 118 Michigan St., CHICAGO.

Draper Publishing and Supply Co.—There appears elsewhere in this issue the ad of Draper Publishing and Supply Co., Chicago, which we hope every one of this class will see. These people have 3 high-class papers, each occupying a separate and distinct field—Dairy and Creamery, Wood Markets and Sheep, and Commercial Poultry—six months. The subscription price of each is only 30 cents a year, and valuable premiums are offered. Those who are in a position to secure subscriptions will receive liberal terms on application. Write the Draper Publishing and Supply Co., today for sample copies and if you saw their advertisement in the American Bee Journal.

GINSENG
$90. In ginseng produce $95,000 to $12

Buy ginseng direct from the root farm of the famous farm. Treats with every phase of the ginseng industry in an instructive and practical manner. A valuable book for the always "CYPHER'S INCUBATORS",
Seem To Be Wintering Well.

Bees are flying to-day, and seem to be wintering fairly well.

ELEVERT W. HAAG.
Stark Co., Ohio, Jan. 11.

Poor Season—The Bee Journal.

The past has been the poorest season for honey in this locality in many years. I secured 26 good colonies in two-story 10-frame hives, and they nearly filled the supers.

I would not think of getting along without the Bee Journal. I have read and reread three of the standard bee-books during the last year, and am well satisfied that the copies of the Journal for the past season were worth more to a beginner than all of these books put together. The text-books are all excellent, and well fill the place for which they are intended, but the amount of original thought and experience which we get from conventions and otherwise thru the Journal are above everything else.

D. R. SALSBURY.

Smallest Crop In Years.

We had the smallest honey-crop in this county the past season that we have had in a number of years; in many apiaries the bees stored no surplus. The goldenrod and wild aster yielded no nectar, and the oldest beekeepers say that this never happened before in this "neck of the woods."

Our bees had their last flight Nov. 6th, and we may be in winter quarters until April 1st. Many colonies are very light in stores. We winter them in the cellar, and they are not large in number.

We had plenty of warm rains late in the fall, early snows, and no frost is in the ground. The clovers are doing well, and we are sure of a big crop next season.

W. R. H. GRAM.
Barron Co., Wis., Jan. 7.

A Canvassing Experience.

If every one could get as much fun out of canvassing for new subscribers as I have, I think you would have plenty of agents. I called on one old gentleman, and, after showing him the Bee Journal, I told him that if he expected to be successful in keeping bees he should keep posted and read a bright, wide-awake journal. His reply was, "Look here, Donaldson, I have been keeping bees for years and I have forgotten more of them than you know. I tell you it's all luck." I then asked him if he happened that my bees came thru the winter all right when beekeepers around me lost all that they had. He replied, "You were lucky; that's all there is to it." I thought my next question "How have so many probably he accounted for the fact that I secured a good honey-crop when others did not get any. He replied, "Tell you it's all luck," you'll see, your luck will change, too. I had just as good bees as you have, and the first thing I knew they were all gone. The worms ate them all up." I concluded he was a hopeless case.

J. M. DONALDSON.
24th Year Dadant's Foundation. 24th Year

We guarantee satisfaction. ✿ ✿ Why does it sell so well? ✿ ✿

What more can anybody do? BEAUTY, PURITY, FIRMNESS, NO SLAGGING, NO LOSS.

PATENT WEED PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Vell Material. We sell the best Veils, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

LANGSTROTH on the HONEY-BEE—Revised

The classic in Bee-Culture—Price, $1.25, by mail.

Bee-wax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.

H. HOWARD M. MELBEE, HONEYVILLE, O.

(Take this cut is the full size of the Knife.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Enclosed in this celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very best English rat-tooled, and we warrant every blade. The hoes are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle ab described above. It will last a fast-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your Pocket-Knife will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

If you want the Bee-Book

That covers the whole Agricultural Field more completely than any other publisher, send $1.25 to


If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper publish in the United States.

Wool Markets and Sheep

has a hobby which is the sheep-breeder and his industry, first foremost and all the time.

Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.

Please mention Bee Journal when writing.

BE SURE TO REMEMBER that the popular Pan-American Exposition Route this summer will be the Nickel Plate Road, the shortest line between Chicago and intermediate points and Buffalo. No extra fare is charged on any of its Peerless Trio of fast express trains, and American Club meals ranging in price from 35 cents to $1.00 are served in all cars. Partial thru vestibuted sleeping-cars and modern day-coaches with uniformly colored porters in attendance on the wants of passengers. The acme of comfort and convenience in traveling is attained thru the superb service and competent equipment found on the Nickel Plate Road. Write, wire, phone or call on John V. Calahan, General Agent, 111 Adams St., Chicago. 1-434.
Apiary of Mr. and Mrs. James R. Conklin, of Cayuga Co., N. Y.

(See page 72.)
THE BEST WHITE

ALFALFA

Extracted Honey

ALL IN 60-POUND TIN CANS.

ALFALFA HONEY

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.

BASSWOOD HONEY

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms in Wisconsin. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

We have a good stock of the fine WHITE ALFALFA and WHITE BASSWOOD EXTRACTED HONEY that we can ship by return freight. Most bee-keepers must have sold all their last year's crop long before now, and will be ready to get more with which to supply their customers. All who have had any acquaintance with the above-named honeys know how good they are. Why not order at once, and keep your trade supplied?

Prices of Either Alfalfa or Basswood Honey:

For the purpose of selling again.

A sample of either, by mail, 8 cents; samples of both, 15 cents—
to pay for package and postage. By freight—1 one-pound can, 95
cents per pound; two cans, 9 cents per pound; four or more cans, 85
cents per pound. Cash must accompany each order. If ordering
two or more cans you can have half of each kind of honey, if you so desire. The cans are boxt. This is all

Absolutely Pure Bees' Honey,

The finest of their kinds produced in this country.

Read Dr. Miller's Testimony on Alfalfa Honey:

I've just sampled the honey you sent, and it's prime. Thank you. I feel that I'm something of a heretic, to sell several thousand pounds of honey of my own pro-
duction and then buy honey of you for my own use. But however loyal one ought
to be to the honey of his own region, there's no denying the fact that for use in any
kind of hot drink, where one prefers the more wholesome honey to sugar, the very
excellent quality of alfalfa honey I have received from you is better suited than the
honey of more market flavor, according to my taste.

C. C. MILLER,
McHenry Co., III.

Order the Above Honey and then Sell It.

We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

Address,

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

26 cents Cash paid for Beeswax. This is a good time to send in your Bees-

wax. We are paying 26 cents a pound-

CASH—for best yel-

low, upon its receipt, or 28 cents in trade. Impure wax not taken at any price.

Address as follows, very plainly,

GEORGE W. YORK & CO., 118 Michigan St., CHICAGO.
Editorial.

Removal Notice.

Beginning Feb. 1st, our place of business will be at 144 & 146 Erie Street, instead of 110 Michigan Street. Our correspondents, and customers who are in the habit of calling at our office, will please note this change in location.

After our loss and general disturbance here, caused by the fire in this building on Jan. 1st, we concluded it would be best for us to seek another location. We had little trouble in finding what we think will suit us exactly.

The new place is on the first or ground floor—so there will be no more stairs to climb, as is the case here. Also, there will be no need for a freight elevator at the rear, on which we have had to load and unload all our goods the past eight years. This will save considerable handling. We will have a larger floor space at our new location, so we will be able to have everything on one floor, instead of on two as has been the case here a part of the time.

Our new office—144 & 146 Erie Street—is just a few short city blocks (about 100 rods) due north of the Chicago & Northwestern Railway Passenger Station on Wells Street. We will be just about midway between Wells Street and Franklin Street on Erie Street.

We think now none of our friends who come to the city will experience any difficulty in finding us.

Come and see us in our new business home—after Feb. 1st. George W. York & Co.

Bees and Fruit—The editor of Green's Fruit-Grower—Mr. C. A. Green—offers the following testimonial to the value of bees to the growers of fruit:

"But as regards bees injuring fruit, there is no doubt in my mind(163,725),(991,745)

The Editor, in commenting on the above paragraph, writes:

"In my humble judgment the decision of the Utter trial was worth more—nowadays more—than it would have been in the case of the evidential important as that was. If the decision in the first-named had been against us, and let there, bee-keeping might have been wiped out of many fruit sections of the United States. The Arkadelphia case related only to bees in town and vicinity; and if that had gone against us it would have wiped bee-keeping out of the great centers of population only, but could not have affected it in the least in the great acres of country half a mile and more from those centers. Why, it seems to me that the results of the Utter trial are worth thousands and thousands of dollars. If the National Bee-Keepers' Union, the United States Bee-Keepers' Union, or the North American Bee-Keepers' Association, now all merged into one, had never done any more, we could still feel that the money that has been put into the several treasuries was well invested.

We agree most heartily with all the foregoing. Of course, there are many bee-keepers who think that they do not make a sufficient business of bee-keeping for it to be worth while for them to join the National Association. We think, however, that they are making a big mistake. No one can tell just when he will have to meet the same kind of opposition as did Mr. Utter, the bee-keeper. It pays (to be prepared) in advance for any such attack. But even if it were unnecessary to defend yourself, you would have the satisfaction of knowing that by joining the Association you were doing good by helping others who are unfortunate enough to be compelled to defend themselves against envious or
The Wisconsin Convention will be held at Madison next Tuesday and Wednesday, Feb. 5th and 6th, in the State capitol building. A portion of the interesting program is as follows:

President's Address, by N. E. France; Celsar vs. Outdoor Wintering, by A. P. Miner; Outlook for Bee-Keepers' Exhibit at the Pan-American Exposition in 1901, by E. D. Uchser; Honey Exchange, by C. A. Hatch; How to Maintain Present Price of Honey in the Event of a Good Honey Crop, by Harry Lathrop; Short Cuts in Extracting, by Frank Minnick; Discussion of Laws Pertaining to Bees, by E. H. Beecher, and Mrs. Evans and Mrs. Towle will each present a paper on subjects of their own selection.

The secretary, Miss Ada L. Pickard, in her announcement, says:

Many of the prominent and experienced bee-keepers will be present.

E. R. Root, editor of gleanings in Bee-Culture, will present his views on the evening of Feb. 5th. These we know to be highly entertaining as well as instructive, and to be appreciated they must be seen. Since Mr. Root presented these at the National Convention he has obtained many new slides, which will prove to be instructive and interesting to fruit-growers as well as to bee-keepers.

A general discussion will follow each topic, and a free use of the question-box and answers will be a prominent and valuable feature.

Execution rates, within 200 miles of Madison, one and one-third for the round trip, ticket purchased Feb. 4th, 5th or 6th good to Feb. 9th. Tickets in Wisconsin, over 200 miles from Madison, same rate if purchased Feb. 4th, good to Feb. 9th.

Editor W. Z. Hutchinson, of the Bee-Keepers' Review, as well as the editor of the American Bee Journal, expect to be present also. We are anticipating a good meeting, Wisconsin bee-keepers should turn out in full force.

Mr. O. O. Poppleton, it seems, has been receiving considerable notoriety recently in several of the bee-papers. About two months ago we received his photograph, expecting to use it in the Bee Journal very soon after, but before we were able to do so we found that the American Bee-keeper had already decided to present his picture, which appeared in the December issue of that paper. Then, just after making up our forms of the last week's Bee Journal, in which appeared Mr. Poppleton's picture, we received gleanings in Bee-Culture, and discovered it there also. So it seems that at least three of the bee-papers had been planning to show Mr. Poppleton to their readers. It is all right, as there is no one in all the ranks of bee-keepers whom they would be more pleased to see than Mr. Poppleton. It was Mr. E. R. Root who said to his son E. R. Root, when he (A. I.) had the editorial management of gleanings in Bee-Culture, "Whenever you see anything from that man Poppleton just hand it right in to the printer. It is always good. He is sound and practical." Editor E. R. Root says he has found his father's statement concerning Mr. Poppleton to be literally true.

Mr. Poppleton, as is known by most of the older readers of bee-literature, uses what is called the "Long-Ideal" hive, the frames being 12 inches square, and from 30 to 34 frames in each hive. These frames are all used in the brood-chamber, and, of course, are run entirely for extracted honey. Mr. Root says:

"Mr. Poppleton himself believes that the hive first devised by Langstroth 30 years ago had been improved upon so far as shape and proportion of frames are concerned, for the production of comb honey. But the producer of extracted honey is so different he thinks it doubtful if the same style of hive and frame can be best for both."

Mr. Charles Becker, as well as other apiarian exhibitors at fairs, hear some queer remarks made by visitors who see the exhibits of honey and bee-supplies. At the Wisconsin fair all the exhibits of Mr. Becker's large exhibit of bottled extracted honey. The old gentleman said to the old lady:

"What is that along there in them bottles?"

"I don't know unless it is an advertisement for a drug-store," replied the lady.

Mr. Becker is a very sweet "druggist."

On another occasion some spectators were strolling along and came to the honey-extractor. One of the company upon inquiring what it was, received this wise answer from another visitor:

"Why, they put the bees in there, and squeeze out the honey."

And yet, some of us are just as ignorant about certain things as were the people referred to in the foregoing concerning common apiarian matters.

Mr. H. G. Osborn, writing to gleanings in Bee-Culture, from Cuba, Oct. 10, 1900, after living there 12 years, advises any one contemplating bee-keeping in that country, to stay at home unless one can first go there and learn the difficulties to be encountered, and how best to meet them; also as to insects which delight to feast on "the rich red blood of the new comb, the very best stimulant for a good appetite." One year he extracted 75,000 pounds of honey from 600 colonies in five months.

Editor Root wisely says: "No one should ever think of 'pulling up stakes'; taking his all, and changing everything in a move to a new locality, much less go to a climate that is essentially different from the one in which he has been brought up."
Contributed Articles.

The Bee-Keeper and the Bee-Supply Dealer.

A Colorado subscriber wrote us as follows: Oct. 16, 1900, and we referred his letter to several bee-supply dealers requesting their opinion on the subject:

TO THE AMERICAN BEE JOURNAL:—

I want to purchase supplies needed for 250 colonies of bees. I don’t know where to buy, for the reason that the business must be transacted by mail, and I object to paying for a large bill of goods that I have never seen. But I can’t help myself. When the goods are manufactured, then counted and shipped, I am not represented. My money passes without control, and I am helpless.

I know all the current answers to my objection; but the answers do not satisfy. The seller is honorable; that does not meet the case. The shipping-clerk is careful; that does me no good after an error is made. An error in shipping can be corrected; but the errors at the points to much; but the error of the man at the saw, if his spoiled goods get shipped, is never corrected. We get self-wooed apologies, but these do not meet the requirement.

In making a rule of business to protect the seller absolutely, we have left the buyer absolutely unprotected. Cash in advance is perfect protection to the seller, but it is rank injustice to the buyer. Cash on delivery of goods, duly examined, is the rule, and several dealers have adopted the plan.

Now, I submit that the bee-keepers, supply dealers, and editors ought to aggregate brains enough to make a rule of business that will protect both buyer and seller. Let us try the problem, at any rate. Will not the sellers of supplies lead the discussion?

COLORADO.

We have received the following responses to the above, from some of our advertisers:

DEAL WITH RESPONSIBLE FIRMS.

I do not consider the dilemma of our Colorado friend a serious one. If he wishes to purchase a car-load of supplies the goods, which will be sent to him at a very low price for the consideration of a quantity order with the cash. This is greatly in the favor of the purchaser. If he places his order with a strictly responsible house his goods will be guaranteed as ordered, and if, by accident, an error should be made to the factory several hundred without expense to him. As a rule, manufacturers and supply dealers are very honorable in their dealings, and if there are any that are not they must eventually drop out of the business.

After giving this subject much thought I can see but one explanation, and that is, to be certain to place the order with a responsible firm.

WALTER S. POUDE.

"COLORADO" TAKES A WRONG POSITION.

We note the copy of letter from your Colorado subscriber, which you have called to the attention of your customers. We agree that the terms of the agreement of a mail order with the cash are an advantageous proposition in this matter, for this reason: If he wishes to purchase a car-load of goods, and can show as good financial standing in the business world as the manufacturer, then he would have no objection to sending him goods to be paid for when examined; but inasmuch as he is not in business, and not quoted in the commercial reference books, he could hardly expect that any one would trust him outright with a car-load of goods unless he could give satisfactory references.

We have never had any difficulty in satisfying our customers in the ultimate settlement of any disputed point, unless it may be with some one who has ordered only a few dollars worth of goods and is simply of that make-up that he would not be satisfied even if the whole amount of money he paid for the goods was returned to him.

Now we would suggest that if this party wishes to purchase a car-load of goods, and, as he says, he is willing to pay cash, that he send the manufacturer one-third or one-half the cost of the goods, and deposit the balance in the bank to be paid for to the manufacturer when the goods have been received and found satisfactory.

THE W. T. FALCONER MFG. CO.

NO RULE CAN BE LAID DOWN.

There is no rule that can be laid down in this matter, as the matter of credit to a strange purchaser by a dealer depends altogether upon the information that the dealer may or may not have obtained concerning the purchaser. If dealers were compelled to trust everybody, they would have to ask a much larger price for their goods to make up for dishonest customers, and the honest ones would evidently pay for the dishonest ones. A few very large orders to understand that good business do not hesitate to furnish good references, and that secures them a credit, so they can see the goods before buying. On a small retail trade, however, it is not advisable to make credit, as it involves too large a correspondence and too much huck-keeping. Between a fair dealer and a fair purchaser, there is not trouble once in a thousand purchases, because the dealer is always ready to take back incorrect goods and replace them, paying freight, too. If the goods are as large or as the dealer is not fair, or the purchaser himself is unjust or gets angry at an error, instead of peaceably representing the mistake which needs correction. But as I said before, it does not happen once in a thousand deals that both parties get so angry that they cannot agree on a satisfactory solution.

As we cut up very little lumber ourselves, but buy much of our stuff already cut from large mills, we are both a buyer and a seller in the goods furnish by the man at the saw, and we find we see very little trouble in getting giving satisfaction.

CHAS. DADANT & SON.

TRY TO DO AS YOU WOULD BE DONE BY.

Your Colorado correspondent is not so badly off as he imagines. In the first place it is not necessary or desirable even, for him to send his order hundreds of miles distant to the factory. He can place it with a large wholesale dealer in his own State, and receive just as good prices as he sent the order direct to the factory.

Again, if he is a reliable and responsible man, and can satisfy the one with whom he places his order of the fact, it is not necessary for him to send for the goods, and he gets them and is satisfied they are what he ordered. Neither the manufacturer nor the dealer wants to have any unfair advantage over his customers. The reason why the rule of "cash with order" has been adopted, is to protect the buyer, but it is rather in his interest in preventing bad debts, thereby permitting of closer prices. If the manufacturer or dealer had the means at hand of ascertaining who were responsible and trustworthy they would not, not many people could be accommodated who, under the present conditions, find it less troublesome to send the amount with the order. We have the means at hand for men in the mercantile business; but not for farmers, professional men, etc., who make up the great majority of customers for bee-supplies.

Even if cash does accompany the order and it is placed with a responsible manufacturer or dealer, the buyer is not helpless if the order is not properly filled. Your subscriber seems to assume that the manufacturer or dealer would more care in avoiding mistakes, the incurring the payment was not to be made till after delivery and inspection—a proposition which is absurd from our point of view. We would have as much right to assume that the buyer would be more critical in his inspection, seeking for some basis as a claim for rebate, if he were allowed the privilege of inspection before settling for the goods. We have more faith in both classes—buyer and seller—than to ascribe to either a low standard of business.

Your correspondent says, "Errors of the man at the saw, if his spoil goods get shipped, are never corrected." That is a pretty sweeping statement which we think he would find it difficult to prove. We can cite him to numerous cases in our experience, that have been made to modify it. We always try to do as we would be done by, whether goods are paid for or not. Occasionally a man takes so unreasonable a position as to make it impossible to satisfy him; but we usually satisfy our customers.

THE A. I. ROOT CO.
Honey-Dew—Extracted Honey Question.

BY C. P. DADANT.

I HAVE received the following to be answered in the American Bee Journal:

Mr. C. P. DADANT.—Would you be kind enough to answer a few questions about the product of the com-pressed or enclosed honey, known as "honey-dew," or "honey-flow," in the majority of bee-keepers, and always get it. A customer of mine bought nothing of me last season until September. I find he had bought elsewhere at a less price, but admits that my goods were best, and again orders of me at my price, without making a single objection, as "Colorado." Every supply dealer and manufacturer should be able to establish a character beyond any question, by the best of reference. I deal with hundreds of customers every year—any an easy matter for every one of them to get my standing within a week, but it is an utter impossibility for me to find out the character and standing of all my customers. If every bee-keeper was honest and fair, then it would be perfectly safe and right for any reliable firm to submit goods for inspection before payment. But it is a melancholy fact that bee-keepers have their regular proportion of people who are dishonest, unfair, and cranky, as every dealer knows. We must protect ourselves against this class both by care with which we order the firm until after having established a character with a firm, we sometimes make exceptions. But this does not protect us against losing customers, and we are forced to do the right thing the hard way.

Why should I, as a "manufacturer and dealer," "contribute any brains to make a general rule of business that will protect both buyer and seller?" Why should I contribute to make it perfectly safe for my customers to order of my reputation? If I have given them satisfaction and no cause to complain, let them keep on buying of me, and if they want to try the other man let them take their chance, and not ask me to make it safe for them to try him.

If it were a rule to ship goods on approval, we would be at the mercy of the Chinaman from ordering from several concerns and selecting the best, as he sees it, and refuse the others on some pretext? We would never know, and if we did would have no redress. What protection would we have against a chronic crank and a fault-finder?

Such conditions as Colorado complains of, while it is liable to happen to any firm, and in fact do happen, are exceptions. Where they are a rule, they will soon be established, in which case the reputation of a man is destroyed, and in the case of exceptions that happen to good firms, it is hardly worth considering a general rule as proposed.

Let each firm do business on a principle that will satisfy the buyer and the seller. If I have given them satisfaction and no cause to complain, let them keep on buying of me, and if they want to try the other man let them take their chance, and not ask me to make it safe for them to try him. It is only those that mistrust everybody else that we ever have any trouble with.

I have for a number of years shipped all of my honey to one firm, for the reason that I have confidence in their honesty, and I let good enough alone.

The only general rule should be with the publishers. Hold them responsible for the character of their advertisers. They are making money by it, why not then they can afford it considering what we have to pay. Let it be an understood rule, that the appearance of an advertisement is a guaranty for the character of the firm.

GUS O'TTERBEE.

LATER.—I had thought that perhaps I had been a little too hard on "Colorado." I have just read the editorial on "A Dishonest Advertisement," page 691 (1900), and I am more than ever confirmed in the position I have taken. We must protect ourselves against that class of bee-keepers, and the honest must suffer in consequence. G. D.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by writing in the names and addresses when writing us on other matters.

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be drawn off thru a faucet without having to move the tank. For a crop of a few hundred, or even of a few thousand, pounds, this is certainly good. We sometimes have unripe honey, and I know that such honey would be beneficially standing in an open tank in hot weather. But if the crop is harvested at the right time, there is usually no need of artificial ripening. There are seasons when the weather is damp and the crop is so watery that it even ferments in the combs before harvesting. No amount of ripening will help such honey.

3. We always return the combs to the hives to clean them. If there is no honey in the fields at the time of extracting, we wait until evening to return the extracting supers, so that the bees may not be incited to rob. About sunset is a good time, and if any excitement prevails it dies out before any damage is done. The next morning all is quiet. In a good season, when the bees are still at work, the combs may be returned at once, that is, the combs of one hive, that have just been extracted, are exchanged for those of the next, and so on, till the end of the day.

We have tried keeping the combs over, from one year to another, without giving them back to be cleansed—we do not like it. They are sticky, and leak more or less; they attract mice and robber-bees, and the liquid honey that sticks to them is likely to sour. Then when spring comes, if we happen to put them on the hive during a day of short crop, we have some risks again from the excitement caused, and some danger of robbing.

4. Yes, if your colonies are strong, the combs are better off on the hives during the summer than in the honey-house or anywhere else. Even if there is no crop, the bees take care of them and neither mice nor moth can touch them. But we must not leave a lot of supers on a weak colony. That would be an error. Some judgment must be used in this as in any other thing. Let us always remember that successful bee-culture is made of many little details, and that the most careful man is also the most successful.

Hancock Co., III.

Queen-Rearing on a Roof—Feeder and Liquefying Granulated honey.

BY JOHN R. SCHMIDT.

Queen-Rearing on a Roof—Feeder and Liquefying Granulated honey.

BY JOHN R. SCHMIDT.

So much has been said already about bee-keeping on a roof, and especially as this has been my subject quite often it is really becoming one of the "old chestnuts." It is about time this subject were buried, at least long enough to allow the readers to recover from the "too much of one thing" malady which creeps into our periodicals so often not only on our literature, but in many others as well. For instance: Not long ago while talking to a photographer who has made a success of his profession, I chanced to ask him which is the best photographic journal publisher. Pick one of the high-priced journals and turning to the frontispiece he said: "Here we have an example of composition and lighting that we buried 20 years ago, and it is the same with many of the articles as well—the rethreshing of the same old things until we actually do not care to read them."

The only excuse I have for bringing an old subject before the readers is, that it introduces something which heretofore to my knowledge has never been attempted on a large scale, viz: The rearing of queen-bees for the trade. The illustration hereafter is a photograph of the C. H. W. Weber apiary, and again shows a few of the nuclei used last season to accommodate some of the queens. It has been suggested that the only sure way to get queens properly mated is to establish an apiary on an island, away from other bees, and even to accomplish this desired result a desert was mentioned. Probably this led to the idea of going to the other extreme and rearing them on a roof of the city; anyhow, this has proven to be a capital idea, at least in this city, where house-top apiaries are few and far between. Mr. Weber tested this method of queen-rearing last season and found it to work well, his business having develop to such an extent that a move was necessary to the roof proper, about 20 feet higher, where more room and sunshine could be given the bees.

The same idea of having the hives under cover has been adhered to, as this is important when located on a high roof where the mousetraps, etc., can be placed over the house-tops. It would become a troublesome and often disastrous undertaking to winter hives of bees under any other method, but as it is here, each hive nests up to the second story in a solid packing box, warmed during the winter. A thing of no little importance has been added to these hives. That is, every one has a permanent Doolittle feeder on the north side of the brood-chamber, and manipulated entirely from the outside thru a hole in the top closed with a cork. The arrangement is so convenient that one may feed any desired amount of syrup at any and all times; even in the coldest days the bees may be fed with the same convenience and safety as in summer, the packing not being disturbed in the least. Just pull out the cork, insert a funnel, pour in the feed, replace the cork, and we're ready for the next hive. This is almost convenience itself, and as near being the perfect way to feed as anything could be.

Another thing, every one of the hives under cover has three queens in each—two young laying queens and one old one—living peaceably, too. I believe this was considered impossible heretofore. Can't tell you now (by request) how it is done, but it is an accomplisht fact—nothing theoretical about it.

Liquefying granulated honey.

The sale of liquid extracted honey is another specialty of Mr. Weber's, and to keep it in the liquid state is not an easy thing to accomplish, judging from the amount of granulated honey we see. This localized method of liquefying extracted honey, and to make a success of the business we must give them what they want. Realizing this, Mr. Weber has devised a liquefying tank with a capacity of one barrel at a time. The honey-chamber is surrounded by a water-bath, and the water is heated by a gas stove of special design. The exact amount of water in the tank can be read from the outside upon an automatic register, and as the water is too low a turn or two of a small wheel admits the water thru a sep- a special connection for this tank. Should the water sup- ply become too great that may be turned into a drain pipe, and needs no further care. The temperature of the surrounding water is of great
AMERICAN BEE JOURNAL

importance, and to know to a degree just how hot the water really is, is accomplished by a thermometer on the outside which registers the exact temperature of the surrounding water in the tank. A glance at this will tell us just where we are "at" at all times, and there is no danger of overheating except thru carelessness. Any variation from the desired temperature is easily controlled by the perfect system of heating, and cold water supply. All this will be appreciated the more when it is said this tank is located in the store in full view of all customers and visitors, and its novel appearance excites much curiosity. The honey when re-
liquefied is run into bottles, corked, and hermetically sealed while hot with a preparation which looks like wax, and something especially appropriate and pleasing when used for this purpose.

Is this tank a success? Well, I believe I can safety say it is. Two bottles of re liquefied honey which I saw had been on ice constantly for three months, and after this long time did not show the least trace of granulation. If bottled honey will stand so severe a test as this there is no necessity for educating the people to eat granulated honey. I was told a tank like this does not cost over $100, and it cer-
tainly would be a good investment for many. To see it one would think it cost a good deal more.

Such are a few of the good things Mr. Weber has thought out himself, and if he could be induced to describe them with us we would put a few "wrinkles" into some of the most prolific writers.

Before closing I would like to say that some parts of this article may read like a big puff for Mr. Weber. To all those who think it such, I would say that I write only hoping to give the people a few typical to the reader, and if a person deserves credit for such a thing it is no more than right that he should be mentioned in connection with it.

Hamilton Co., Ohio.

The Conklin Apiary in Rhyme.

By Mrs. J. A. CONKLIN.

In the village of Moravia this apiary is found—
Just out behind the barn are the hives round;
Bondeled on the east by berries, and on the west by hens.
On the north by a vacant lot, a neighbor it depends.

The owner that's at work there, was born in '59;
He stayed on the farm with father until he married me.
We went to farming right away, instead of a wedding trip,
But he hankerred so for honey that one day he bought a "skip."

You all know what the fever is that one swarm brings to men—
Well, I guess the only remedy is to get some more of them.
Mistakes, experiments, and even death didn't break the fever up—
Still on it raging till cooled by drink of a successful cup.

We finally gave farming up, and to the village came.
But his appetite for honey is very much the same.
Bee-keeping sir—and also wives—those both short and tall,
When passing thru this place we'll be glad to have you call.

OYAHU CO., N. Y., Dec. 19, 1900.

The "Bull-Dog Ant" of Florida in the Apiary.

By PROF. A. J. COOK.

I HAVE been much interested in a correspondence with H. E. Hill, of Florida, regarding a large red ant of that State. Mr. Hill says he has not seen this species in Canada, Cuba, or the United States except Florida. These ants are very serious pests in the apiary, and their destructive habits make it imperative that the bee-keeper give them special attention. Mr. Hill states that he has as many as 19 nuclei in a single week from these predatory ants. This is true not only in the main colonies, but even in the brood frames where the nuclei were fastened on the trunks of palm-trees quite a distance from the ground. A further precaution was also taken of placing a girdle of cotton wadding saturated with carbolic acid around the tree above and below each nucleus.

Districts not cultivated are fairly alive with these ants. They burrow deep in the roots of old stumps, under logs or other pieces of wood, in the grass, between the walls of buildings, in wood-piles, in ventilated hive-covers, beneath the bottom-board of hives, in the vacant space of a con-

tracted hive, between the shingles of old buildings, in rot-
ten portions of tall trees—in short, may be found in any place that affords them a harbor.

Mr. Hill has never counted them but believes that a colony may number several hundred thousands. It is quite common, however, for a detachment of a few hundred to gather in any place affording a safe rendezvous. They are very ready to occupy any convenient harbor near the apiary. Hence the need of great vigilance on the part of the bee-keeper.

It is a curious fact that queenless colonies, or any colony in the apiary weak in numbers, are quick to be discovered by these marauders and are almost certain of attack and slaughter. The bees make their homes in the hive at night-time; and even populous colonies not infrequently succumb to their attack.

I have long believed that ants are to the Archaeopteryx what man is among vertebrates. Even the study of the ant's brain would establish its position at the head of its phylum. Its brain is not only large in proportion to its body, but has a kind of corruagation which reminds us of the brains of our own and those of the other higher mammalia. We know that ants sow seeds, clear the ground, gather and cure their grain, make slaves, and do many other things that indicate high intelligence. It is not surprising then that these proved marauders are a great apicidal of Florida. He states that in the early evening, scouts are sent out in advance of the main army, which select the colony of bees to be destroyed and plundered. These advance agents may be seen running over the hive in large numbers. Such a colony of ants is usually doomed unless removed beyond the reach of the menacing host. Mr. Hill has frequently removed the imperilled colony with the result that an adjacent colony was vacated by the destroyers of this ant.

This method has been the most successful of any tried. Mr. Hill reports that the bees show the utmost consterna-
tion when attacked by these ants. The chitinous crust, with which all ants are very hard, is frequently crushed by this bee-destroyer of Florida. The ant has immense strength, is very agile and alert, and, by use of its sharp, scissors-like jaws, is sure of victory. The hum of distress, and even of despair, made by the bees is so characteristic, that it would be quickly recognized even by the inexperi-

enced.

As before stated, these attacks are always made in the night. During the time of the contest, thousands of ants may be seen running over the ground and the hives near by. The ants grasp the bees and the two may be seen whirling, one over the other, until the bee is hurried from the hive maimed or dead. This hand-to-hand conflict, if we may call it, gets the best of the ants. They do this by biting the leg of the bee, or holding her by the thorax and pulling her up high from the bottom-board between the combs. After the terrible carnage, the remaining ants feast upon the honey which is left in the comb and in the honey-sacs of the dead bees.

The immense numbers of these destroying ants can be easily imagined, as Mr. Hill states that he has burned thousands of colonies during the past two years. They seem to be proof against the use of bi-sulphide of carbon. When this liquid is used, they pick up their eggs and move to new quarters. The free use of gasoline and the torch seems the only practicable way to destroy the destroyers. Mr. Hill has invented a very ingenious way to protect his queens, springing out of a colony of wood ants. He puts them on a stand, the legs of which are so turned that a little basin encircles each leg. This little basin is made impervious by coating it on the inner side with paraffine. By keeping this full of kerosene or gasoline, the ants are unable to pass up the legs and so can not reach the bees. Of course the liquid has to be replaced as it evaporates.

Like all ants, this "bull-dog of Florida" has a sort of scale or hump on its narrow thorax. There are two sizes to these, the common and the larger, which appears to be a soldier. The heads are very large, the eyes round and small, and the jaws very strong and sharp. The entire body has numerous hairs. Except the eyes and the abdo-
men of the soldiers, the entire body of the ordinary worker, which are black, the entire ant is red. As Mr. Hill has not sent me any specimens of the queens, I do not know how they differ from the others except as very likely they are large of still show tubs of wings. The queens of all ants, as also the males or drones, have wings and fly
Questions and Answers

Conducted by

DR. C. C. Miller, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—Eds.)

Moving Bees in Winter.

I have an apiary of about 50 colonies. Would you advise me to move them now?

Virginia.

Answer—Without knowing more about the case it is hard to answer. If you yourself expect to move, it will probably be more convenient for you to move the bees a few miles away if you remain where you are, and the pasture is very much better at some place two or more miles away, it may be advisable to move the bees. If you expect to move the bees, and desire only a present present is a good time to move them, it may be said in reply that it will be better to wait till the bees begin to fly in the spring. Still, it is much more convenient to move them now, they may be moved carefully without danger of much harm.

Getting Straight Brood-Combs Moving Bees.

1. As I am a beginner in the bee business, I would like to know what is best way of getting straight combs in the brood-frames? I have 20 colonies, and I wish to run for extracted honey another year. The past year I work for comb honey, so the brood-frames are in such a shape that it will be difficult to extract a great many of them that I would like to get filled.

2. And, furthermore, is it best to contract the space in the hive, when there is an extra frame in the hive that isn’t filled?

3. After a swarming issue, can I move the old colony, say a half mile, without injuring them, to a different place, supposing that the swarm that issued would better be put back on the old stand? The reason that I ask is, I want to have them on the opposite side of the river. I have 30 colonies.

California.

Answers.—1. The very best way to have combs built straight is to fill the frames with comb foundation. That makes sure a thing of it that the center of the comb will be in the center of the frame, and you may make sure at the same time of having all worker-comb.

2. It is not desirable to have any more space in the hive than can be filled by the bees, especially in winter, for it costs the bees extra to keep up the heat in that extra space.

3. Yes, it will be all right to move the mother colony away a half a rod or half a mile. If you want to have the moved colony pretty strong, move it at a distance of 8-10 feet. But if it is to be sold, it is considered good practice to let the old hive stand close beside the swarm for a week and then move it. That makes the swarm very strong, but of course the mother colony is just so much weakened. The other is a matter of personal preference. It is better to make the first swarm strong for surplus. Moving the swarm a half mile will be the same as moving it a short distance, only there will probably be not quite so many bees leave the hive for the swarm, if the old hive is moved a long distance.

Storing Supers—10-Frame vs. 8-Frame Hive.

1. I am anxious to fix my surplus honey house for the winter, but having been deprived of the building I used for a shed, I have no place to store my supers where the temperature does not go much below freezing—in fact, I must leave some outdoors. Thru the kindness of the "gude wife," I can work in one end of the kitchen, but must store my traps elsewhere. Will freezing injure the foundation in the sections, provided they are kept dry and in the dark? By an eye of faith I see a shop and honey-house after next summer's big honey-crop!

2. Why is a 10-frame hive better for extracted honey than an 8-frame, as you advise New Jersey, on page 25? How about two 8-frame hives with queen-excluders between?

Hoosier.

Answers.—1. Don’t be worried about freezing. It’s probably a good deal colder here than where you live, and I’ve had thousands of sections filled with foundation stay in a shed as cold as ours can be in winter but two or more winters, and I don’t think they were hurt by it.

2. One reason for preferring the 10-frame hive is that it is safer for winter. There is more room in it for winter storages. There is not the same reason for restricting the brood-nest at any time for extracted honey that there is for comb honey. The bees will not do anything at comb honey in the supers so long as there is room below. But it is not quite the same with extracting comb above. If you have two 10-frame combs above they will store it in them nearly if not quite as readily as below, and even if the extracting combs are new they will prefer them to sections divided up into little compartments. Of course, you will need more than one story of 10 frames in the harvest, and you will be safer from having the harvest interrupted by swarming than if the queen were confined to 8 frames.

Mating of Queens—Growing Plants for Honey.

1. I have been reading "Langstroth on the Honey-Bee," and I find that it says that the queen mates with the drone while on the wing. I do not find anything any where what the queens mates with in another way. I have six clip queens, and others that seem to be too large to fly, and I would like to know if they will be all right for breeding in the spring.

2. I wish to purchase some honey-plants in the spring, and would like to know what would suit this climate best. What kinds of clovers would you advise, and what kind of garden flowers?

West Virginia.

Answers.—1. It is exceedingly doubtful whether queens mate any other way than on the wing. If the wings of the queen are clip, you should have her on her wedding trip, or if by any means the wings of a virgin queen are bad so she can not fly, you may better kill her at once; she is utterly worthless, as all the eggs she lays will produce only drones. If the clip queens are all right in the new spring, if they were all right in the fall, for a queen does not need to meet the drones each year, but only once for life.

2. Your best chance will probably be among the clovers. Alsike clover is one of the best, and also white clover is somewhat low and wet. Sweet clover will do almost anywhere, and will do well on poor land and on stiff clay. Very likely crimson clover may prove a success with you. It is very beautiful when in flower, and would be an ornament in the yard. Canola is a yellow-flowered and much planted, but it may be worth while for you to try some at that time, as in that case you will be a little ahead if it succeeds.

The Premiums offered this week are well worth working for. Look at them.
Convention Proceedings.


By Dr. A. B. MARON, SEC.

(Continued from page 58.)

Discussion on Shipping Honey Continued.

Mr. Akin—I am glad Mr. Abbott has made his speech; I know a few people in Colorado, Arizona and Utah can people sell their honey.

Mr. Moore—I was going to ask him how he sold 30,000 pounds of honey a year?

Mr. Akin—Don't bother yourself about that, Mr. Moore. In the first place, if we were to have a million people to let the Wisconsin people ship to Chicago, and from Chicago to Denver, and from Denver to Loveland; what would be the freight rate? Not less than first-class, or once and a half, or double first-class.

A Member—Couldn't you ship barrel-staves without all that freight?

Mr. Akin—We would probably have to pay the freight on the barrel-staves, whereas the tin comes to Denver and our cans are put up right in Denver, and distributed throughout the State and adjoining territory, and we have the tin cans. I don't know of anybody in our part of the country who puts up honey in second-hand cans. Last year we put our honey in five-gallon tin cans, otherwise called 60-pound cans. Those cans are made, it is true, out of light tin, and unless they are securely made, you can burst one of them almost as easily as you could roll off a log. When the honey is put into the cans and let it stand for four weeks, and then takes a turn across the continent and back again and it will be there just the same; it will candy solid. At least all the honey I ever produced in Colorado, that has been a good many car-loads, would candy within a month, and will candy as solid as any butter or lard you ever ship. But why put it in a 60-pound can? What trade are we catering to, anyhow? It is come out at different times here in this convention, and in other ways, that the great bulk of the honey we have been producing and taking such pains to get nice, good honey for people to eat, goes where? Into tobacco, into whisky or liquor of some kind or other—I don't know what to call it. I went into a representative from one of the Chicago honey commission firms told us last year that the great bulk of the extracted honey they bought and sold did not go on the table as a table syrup. If that is true, use your old, dirty barrels if you wish to, but in the West where have a good table "syrup" that that there—in the United States, propose to put our honey into cans. It is the cheapest package we can get. Every old alcohol and glucose barrel is pick up by the farmers and others who want to take water on their ground for drinking purposes. The cheapest barrel we could buy would cost us $100, it wouldn't hold anything except water, and not always that. It is true that we could take the barrels and put them out into the open air and let the sun heat them in Iowa out of walnut, and it was put up several years before it went to Colorado. It stood all right until I moved it to Colorado; after I got it in that dry climate, the cracks opened up until you could stick your finger thru. That is what the barrels would do if you ship them from a damp climate and let them stand a little time without rediving the hoops. I tried that once on some barrels I had in Iowa in one hot summer. Afer they had stood in my shop, I filled them with honey and put them out in the sun, let them stand with iron hoops driven tight and putting on iron hoops and drove them until I was afraid I would burst the hoops, and then ship them to Colorado and let them stand in the sun a few days, and then went around and could lift the hoops off from the barrel with a finger. If the honey had not been canned it would have been out on the ground. That cuts but little figure with Wisconsin and New York people, and you who have barrels and can use them and ship them to the packed up, I am producing honey and working on a different line altogether.

Mr. Moore wanted to know how I could sell 30,000 pounds of honey in my local trade. I am making it a staple, and as a staple it must compete with other sweets of equal grade—that means granulated sugar with some honey poured into it to make a syrup. I am not making it for the fancy trade, but when the poor people of this country buy our extracted honey and use it as a syrup, they don't want to buy a barrel of it, and they don't want it to be ex- pensive. That is another thing. Then we sell them five cents, for a package that will hold five cents worth of honey. I am going to hit Mr. York real hard while I am on the floor, and if he undertakes to get after me, I want to set the record between us. Some of our readers read the American Bee Journal an editorial by Mr. York criticizing those of us who want to put our name and address on our package, and he says, "Does the farmer put his name and address on his bags of wheat and on his potatoes, and on his horses and cows?" Yes, sir, a lot of them, pretty much. "Does he put his name and address on them when he sends them to market?" The case isn't applicable at all; his argument is altogether false. The wheat farmer sells it in big bins with 1,000 pounds, and the farmers' warehouses; it is shipped in a car-load to the mill, the miller grinds it, and when it becomes flour, every sack of it goes out with the miller's brand on it, and it remains on it until it is put into the hands of the retailer. Then I buy my honey, if he buys it in barrels or 60-pound cans, and puts it up in little packages to sell to the retail trade, it doesn't make any difference whether I have my address on it or not. The New York store becomes the dealer, and it is in my comb honey that goes thru hands to the retail trade, and is never changed from the moment it leaves my hands until it reaches the retail store, my name has a right and my address has a right, to be on that package and remain there as long as the product remains. A packer or manufacturer is on that goods whenever the goods goes right thru to its destination in the original package; butter is so branded, eggs are not of course, because they are sold in an egg group, but butter is the nature of the product. Yet in the city of Denver, there is a firm, I have been told within the last few days, who are making a specialty of strictly fresh eggs, and when these eggs go out to the different houses around the city, they go out with the name and address of the firm putting them up and guaranteeing them strictly fresh and all right. Now, I will not take any further time on this particular phase of it. But why continue with the large package? Why can't people make the good product and sell it in small packages—put your honey into the small retail package right the first thing; put packages up in dozens, or any other way, just as all kinds of fruit and other things, and put your address and the name of the firm who would like to be used as a table syrup. My honey is put in half-pails 3, 5, and 10 pound sizes, holding 4, 7, and 14 pounds of honey. I put that honey into the pails at the honey-house. I refuse to sell it, except to people right by me, until it has been solid and has been in the pails for enough time to dry. The salesman in my town to-day don't want liquid honey, because they will pick it up and tip it on one side and read the honey-label and then set it down and go off. Every customer who wants to look at it will do the same thing. Directly the honey is cooing around the rim. When it is carded, there is none of that trouble. I am sorry my honey isn't here. I made a shipment by freight but it has not arrived. I believe the price of freight is a little high. We have the printed instructions right here, how to melt that honey, and the people can learn, and will learn, and when they come to the store they want a package that they can take in their hands and put some syrup to go on their table as a staple, and they don't want it to pay for the fancy ways, it is simply to put on their tables. They want it in the cheapest package they can get, and so when it is in a carded condition they take it home and melt it, and everyone is bound to please. Honey is a staple, and not a delicacy, and want it put in cans. I put it up so they can have it either way. If they want it they can take it in the pails and put them in their wagon and go home; it can be used in the town or country, and party the people have a choice. If it is made that way it is simply to put on their tables. They want it in the cheapest package they can get, and so when it is in a carded condition they take it home and melt it, and everyone is bound to please. Honey is a staple, and not a delicacy, and want it put in cans. I put it up so they can have it either way. If they want it they can take it in the pails and put them in their wagon and go home; it can be used in the town or country, and party the people have a choice. If it is made that way it
ing after us to get our honey, and I think we will increase the demand. I have been selling honey very cheap—I won't tell you how cheap; I have been selling it very cheap, and some people said to me, "You are selling honey too cheap; you ought not to do that, Mr. Abbott." Which would you rather I would do? You know if I send my honey to Denver I will have to compete with you? Do you want me to sell at home, or sell in Denver? I say the question comes to this point; if I have a crop of 30,000 pounds for sale, and enough to make the literal crop right around a little village of 2,000 population—making the total crop 50,000, is that community going to consume 50,000 pounds of honey at 10 cents a pound when they can buy granulated sugar for 5½ cents six or 6½ cents a pound and make a splendid table syrup? No, sir, they will not. Mr. Abbott is catering to fancy table trade; Mr. Moore is doing the same thing. Let them put up glass packages, if they want to, for people who can afford it, but let the packy come, and there comes a time when you can't sell to that trade; but the family buys every day in the year; they want it all the time, whether times are good or bad. The family trade is best to depend upon. I said to our Denver people, if I put my honey on the market at 8, 9 and 10 cents a pound, as you want me to, the result will be the people are going to buy the sugar and leave the honey with me; then I have got to ship it. What will I do? Send it down to George Washington, Mr. York. Chicago costs me $30 a barrel; it costs me 97 cents a hundred pounds to get it here, and I pay freight on the package—barrels or whatever it is. Mr. York would probably want to pay six cents there for it, or seven in Chicago; wouldn't it? Chicago has a much cheaper place to the market. How much money have I left for that honey? If I ship to the general market it will net me, less freights, commissions and package, about 3 to 4 cents; and I said to the Denver bee-keeper, Would you rather I would ship my honey and get 4 cents a pound, or sell it at home for 6 cents a pound and keep it at home? I am tending to my own business, I am not bothering you; when you can get more right at home than you can sell, don't put it on the market to compete with other people who haven't the local market, or can't get it. (Applause.)

Continued next week.


By O. L. Abbott.

The members of the California Bee-keepers’ Association met at Selma, Fresno Co., Jan. 7th, and elected a board of directors, consisting of the following members: Dr. J. P. Johnson, J. W. Painie, J. S. Crowder, B. D. Vanderburgh, and C. M. Davis.

The following were elected as officers for the ensuing year: President, Dr. J. P. Johnson; 1st vice-president, J. S. Crowder; 2nd vice-president, C. M. Davis; secretary, Prof. C. S. Taylor, Jr.; corresponding secretary, O. L. Abbott, of Selma; and treasurer, J. W. Painie.

Pres. Johnson read the annual report, showing among other things that the directors had purchased a car-load of cans and a car-load of cases at a saving to its members; that the Association had received and sold 118,732 pounds of extracted honey at 6 cents a pound; and that it had manufactured the wax into foundation for its members at a low cost per pound. The members showed their appreciation by a vote of thanks, and by a request to keep the board.

Grimes was unable to serve as director another year, so Mr. Davis was elected to fill his place.

A committee consisting of J. H. P. Stephens, Prof. C. S. Taylor, Jr., and O. L. Abbott, was appointed to revise the constitution and by-laws, and report at the next meeting.

The meeting adjourned to the first Monday in February.


The Chicago Convention Picture is a fine one. It is nearly 8x10 inches in size, mounted on heavy cardboard 10x12 inches. It is, we believe, the largest group of bee-keepers ever taken in one picture. It is sent, postpaid, for 75 cents; or we can send the American Bee Journal one year and the picture—both for $1.60. It would be a nice picture to frame. We have not counted them, but think there are nearly 200 bee-keepers shown.
**Grand Clubbing Offers.**

Magazines and Post Fountain Pen to the Amount of $9.00 for $5.00.

Gleanings in Bee-Culture &middot; &middot; &middot; &middot; &middot; &middot; $1.00
Review of Reviews &middot; &middot; &middot; &middot; &middot; &middot; 1.25
Success &middot; &middot; &middot; &middot; &middot; &middot; &middot; &middot; &middot; &middot; &middot; &middot; 1.00
Pearson's &middot; &middot; &middot; &middot; &middot; &middot; &middot; &middot; &middot; &middot; &middot; &middot; 1.00
Post Fountain Pen &middot; &middot; &middot; &middot; &middot; &middot; &middot; &middot; &middot; &middot; &middot; &middot; 1.25

All of these sent to one or separate address &middot; &middot; &middot; &middot; &middot; $5.00

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*Read Everything in this Column. Here are a few Sample Combinations.*

**SAMPLE COMBINATIONS.**

Gleanings, Review of Reviews new, McClure's, and Success &middot; &middot; &middot; $5.00
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" " " " " " Cosmopolitan &middot; &middot; &middot; &middot; 5.25
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" " " " " " and Woman's Home Companion &middot; &middot; &middot; &middot; 2.00

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*These prices are not the publishers' prices for these papers, but they are our special reduced prices when taken in connection with GLEANINGS. In many cases they are just one-half the regular rate.*

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**How to Get the Price for any or all of the Papers Named Above.**

1. Gleanings in Bee-Culture, one year, $1.00.
2. If you want only one additional paper, add the price found in the top of the column in which that paper appears. For instance: Gleanings, and Success (2d col.) will cost you $1.25.
3. If you want several papers in addition to gleanings, each one may be had at the price named at the top of the column. For instance: Gleanings, Success (2d col.) and Rural New Yorker (3d col.) will cost you $2.25.
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**THE A. I. ROOT CO., Medina, Ohio.**
worst variety will disappear, and the fever is immediately diminishes. The matter attracts much attention. The remedy was accidentally discovered by a young girl who was down with the disease, who secretly refreshed herself with honey and water with the astonishingly curative results, and it was then tried on soldiers sick with the disease.

Bees Seem to be Wintering Well.

There has not been much winter here as yet, but it has turned colder to-night, with prospects of a big snowstorm or ice spell. Bees are wintering well, seemingly.

J. WILEY MOUNTJOY.

Wintering Bees in a Cyclone-Cellar.

I have 49 colonies in winter quarters—30 in my cyclone-cellar, and 19 in a neighbor’s. I put them away about the first of December, and they appear to be doing well. I find the cyclone-cellar the best place to winter bees, as I have lost only two colonies in six years, and they were weak when put away. Last winter I put 10 colonies into the house-cellar, and lost three of them after taking them from the cellar, and the others were weak and didn’t do much all summer.

The bees stored very little spring honey, but the fall flow was good. I got 1,500 pounds in all, over 900 pounds being comb honey. My best colony stored 169 sections, and the next best 168 sections. No. 1 was an old colony, and did not swarm during the summer. No. 2 was a swarm which came off June 18th; but I had 11 colonies that did not give me a pound of honey.

I use the 8-frame and the 10-frame hives.

Maule’s (35 new things for 1901) Seed Catalogue

You should, by all means, have this most modern catalogue of modern times. It is full of new things and useful things. In vegetable, flower and seed, the new things are many. It is full of illustrations. It gives practical, up-to-date cultural directions and offers many cash prizes. The first edition alone sold 20,000, so while we send it free to all customers, we must ask others to send 10 cents for it, which amount they may deduct from their first order. You will make a mistake if you do not write for this the Novely Seed Book of the year. Address, WM. HENRY MAULE, Philadelphia.

Olds’ Big Three tablets

Pat’s Choice—Late—Introduced in 1890. Henry Olds—Late—Most profitable 1891—Warranted to be more successful than any other. H. Olds—Early— Introduced in 1893. Smooth, Handsome, Free from All other using mental—Cyclone—low price. Curing free, stores full boxes. Send and save money. Send for box.

Western Druggists, 30 cents.

We Can’t Give Away Anything

You pay for what you get in this world. You understand that. But as a business proposition we want you to try our great medicine for Indigestion. Constipation, Biliousness, Sick Headache, Insomnia, “the Blues,” and like complaints——

Laxative NERVO-VITAL Tablets

We know you won’t buy it, until you know something about it. The best way to get you to know how good it is, is to let you try it. That’s what we do. Send Stamp for “Health” booklet, and we will send you a free sample package, that you may try it yourself. We know you will always keep it in the house, if you once try it. What fairer offer could we make?

At all Druggists—10 and 25 cents.

Handsome Stick Pin FREE!

If, instead of sending for a sample, you send us 25c we will send you “Health” booklet, a 25c box and a handsome gold stick-pin, set with emerald, ruby or pearl, warranted to be worth double the money. Order by November 30th. An extra introductory offer. Only one pin to one person. If unsatisfactory, money returned. Send now while the offer is good.

MODERN REMEDY COMPANY, KEWANEE, ILLINOIS.

[This company will do exactly as it promises.—Editors.]

Fred W. Muth & Co.

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One Minute, Please!

We beg to announce that we have gone into the bee-supply and honey business. Being practical bee-keepers who understand the supply business thoroughly, and know pretty well the wants of the bee-keepers, the firm will give its exclusive attention to the bee-supply business and the promotion of the sale of honey in this vicinity.

After visiting all the important manufacturers, we have selected a line that will give the best of satisfaction. Our location—adjacent to the Suspension Bridge—is most central, and being only four blocks south from the Fountain Square, is right down in the business part of the city, and especially handy for our Kentucky friends; our facilities for prompt service are perfect; and our prices are consistent with good business judgment. Our Catalog has many new features. Send us your name so we can mail you one.

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**BEE-KEEPERS’ SUPPLIES.**

Our New 1901 Fifty-Two Page Catalog Ready. Send for a copy. It is free.

G. B. LEWIS COMPANY....

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**WHY NOT BE SURE ABOUT IT?**—Sure that an orchard is profitable? Send for our New Premium Incubator Catalog. It is free.

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We will save you New Precious Incubator.

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**IN ALL ITS BRANCHES.** This is the title and theme of our new Year Book. Contains 200 new and original illustrations of hens, poultry in farm buildings, etc. in the country. Deals with every phase of the poultry industry in an instructive and profiting way. We will save you New Precious Incubator.

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At a Bargain! A GARDEN HOME—including 15 acres and 100 chickens in Larsehington framed wires. Address, 3A5. P.O. Box 322, Springville, Utah.

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11F—Bee-Keepers’ Supplies!
We can furnish you with The A. L. Lemp Co. goods at wholesale or retail at their prices. We can save you freight, and ship promptly. Market price paid for hives. Send for our circular.


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**MUTH’S SQUARE CLASS HONEY-JARS, LANGLESTROH BEES-HIVES, ETC.**

Lowest Freight Rates in the country.

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**THE POPULAR BUFFALO ROUTE**

This summer on account of the 1901 Pan-American Exposition will be the Nickel Plate Road. Countless thousands will visit one of the greatest expositions of modern times. The Nickel Plate Road will be the popular line. The excellence of its service is well recognized by the traveling public, and the reputati of its train employees in their uniform courtesy to passengers is well known. When you go East see that your tickets say Nickel Plate. Write, wire, ‘phone or call on John Y. Calahan, General Agent, 11 Adams St., Chicago, Ill. 2, 4A3.
HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Jan. 19.—Honey is selling slowly; this applies to all grades with the exception of white clover and buckwheat, which sells readily at the providing it grades No. 1 or better. We are asking for No. 2 buckwheat honey sold at from 7c to 16c, and candied white clover at from 16c to 22c, travel-stained and off-grades of clover, 13c and 19c. We are offering a good buckwheat honey, 7c; dark and black heat, clover honey, 10c, buckwheat, 8c. Extracted, white honey and clover bringing the outside prices; buckwheat and other varieties are much under.

R. A. BURKET & CO.

KANSAS CITY, Jan. 22.—Fancy white clover, 15c; amber, 12c; dark, 9c; demand good sound. Extracted, 7c; demand cases. Beeswax, 3½c.

W. R. CROMWELL, PRODUCE CO.,

Successors to C. C. Clemmons & Co.

BUFFALO, Jan. 17.—All kinds of honey are so quiet it is difficult to make a sale. Occasionally some customers are by the reason No. 1, 12c; few, 14c; but dark, 10c, and all kinds in liberal supply; some may have to be reconsidered. Extracted honey, white, 7c; clover, 10c. All grades of buckwheat are in Buffalo. Beeswax, 6½c.

PATTERSON & CO.

ALBANY, N. Y., Jan. 18.—Honey market is dull on all grades now, with light stock and light demand. White clover in good condition, ordinary, 15c; fancy, 16c; No. 1, 15c; No. 2, 12½c; mix, 11½c. Extracted, white, 8½c; mix, 6½c; dark, 7½c.

H. K. WRIGHT.

BOSTON, Jan. 18.—Fancy No. 1 white in cartons, 1c; A No. 1, 1c; No. 1, 15c; No. 2, 12½c; 15c; mix, 11¼. Extracted, white, 10c; light amber, 7½c; buckwheat, 7½c. Beeswax firm at 25c.

BLAKE, SCOTT & ING.

CINCINNATI, Jan. 16.—Market very quiet. No change in prices. Fancy white clover sells for 1c. Extracted, fancy, 15c; ordinary, 12½c; Southern grades bring 6½c. Fancy white table honey brings from 6½c to 8c.

NEW YORK, Dec. 22.—Fancy white, 15c; No. 1 white, 14c; No. 2 white 12½c; amber, 12c; buckwheat, 10½c. Extracted in fairly good demand at 7½c for white, and 5c for amber; off grades and Southern in barrels at from 6c to 12c. We have had many inquiries for this honey this year. Extracted, white, 9½c; light amber, 7½c; buckwheat, 7½c.

J. S. M. 

BEEHIVE, Jan. 19.—Market very quiet. No change in prices. Fancy white clover sells for 1c. Extracted, fancy, 15c; ordinary, 12½c; Southern grades bring 6½c. Fancy white table honey brings from 6½c to 8c.

HILDEBRTH & SIEBERN.

DETROIT, Jan. 19.—Fancy white, 15c; No. 1, 13½c; No. 2, 12½c; amber, 12½c. Extracted, white, 7½c; amber and dark, 6½c. Beeswax, 6½c; demand cases. Beeswax 50c.

SAN FRANCISCO, Jan. 9.—White clover 13c; amber, 11½c; 12½c; dark, 8½c. Extracted, white, 7½c; light amber 6½c; amber, 5½c. Beeswax, 6½c.

Stocks of all descriptions are light, and values are being as a rule well maintained at the quoted range. Firmness is naturally most pronounced on light amber and water white honey, the latter being in very scant supply.

HONEY MARKET.—We may have a customer within a short distance of you who wants your honey or beeswax or in close touch with all the markets; therefore write us regarding your variations in market condition for current and future market price. References—Either Bank here for any business man in this City.

E. O. HAMMOND, 267 Market St., Fairfield, I1.

DO YOU WANT A

HIGH Grade of Italian Honey OR A CHOICE STRAWBERRY?

Send for descriptive price-list.

J. D. BLOCHER, Pearl City, Ill.

FOR SALE

Extracted Honey from Alfalfa—60c.

E. D. S. JENKINS, LAS AMINAS, Col.

Please mention Bee Journal when writing.
We have a Large Stock on hand and can ship promptly.

**SEND US YOUR ORDERS FOR**

Hives, Extractors
OR ANYTHING YOU WANT IN THE
BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. Send for Catalog and copy of THE AMERICAN BEE-KEEPER free. Address,

THE W. T. FALCONER MFG. CO., JAMESTOWN, N. Y.

**SWEET CLOVER**
And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

- **Sweet Clover (white)**: 100 lbs. $1.00, 250 lbs. $2.25, 500 lbs. $4.00
- **Sweet Clover (yellow)**: 100 lbs. $1.50, 250 lbs. $3.00, 500 lbs. $6.00
- **Aislie Clover**: 100 lbs. $1.25, 250 lbs. $3.00, 500 lbs. $5.00
- **White Clover**: 100 lbs. $1.25, 250 lbs. $3.00, 500 lbs. $5.00
- **Alfalfa Clover**: 100 lbs. $1.00, 250 lbs. $2.00, 500 lbs. $4.00

Prices subject to market changes. Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO., 118 Michigan Street, CHICAGO, ILL.
The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.

**HOWARD M. MELBEE,** HONEYVILLE, O.

(This Cut is the Full Size of the Knife.)

Your Name on the Knife:—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The Novelty flies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle, is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your Pocket-Knife will serve as an identity, and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying label gives a false idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25 or give it as a Premium to the one sending us Twenty New Subscriptions to the Bee Journal [with $3.00]. We will club the Novelty Knife and the Bee Journal for one year, both for $1.50.


Please allow about two weeks for your order to be filled.

**Bee-Hives and Honey-Boxes**
in car lots, wholesale or retail. Now is the time to get prices. We are the people who manufacture strictly first-class goods and sell them at prices that defy competition. Write us today.

Inter-State Box and Manufacturing Company,
Hudson, Wis.

Please Mention the Bee Journal when writing Advertisers.

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**BEES-KEEPER'S SUPPLIES OF ALL KINDS.**

**LANGSTROTH on the HONEY-BEE—Revised**
The classic in Bee-Culture—Price, $1.25, by mail.

Beeswax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.
February.

The low-slanting Sun, which for many a day
    Has played childish bo-peep with work,
Is slowly but surely retracing his way,
    Which means he will no longer shirk.

In prodigal mood he deserted the North—
    With harvests a plenty in store—
To riot with beauties of tropical birth,
    And sensuous gardens explore.

Repenting, he turns toward the land where the bloom
    Is waiting his slow, silent tread.
Thrice welcome the wanderer back, and make room
    For music and joy we thought dead!

The bees and the birds have been silent and glum
Since cheery Old Sol traveled South;
The flowers lie asleep till this rover shall come
    And kiss them right square in the mouth.

—BY EUGENE SECOR.
The Best White

Alfalfa or Basswood

Extracted Honey

All in 60-Pound Tin Cans.

Alfalfa Honey

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.

We have a good stock of the fine WHITE ALFALFA and WHITE BASSWOOD EXTRACTED HONEY that we can ship by return freight. Most bee-keepers must have sold all their last year's crop long before now, and will be ready to get more with which to supply their customers. All who have had any acquaintance with the above-named honeys know how good they are. Why not order at once, and keep your trade supplied?

Prices of Either Alfalfa or Basswood Honey:

For the purpose of selling again.

A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—one 60-pound can, 9½ cents per pound; two cans, 9 cents per pound; four or more cans, 8½ cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. The cans are box. This is all.

Absolutely Pure Bees' Honey,

The finest of their kinds produced in this country.

Read Dr. Miller's Testimony on Alfalfa Honey:

I've just sampled the honey you sent, and it's prime. Thank you. I feel that I'm something of a heretic, to sell several thousand pounds of honey of my own production and then buy honey of you for my own use. But however local one ought to be to the honey of his own region, there's no denying the fact that for use in any kind of hot drink, where one prefers the more wholesome honey to sugar, the very excellent quality of alfalfa honey I have received from you is better suited than the honeys of more market flavor, according to my taste.

C. C. Miller.

Order the Above Honey and then Sell It.

We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

Address.

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.
National Bee-Keeper's Association.

General Manager Secor has sent us the following copy of the report of the committee appointed by the Board of Directors of the National Bee-Keeper's Association to count the ballots cast at the annual election held in December, 1900.

Hon. EUGENE SECOR,

General Manager National Bee-Keeper's Association, Forest City, Iowa.

Dear Sir:—The undersigned committee selected to count the votes cast by the members of the National Bee-Keeper's Association in December, having performed their duties, find the following result:

Total number of votes cast 236.

Elected Manager—Eugene Secor, 236; George W. Yorke, 16; Dr. C. C. Miller, 3; Wm. A. Seherr, 2; balance scattering, 1 each.

For Three Years—W. Z. Hutchinson, 317; A. I. Root, 235; E. Whitcomb, 183; George W. York, 35; G. M. Doolittle, 17; Dr. C. C. Miller, 12; Herman F. Moore, 15; E. T. Abbott, 11; C. P. Dadant, 10; N. E. France, 8; O. O. Poppleton, 6; Frank Renton, 5; C. A. Hatch, 4; W. L. Cogshall, 3; Thomas G. Newman, 3; H. W. Root, 3; F. H. Backstrom, 2; Prof. A. J. Cook, 2; Eugene Secor, 2; balance scattering, 1 each.

Respectfully submitted,

GEORGE W. YORK.

Hon. HERMAN F. MOORE.

The official of the National Association now are as follow:

President—E. K. Root.

Vice-President—John A. Z. Alkin.

Secretary—Dr. A. B. Mason, Toledo, Ohio.

General Manager and Treasurer—Eugene Secor, Forest City, Iowa.


Single vs. Double Tier Cases. Some time ago Gleanings in Bee-Culture published an editorial on the subject of comb-honey shipping-cases, saying that years ago the first were double-tier, holding 40 pounds, and after some time similar cases were made holding just half the amount, and finally 24-pound single-tier cases. The latter were so convenient that naturally the 24-pound single-tier appeared. Bee-keepers and commission men, after using the latter, decided that it was just the thing. The objection to the double-tier cases was that should any of the combs in the upper tier of sections become broken they would leak down over the lower tier, and thus drown them also. During the past few years there has been scarcely a double-tier case used in the East and central West, but in Colorado the beekeepers seem to hold to the double-tier cases with two glasses separated by a strip of wood.

Editor Root says that during all the time the many were advocating single-tier cases Dr. Miller still clung to the 24-pound double-tier case. The Root Company, like many others who handle large quantities of comb honey, advocated the single-tier cases either 12 or 24 pound, but it seems that after getting and disposing of some ear-load of honey from Colorado the past few months, put up in double-tier 24-pound cases, their prejudice against them began to wane; and now Mr. Boydten, their honey-man, and also the freight-handlers, prefer the 24-pound double-tier cases. Mr. Root thinks that while it may not be possible to give fully the reason, it may be an account of the double-tier case being critical in form, and thus more easily lifted and handled than when spread out in a single tier. He says, "Handle a car-load of it and be convinced." He thinks the double-tier case is more symmetrical in appearance, conforming more with other packages holding staple goods.

Mr. Root also says that the double-tier case is now used "with drip paper under the upper set of sections as well as under the lower one, so that the objection to honey leaking from the upper to the lower set has been removed."

Galvanized Iron vs. Tin. A Stry Straw in Gleanings in Bee-Culture says: "Australians seem agreed that galvanized iron does well to hold honey so long as honey without air touches the surface; but let the surface be simply damped with honey so the air can get at it, it is then riddled with holes. This takes place,—[A short time ago the Australians seemed to be agreed that galvanized iron was not fit for either extractors or cans, for holding honey. The verdict in this country seems to be that for extractors it is safe, because the honey is supposed to remain in the machine only long enough to run out. But I believe myself that storage-cans of less than one or two hundred capacity should be made of tin. If larger, galvanized iron will be all right.—Editor."

Queens by Mail. In the American Bee-Keeper Editor Hill refers to the discussion at the Chicago convention in regard to the effect on queens sent by mail. It will be remembered that there were those present who thought that queens were quite a good deal injured in going thru the mails, and also others who did not think they were materially affected. Referring further to the matter, Mr. Hill says this:

To take a queen from active egg-laying and confine her in a small-living-case for several days is such a very abrupt change, resulting in a suspension of her natural function, that even a casual thought of it impresses one with the probability of its detrimental effect. And, indeed, it may be that very prolific queens are sometimes injured in this way. We believe, however, that it will rarely be found that the injury is permanent. Some of the best queens that we have ever owned have come to us the actions of which have been consistent. Some very inferior ones have likewise been received. We might be prone to change this paper to the action of the most inferior lot of queens that we have ever observed and used them only about 50 hours; and then, upon three full frames of brood and bees. There were 50 of them in the lot, and but five or six of them proved to be worth keeping, all of who were of the high-priced kind.

The National Bee-Keeper's Association. We received the following letter recently.

EDITOR AMERICAN BEE JOURNAL:—I have just learned thru the Rural New Yorker the result of the Uter vs. Uter suit against the bees. "Burr for the National Bee-Keeper's Association! Had it not been for that suit would never have been appealed, and then I believe that the suit would have had to be a back seat, and would have surrounded around by anybody and everybody would do this, so I wonder if beekeepers would thrust the country realize the benefit they already have, and will heartily receive from the actions of the Bee-Keepers; that is, it is the foundation upon which we as bee-keepers can build our hopes of having our rights protected.

I am glad my ideas have been stirred up sufficiently to cause me to become a member of the best association we ever had. Enclosed find $1.00 which you will please forward to General Manager Secor.

AARON SNYDER.


We are glad Mr. Snyder wrote us as he did. His letter ought to stir up others to follow his good example.

Really, we don't see how any one that is at all interested in bee-keeping, and in seeing their rights upheld, can fail to appreciate the great value of the National Bee-Keeper's Association. There ought to be a grand stampede on the part of those still outside the Association. They should join by the hundreds, and do so at once.

We are ready at all times to receive the annual dues ($1.00) from any and all, and then forward the money to General Manager Secor, who will promptly mail a receipt to each.

Pasteboard-Candy Queen-Cages. During the past season a number of queen-breeders used mailing cages which had a piece of perforated cardboard at the candy end of the cage, instead of the usual cork that has been used for years. The idea was that the bees would tear away the pasteboard, then eat thru the candy, and thus liberate the queen. It seems that some bee-keepers who received
queens in these cages were not successful in introducing, and attributed the failure to the pasteboard. In a stray straw in Glenings in return Dr. Miller had this to say about it, being having used a number of the pasteboard cages:

The American Bee-keeper, speaking of the pasteboard-candy mode of introduction, says:—

"At this writing numerous reports are coming in which show that failure more often results thru the use of the new plan than with the older method." Isn't your verdict a bit hard on Mr. Hill? In the few hundred cases that have come within my knowledge, there have been rare exceptions when the bees did not make the pasteboard, but that is the only objection. As to the rest, there is undoubtedly additional security from the longer time it takes to remove the pasteboard; and, without being sure of it, my present notion is that fewer failures will occur with the pasteboard.

Editor Root had this comment on the above paragraph:

A good deal depends upon the kind of pasteboard and the manner it is put in over the candy. The first cages we sent out had the strips extra wide. We now cut them a little narrower, so that the candy is exposed on both sides of the bees, as well as thru the pasteboard. It is true there have been failures by this plan of introduction; but the failures have been due, I think, in all cases, to too much pasteboard or to the wrong kind of pasteboard.

Should Brood-Combs be Renewed?

A question sometimes asked, and answers to the question vary according to the place. It seems just a little strange that views on opposite sides of the ocean should be so far apart. Good authorities on the other side say that when brood-combs become old the bees have no use for them any longer, and save space for the growing larvae to such an extent that it is not advisable to allow combs to remain without renewal, the proper time for renewal being given by different authorities at four to ten years. On the other hand, beekeepers in this country pay little or no attention to the matter of renewing combs, and allow them to last as long as they please; some do not rule them out. Some of them say they have combs 10, 20, or more years old, and can see no difference in the size of the bees reared in them. But a slight difference in size might not be easily discerned with the naked eye, and those who advocate renewal of combs argue that as each bee emerges from a cell leaves a deposit in the way of a cocoon, the diameter of a cell must become less, and as a result the bees reared therein must be less.

The only way to settle the matter definitely would be to have instruments sufficiently delicate to measure a very small fraction of an inch, to find by actual measurement the difference in diameter between cells of new and old combs. Such measurements have been made by Editor Root, and unless the specimen of comb measured by him was exceptional, we may thank him for having set the question at rest, and congratulate ourselves that the bees do not show a lack of good judgment when they show their preference for old comb. Mr. Root had sent to him a specimen of worker comb 25 years old, and says:

There are just as many cells to the square inch, of course; but the bottoms of the cells have from eight to ten layers of coccoid, while the sides of the cells have only one, and at most two layers. This would seem to indicate that, when the diameter of the cells gets too small, the bees remove the excess of cocoon walls, but leave the bottoms until they get a packing of ten layers. This reduced depth can, of course, be corrected by adding more wax to the sides of the cells. Now let's see if this is true. There, I've stooped to measure, and find that the thickness of the comb is from one inch to one and one-sixteenth inch. Thickness of new brood comb is about eight-sevenths; and, if so, this 25-year-old comb has been thickened from two to three sixteenths because of the packing of nine and ten layers of coccoid in the bottom of the cells. The other fact seems to be that the diameter of the cells has not been reduced all these years. If this is true with other old combs, then worker-bees in a 25-year-old comb will be just as large as in one six months old. This is inclined to believe correct, because Nature would surely make some provision for the excess of wall-lining.

Weekly Budget

Dr. P. H. Brown of Richmond Co., Ga., writing us Jan. 23rd said:

"Bees did fairly well the past season, and where attention was given they will safely. Thickness of new brood comb is about eight-sevenths: and, if so, this 25-year-old comb has been thickened from two to three sixteenths because of the packing of nine and ten layers of coccoid in the bottom of the cells. The other fact seems to be that the diameter of the cells has not been reduced all these years. If this is true with other old combs, then worker-bees in a 25-year-old comb will be just as large as in one six months old. This is inclined to believe correct, because Nature would surely make some provision for the excess of wall-lining."

Mr. H. D. Cutting of Lenawee Co., Mich., as a good man of our readers knows, has been totally blind for several years. On Jan. 1st Mr. Cutting mailed us a picture of himself and his dog "Duke." This dog is one of Mr. C.'s most intimate friends. He is 2 feet 11 inches high, which is about 5 inches higher than an ordinary dining-room table. He weighs about 150 pounds. Mr. Cutting says, "He is very kind to me, also, a great pet of our family." Mr. Cutting, a man who will remember, had charge of the Michigan apiarian exhibit at the World's Fair here in Chi-

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Mr. Thomas G. Newman, in his Philosophical Journal for Jan. 19th, had this to say about our New Year's troubles:

Fin.-We regret to learn that the office of the American Bee Journal of Chicago, Ill., as well as the bee-supply and honey departments, were wrecked by fire and water on Jan. 1st. This was a disastrous way of beginning the New Year. As the editor of the Philosophical Journal was editor of the American Bee Journal for nearly 20 years, he deeply regrets this disaster. The present proprietors (Rev. W. York & Co.) have our warmest sympathy and best wishes for surmounting the loss. As they issued the next week's Bee Journal on time, we feel that they are equal to the task.

Mr. F. L. Field was one of our New York subscribers until we received the following letter, Jan. 29th:

Dear Sir:

Now I want you to stop that paper of yours I have had to or three little papers sent me before that I could not stop it when paying up, now I want this to end it. If you send on you will never receive any pay when I subscribe for a paper I'll tell them I am capable of knowing how long I want it with out any of your help.

F. L. FIELD.

The above is as nearly like Mr. Field wrote it as we can show it in type. His subscription was in arrears only since July 1, 1900. If he had been kind enough to have sent us a postal card when it expired, asking us to discontinue sending it, we would have been glad to.

But Mr. Field very likely wanted the Bee Journal, else he would have notified us in a courteous way over six months ago.

Many subscribers express their thanks to us for continuing to forward the Bee Journal to them after the subscription has expired. This is only common sense and until such time as it is more convenient for them to remit. We are always glad to do this, even if occasionally we do receive such a cross-grained letter as Mr. Field wrote us.

We would never think of barring the American Bee Journal on any one, and always stop sending it when asked to do so. We do feel, however, that when a man continues to take it from the post-office and reads it, he ought to be willing to pay for it.

Of course, whenever any one finds he does not want it any longer, then he should pay whatever is due, and courteously request its discontinuance. To do this is only common honesty and ordinary gentlemanliness.
Convention Proceedings.


By Dr. A. B. Mason, Sec.

(Continued from page 75)

Discussion on Selling Honey Continued.

Mr. Moore—Mr. Eaton, the chemist of the Pure-Food Commission, would like to say a word or two about labeling packages, from the standpoint of the Pure-Food Commission.

Mr. Eaton—There is one interesting thing just brought up I forgot to mention, and that is, about the name and address of the manufacturer being on every package; that is the only way honey can be sold in this State, at least in the packages. Mr. Aikin’s name on the label, and address of the manufacturer must be on the package, not only in the case of honey but every sample of food. There is just one other thought that came to me as Mr. France, I believe, was speaking about putting honey in glazed barrels. I think it should be on the label. I don’t believe that is as necessary as it is to avoid the evil itself. It is the adulteration we are looking after. If they get the honey pure, they don’t care so much for appearance. But with the worst adulterated honey comes the finest package.

Mr. York—There are several things I would like to say. I think some one said that the National Biscuit Co. used to label their packages, and to have that in it in packages. If I am not mistaken, they use more honey put up in 60-pound cans than in barrels. The “body-blow” that Mr. Aikin thought he gave me, I did not feel at all. In fact, I think it is good. I have not tried it myself. I think that he was aiming at me. He says he has a right to put his name on every package of his honey. True, he has a perfect right to do so, but if I bought his honey I would take it out mighty quick. Usually the way I put my comb honey for sale is to have these words on the outside of the carton, “Your Honey. Absolutely Pure, Always the Best.” Suppose I sell that to grocers and they take it out of the carton and find R. C. Aikin’s name and address on the section. Wouldn’t the grocers think York is a fraud? I have been the adulterated product, and I have kept a man out at high expense to push “York’s Honey,” and I think I have a right to have my name on that honey and not the bee-keeper’s name. It is none of the public’s business who produced that honey. When I buy Mr. Aikin’s honey, it is my honey, and I have a perfect right to do what I please with it. I can throw it in the Chicago river if I want to, or give it to anybody. It is not necessary for the consumer to know whose bees produced it. There is a great difference between R. C. Aikin’s honey and the honey produced by the bees. Mr. Eaton said the label must be on every package—not the label of the honey-producer, but of the man who puts it on the market.

Mr. Eaton—Either the manufacturer or the packer; some one that we can hold responsible.

Mr. York—So I say that every package that I put out in that shape I have my name on, and I will guarantee it. I am not working in Chicago alone. I boom the business of Mr. Aikin when I pay him his price for his honey. For instance, I know Mr. Moore sells honey in this city and gets a good price for it. If he buys Mr. Aikin’s extracted honey, and puts his name on it, will he get as much for it as he would if he took it in Chicago, the consumer would thus learn that it was R. C. Aikin who produced it, and think that next time he (the consumer) will get his honey direct from Mr. Aikin. Then Mr. Moore might as well go to hod-carrying. He can’t afford to lose a cent. He says that he will gain by paying his expenses to advertise Mr. Aikin’s business. Do you see the point? When I buy a bee-keeper’s honey, that honey belongs to me, and I stand back of every pound of it that I offer for sale. I don’t know that I can say anything more than I have. I have had at least some experience, and believe you all know how I stand on this question. If you had had the experience I have had last winter with honey, I am sure you would not use another honey-barrel while you keep bees. They are dangerous. I lost one finger-mall myself from handling honey in barrels! You will remember the little scene on the platform, yesterday he spoke of a hung coming out—

Dr. Mason—That was a can and the cover blew off!

[Laughter.]

Mr. York—I was going to tell about the 28 barrels of honey that I had standing on end in my warehouse; before I knew it, the honey was leaking all over the floor, and I had to transfer every barrel of that into tin cans.

Mr. Poppleton—The honey we had did the same thing in cans.

Mr. York—I lost scarcely any honey at all in cans. But Mr. Burnett knows more about this subject than all of us put together. He has handled much honey in his 20 years in Chicago, and I would like to have him close this discussion, if he will.

Mr. Burnett—I thought perhaps you had enough yesterday, but this discussion brings to my mind a little incident, I will relate it. If Dr. Mason takes exception to it, you must draw your own conclusions. I was on a tour some time ago. After a little lapse of time in conversation, the lady turning said, “Who is sweet?” The reply was, “Both of us.” Now, this discussion on packages has been sweet; it is all right, and the condition I can take under my tongue. But when one talks about advertising and packages, we see the evil of evil; I don’t believe that is as necessary as it is to avoid the evil itself. It is the adulteration we are looking after. If they get the honey pure, they don’t care so much for appearance. But with the worst adulterated honey comes the finest package.

Mr. York—There are several things I would like to say. I think some one said that the National Biscuit Co. used to label their packages, and to have that in it in packages. If I am not mistaken, they use more honey put up in 60-pound cans than in barrels. The “body-blow” that Mr. Aikin thought he gave me, I did not feel at all. In fact, I think it is good. I have not tried it myself. I think that he was aiming at me. He says he has a right to put his name on every package of his honey. True, he has a perfect right to do so, but if I bought his honey I would take it out mighty quick. Usually the way I put my comb honey for sale is to have these words on the outside of the carton, “Your Honey. Absolutely Pure, Always the Best.” Suppose I sell that to grocers and they take it out of the carton and find R. C. Aikin’s name and address on the section. Wouldn’t the grocers think York is a fraud? I have been the adulterated product, and I have kept a man out at high expense to push “York’s Honey,” and I think I have a right to have my name on that honey and not the bee-keeper’s name. It is none of the public’s business who produced that honey. When I buy Mr. Aikin’s honey, it is my honey, and I have a perfect right to do what I please with it. I can throw it in the Chicago river if I want to, or give it to anybody. It is not necessary for the consumer to know whose bees produced it. There is a great difference between R. C. Aikin’s honey and the honey produced by the bees. Mr. Eaton said the label must be on every package—not the label of the honey-producer, but of the man who puts it on the market.

Mr. Eaton—Either the manufacturer or the packer; some one that we can hold responsible.

Mr. York—So I say that every package that I put out in that shape I have my name on, and I will guarantee it. I am not working in Chicago alone. I boom the business of Mr. Aikin when I pay him his price for his honey. For instance, I know Mr. Moore sells honey in this city and gets a good price for it. If he buys Mr. Aikin’s extracted honey, and puts his name on it, will he get as much for it as he would if he took it in Chicago, the consumer would thus learn that it was R. C. Aikin who produced it, and think that next time he (the consumer) will get his honey direct from Mr. Aikin. Then Mr. Moore might as well go to hod-carrying. He can’t afford to lose a cent. He says that he will gain by paying his expenses to advertise Mr. Aikin’s business. Do you see the point? When I buy a bee-keeper’s honey, that honey belongs to me, and I stand back of every pound of it that I offer for sale. I don’t know that I can say anything more than I have. I have had at least some experience, and believe you all know how I stand on this question. If you had had the experience I have had last winter with honey, I am sure you would not
everybody who will refuse to buy a second-hand can, no matter who offers it to them for sale, nor how good it is or appears to be. The package for honey ought to be tested, and the party who uses the package ought to know what conditions are necessary to keep honey in good shape. A man like Mr. France, he won't make a mistake with a barrel; he works out that thing. He knows now what is necessary to carry the honey in the right kind of condition. He has been in the trade forty years. If there happened to be any harm done in some years ago a bee-keeper came to this city and sold his honey to the retail trade. A good many have tried it in the past, but they have not all stayed with us; but this one came, and he sold all his honey, and sold all his neighbors' honey, and began to be a haring of business. Well, he felt enthusiastic about the matter; he felt sure that he had gotten into a business now that he was going to get rich at. He didn't think anybody could do much better than he was likely to do, and he did the first year. The second year he didn't bother much with his own product, but he bought from me several tons of honey and stored it, and it was mostly baswood honey in barrels. The first year he didn't sell nearly as much honey as he did the first, and the third year he didn't sell a great deal of honey, so little, indeed, that he concluded he would not sell out the business. The same in the audience could probably tell someone about the same. That was his experience. I bought some of that honey. It had been stored in the basement, I think, three years, and there didn't seem to be anything the matter with the honey: some hoops had come off from some of the barrels in that lot—not only so, I suppose, but they had all been dipped. I don't know how much they had been dipped, but they had been dipped, and I gave them away. I have sold them to other parties and the honey seemed to be all right. Barrels are dangerous unless the man who uses the honey knows just how to do it, and knows how to make a barrel to hold honey. A tin can that will hold a liquid and be well soldered, will do for honey on almost any occasion, although a great many people who have made cans for honey solder the joints so light that the honey will be lost in the soldering. Some people have sprung them, and lots and lots of honey has been lost in that way. I have had them come in car-loads where the cases were thrown and smeared in honey 3 inches deep on the floor of the car, and I had to make and sell them. I think that raising honey is an almost inexhaustible subject, for strong-minded people who have had lots of experience know what they need in their business in the way of a package, and as for selling it, we need small packages and we need larger ones. If they are all small, they will not bring any more than half a barrel and half a small can; that is probably the experience of the trade.

Mr. Mason—Now, you see, the people who have spoken in this discussion might have summed the whole thing up by saying, Put your honey in the package that your market demands. It doesn't depend upon the barrel; it depends upon the man who handles the barrel; doesn't depend upon much more than how the man who handles the can. Don't try to sue Mr. Abbott by sending honey to him in cans, if you have a market that wants barrels. Mr. Poppleton—Mr. Barnett, how much more can you sell honey for in the Chicago market in cans than in barrels?

Mr. Barnett—I don't know as I can answer that question unless it is in this way. If it was about half in cans and half in barrels it might sell at about the same price.

Mr. Poppleton—Mr. Abbott said that we shippers should have a little compassion on the shippers and pay them back the extra money cans will cost us, and they will get all the cans they want. It costs me 75 cents more per hundred pounds than it does in cans and barrels. The whole question with me is that and that alone.

Dr. Mason—Mr. York spoke of the National Biscuit Company having so many cans to sell; we have a National Biscuit Company here, and I can, "Why do you have so many cans to sell?" and they answered, "Because we can't get honey in barrels and are obliged to buy in cans." Mr. Poppleton—I have taken great pains to find out what the man was getting behind my back and tell them I have barrels.

Pres. Root—Mr. Akin wishes to make an explanation of the labels on packages.

Mr. Akin—The explanation I wish to make about labels on packages is this: Mr. York, or any other dealer, need not worry about losing his trade because my name and address is on the package. It is only the man who buys or ships in car-loads who is able to pay freight, and a man in this city who wants to buy a case of honey, either comb or extracted, isn't going to send to me and pay local freight. No, he is going to buy my honey from Mr. York, I wish to speak on that point because there is an undue fear in that respect.

Mr. York—Many private families in Chicago who could easily afford to send to Colorado for Mr. Akin's honey, and pay for it and also pay the freight on one 60-pound can or 50 pounds of comb, rather than pay the retail price that grocers have to charge here for honey. Well, with the dealer knowing that the consumer is entirely right, still no city retail dealer is quite foolish enough to furnish his customers with information as to his source of supply so they can buy direct. It costs too much to work up a demand or line of customers, to turn it over to some one else in that way afterward. I would not expect that the bee-keeper who buys honey of me to retail among his customers would use my name and address. It is a little out of the line for him to tell the customers just where they can get that same kind of honey. That wouldn't be ordinary common-sense let alone business sense.

Continued next week.)


BY JAS. A. STONE.

The Illinois State Bee-Keepers Association held its eleventh annual meeting at Springfield, Nov. 20 and 21, 1900. On account of bad Illinois mud roads there were but few present except those who came by rail. Nevertheless we had a good and profitable meeting. Among those present were Mr. I. N. Shadow, president; Mr. Willard, secretary; Mr. W. S. Reid, vice-president; and Mr. A. K. Becker, treasurer.

There was a large attendance of members in the city and suburbs, and a great many who were hotel guests. Messrs. George W. York and C. P. Dadant, and, as Mr. York has said already in the American Bee Journal we heard with great interest of a few of the many things he (Mr. Dadant) learned while on his trip thru France, and other parts of Europe.

The treasurer not being present at the opening of the meeting his report was given along with the secretary's, and showed that on account of furnishing the Bee Journal to the member in Illinois for the past year, that Mr. I. N. Shadow, president of the Convention, to Jas. A. Stone, Sec., Rural Route 4, Springfield, Ill.

The president's address was brief, but in happy, well-chosen words.

Mr. Becker said, "I am a Methodist, and favor experience meetings, so let us hear from all the members. My bees swarmed a great deal, and stored no honey. Mr. Dadant, how would you prepare a winter cellar for bees?"

Mr. Dadant—The beehive in the cellar is the warmest part of the furnace-room by a double-4 inch wall, pack between with sawdust, ceiled overhead, and there pack the same. There are two windows outside, arranged with shutters to let in air but not light.

Mr. Titterington—Do you let your bees swarm, or do you divide them?

Mr. Dadant—Almost entirely the latter.

Pres. Smith—I present continued swarming by first honey. Mr. Akin's is a second swarm, and I may say at the end of 48 hours empty them in the evening at the entrance of the mother (old) hive, which will likely end swarming for that colony for the season.

Mr. Dadant—Whom did you get that from?

Pres. Smith—From you.

The premium list committee reported, and on motion a temporary committee was named as follows: Chas. Becker, C. P. Dadant, and Jas. A. Stone.

The premium list committee is instructed to ask for a larger premium on honey extracted on the grounds, on account of its being an educator to those who were prejudiced against extracted honey.

Mr. Dadant said in his splendid talk on his travels thru Europe, that he could distinguish the American honey at the Paris Exposition from that of the other countries, by the neatness of the sections, even at a distance; and in the apiaries that he visited he did not see the improved implements that were to be found in this country. He began to think he was more of an American than Frenchman. But he also said in their favor that their bee-keepers' meetings
were more largely attended than ours, and they did not al-
low the only ones things till be had paid his fee, of one or two dollars, as the case might be, and had still
had a membership of 200 or 300.
Mr. Becker—One year, when the white clover honey-
flowers was gone, I cut some colony that gathered 16½ pounds of honey in one day, and the same colony in the fall gath-
ered 14 pounds from heartseed.
A paper by George W. York was read as follows:

PURE FOOD LEGISLATION.

This is a large subject. It means much at both ends. First, it will take hard work to secure it; and, second, it will take much more and harder work to enforce it after it is secured.

Illinois succeeded in the passage of what was, thought to be a good pure-food law at the last session of its legisla-
ture. Some attempt has been made to enforce it in Chi-
icago, but so far we believe without much effect.

As to the question of the need of pure-food legislation, only the adulterator or swindler would object. The very health and life of the people depend upon their getting pure food. There is also a moral aspect to the case. The sale of impure food is a deception and a fraud practiced upon the purchaser or consumer. It is getting money under false pretenses, and the result of the trade by its worst and most dan-
gerous kind. The state should protect the lives of those who help make up the State; especially should it step in and insist that helpless women and children shall be prevented from being imposed upon and defrauded by those whose conduct is a danger to the community.

I think that if the law contemplated the prosecution and punishment of the manufacturer or wholesaler of the goods instead of the retailer, better results would be ob-
tained. This would of course necessitate the labeling of prac-
tically all goods offered in the open market. But this could be done, and the retailer could be required to reveal the source of his supply, if found adulterated.

The demand for pure-food legislation is one of the most important requirement to the successful results of pure-food legislation to honest officials—officers who know no better than to enforce laws just as they find them, without fear or favor. No law ever enforced itself, and never will. The reason, almost invariably, why prohibi-
tion laws don't prohibit is because of officials who are cap-
date honestly and fearlessly. I believe, however, that the
present pure-food commission of Illinois are all right, but that the fatal weakness is in the law itself.

But so long as the "dear people" persist in electing as their State lawmakers, saloon-keepers, poultereightful politicians, gamblers and frauds, just so long may they expect to have weak laws—that laws that fail at the most crucial time, because they are weak and not with that intention. The people must act honestly and demand that in the selection of their lawmakers and public officers, then, and not until then, need they expect that good laws will be furnish and properly enforced.

It would be one of the simplest things in the world to drive practically all the adulterated honey out of the Chi-
icago market, or any other market, for that matter, if it were not gone about in genuine earnestness and with determina-
tion to accomplish this thing. The York and Division of the law permitting the confiscation of all the adul-
terated food on the market. A few raids back up with a law having such “teeth” in it would soon end the adul-
terating business. There wouldn’t be any profit in it; and any business that is uneconomic in dollars and cents will soon be left to take care of itself, and that means speedy death.

The people should unite in demanding the enactment of strong adulteration laws. If they do not comply with such demand, then proceed to elect men that will give heed to the people’s will. Having secured suit-
able laws, elect only such men to office as will understand that their retentive power depends upon their executing the will of the people as exprest in the law. Pretty sud-
denly after such things have come to pass there won’t be much adulterated stuff to be found. Even frauds don’t en-
joy frequent and close contact with so good a thing as a good strong law—one with cross-cut law tactics, and not coming and going.

GEORGE W. YORK

The election of officers for 1901 resulted as follows:
President, J. Q. Smith, of Lincoln; 1st vice-president, George Polidner; 2d vice-president, C. P. Ddim; 3d vice-president, S. N. Black; 4th vice-president, J. M. Titter-
ington; 5th vice-president, A. Stone, R.D. & R., Springfield; and treasurer, Chas. Becker.

On motion the temporary premium list committee was made permanent.
The convention then adjourned sine die.

JAS. A. STONE, Sec.

The Afterthought.

"The Old Reliable" seen thru New and Unreliable Glasses.

By E. E. HASTY, Richards, Ohio.

BEES GNAWING COMF FOUNDATION.

It is a vexatious thing to have bees gnaw foundation after it is put in—half inch of foundation, then a big hole, then the lower half of the foundation pretty much all right, except with nothing to hold it in place. Presumably Mr. Doolittle is right, that flat-bottomed foundation is gnawed much the worse: and that is a serious short-com-
ing. Still, it may be rather the thinness than the shape that tempts them. When they are fixing the bottoms they don’t tear things down, and when they tear down they are not fixing the bottoms—not even that can suit them or not. I don’t think bees ever nibble up founda-
tion at the same time when it is being prepared to put honey in, or that they ever throw the fragments away, as might expect. Incapable of entertaining more than one idea at a time, and also being the opp. to mix up with propolis and dant things with. My bees won’t even spare the half inch at the top when only start-
ers are put in.

And prepare your queenless hive to keep your drones, while you have plenty. For if Doolittle can’t practically make bees rear more in the fall it isn’t likely that you can. Hand-picking of drones I am rather suspicious of. May be it’s all right. Almost certainly it’s no harm. One can’t get in the idea that drones (or rather drones) can harm heritances (prospective) which drones carry about them inevitably must be totally invisible—or mostly so. Page 7.

THE GREED OF GREAT CORPORATIONS.

I think we have been shown few examples of the com-
tempt with which great corporations regard what common citizens think, and must think, of their ways, to exceed the one given on page 9. Freight to San Francisco charged when the goods never went there, and were never intended to go there, and then freight back again added. This regu-
lar add-insult-to-injury kind of clean steal. I’m not sure we are going to have overcharges corrected right away, for when there is a desire to overcharge, some less flamboy-
ant we do it than that can easily be found; but I’ll venture to prophesy that the twentieth century will not be very many years old before corporations decide that it pays to keep their outrages a little out of sight of the people when they can just as well as not. Presumably the evil habit comes of gradual up in the hexagon, not even as good as the bee being actually sent that way—nobody on the thru trains knowing what the lock cars contained in the line of small items.

CHUNK HONEY IN PAILS.

That chunk honey on page 19 was too big a lot, and had "got too far from Canada." People used to sections are not likely to evolve backword and buy the old-fogy style. But in back-country towns, where folks have never bought sections, and don’t want to begin, there small lots in bulk would be all right. I doubt if it’s best to, solder it up in tin, however. Empty candy-pail, or something in the line of a big pail with close-fitting cover, would look to me more like the thing, even if it had to go 50 miles by wagon. In-
deed, while modern glasses the half of a pound of honey might easily pay for lots of wagoning.

HEXAGONAL APIARY A BACK NUMBER.

Weep over Mr. Doolittle giving the weight of his-name and example to the hexagonal style of placing hives. Out of date for one thing, and another, and not must to recommend it in the first place, but the fantastic resem-
blance of the hexagon to the honey-comb. The fact that we are bee-keepers does not make us long to be paid for our crop in hexagual in the Hexagon, not even as good as the rank-and-file, and the latter barely escapes being a dis-
Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, III.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—Editor.]

Feeding Bees in Winter.

I have a lot of bees that will need feeding. I read of bee-candy. Where can I get it? and how is it fed to the bees? I have old-fashioned hives without sections. Would it do to put the candy underneath, or how will it be best to use it?

SUBSCRIBER.

Answer. — It may be you can get bee-candy from dealers in supplies, but keep-candy generally makes it for himself, and you will find instructions for making in your text-book. [See page 59 for directions for making the "Good" candy.—Editor.]

From what you say, your hives are probably box-hives, and there is no chance to feed them above. If the weather is such in your locality that bees are flying every few days, it will be all right to put the candy underneath. Crowd it close up to the combs, so the bees can crawl directly from the combs upon the candy. Put the candy there in the evening, and contract the entrance for a few days, so the robbers will not trouble. If you are in a cold locality, where bees may not be flying for some time, take your bees in the cellar (if they are not there already), turn the beehive upside down, and lay the candy on the combs.

How Many Bees Die During Winter? — Wintering in a Warm Room.

1. How many bees in a good colony will die during the winter months, or before the flowers come in the spring?

2. I have two colonies in a room upstairs, which is heated from the kitchen stove. The bees were placed there because their storehouse of honey was not sufficient to carry them thru. Should they be kept in darkness, or have the light? I have a glass box over them, so they can fly around a little, and also carry out the dead bees. Some think they will not winter in this way, but they seem to be doing well, and are quite ambitious.

NEW YORK.

Answers. — 1. It is a hard thing to give a definite answer. One colony may lose ten times as many as another, the two sitting side by side. A given colony may lose ten times as many bees under unfavorable conditions as it would under favorable conditions. One colony may be composed mainly of old bees whose "span of life is nearly run." another may have a large number of young bees. So you see it's a hard matter to say how many will die, and it's no great wonder that the books don't try to tell us. About as near a definite answer as they could come would be to say, "A whole lot." If I were forced to give some kind of an answer, I think I should say at a guess that you ought not to complain much if not more than half of them died, and feel exceedingly thankful if only a fourth of the colony died.

2. Look here, my good friend, if that colony comes out alive in the spring, you can be put in a glass case in a museum and exhibited as the man that brought the winter alive a colony of bees in a room well warmed and lighted, the bees having the opportunity to fly within a limited space when they had a disposition to do so. It is true that some cases have been reported in which bees have been successfully wintered in a warm room above ground, but as a rule it is considered that in such a room kept dark through the winter, a colony of bees will be found dead in the spring, and if the room is light they will be deader yet. It might be well for you to keep the room, give the bees some honey or candy, and in two or three days later return them to the cellar.

Wintering Troubles.

I wish you would tell me what to do with my bees. For awhile the temperature was at 42 degrees, and one of my colonies started to rear young drones and consumed their honey. They had a young queen which I could not get to lay last fall. I fed them for a week, and it didn't go any good, so I thought I would unite them in the spring, but as they used up most of their honey I just took the cover off and the bottom-board of another that had plenty of honey, and gave them a little tobacco-smoke, but this did not go. There was about two quarts of dead bees in a few days. I don't know whether the smoke killed them, or whether they killed each other. Then, the temperature went down to 35 degrees, and my bees were all quiet. But now it is down to 30 degrees, and they are making a little noise.

IOWA.

Answer.—Probably about all is done that can be done. The colony that began rearing drones was most likely queenless, or had a bad queen, being worthless in either case, and was killed by the bees that had a good queen. The bad colony is now dead, for which you need not greatly mourn, and the other colony may be little the worse for the scrimmage.

Feed-Bags and Burlap for Packing.

How will old feed-bags or burlap do for packing outside cases, 5 or 6 inches larger than the hives? I have only 3 colonies this winter packet with burlap and with hay-chaff in outside cases, and a super under the hive forms below.

MAINE.

Answer. — They will make good packing, but look out that the mice don't find it too comfortable a place for their needs.

Bees Troubled with Moth-Worms.

What can I do to stop millers from getting into the hives and destroying the whole colony? I have had five colonies to share the same fate. They seem like the common white millers that are about an inch long. They are pack in like sardines in a box. Father had bees for 50 years, but never had anything like this. As he is not here to teach me about bees, I will have to depend upon the books. — NEW JERSEY.

Answer. — When worms spin their cocoons in a hive and are packed like sardines in a box, the case is pretty bad. The first thing, however, that it is important for you to get into your head, is that the worms are rather a result than a cause of the trouble. In a strong colony of bees, the worms never get much of a foothold, for the bees will keep them cleaned out without any attention on your part. A weak colony of black bees may allow the worms to get in, but if the bees are Italian even a weak colony will keep the worms at bay. You may, in some cases, get some help by lifting out the combs and picking out the worms, and replacing them in the box. Aside from this about all you have to do is to see that no colony becomes queenless or weak, and to try to have as much Italian blood in your bees as possible.

The Chicago Convention Picture is a fine one. It is nearly 8x10 inches in size, mounted on heavy cardboard 10x12 inches. It is, we believe, the largest group of bee-keepers ever taken in one picture. It is attractively paid for, 75 cents; or we can send the American Bee Journal one year and the picture—both for $1.00. It would be a nice picture to frame. We have not counted them, but think there are nearly 200 bee-keepers shown.

The Premiums offered this week are well worth working for. Look at them.
Contributed Articles.

Three Foggy Notions of Value.

Wide-Frame Supers, the Honey-Board, and the Telescope Hive-Cover.

By Friedemann Greiner.

What wonderful improvements have been made during the past 50 years in bee-hive manufacture! Even 30 years ago it was an uncommon sight to see anything else but box-hives in a bee-yard. If we will except an odd case of a single-frame hive, the manufacture of the hives were the order of the day. A market change has taken place—a change for the better. Well-made and nicely painted movable-comb hives have taken the place of the ugly boxes. It would seem almost as tho the climax in the line of hive-manufacture had been reach; but still the improvement is going on. As to the construction of the brood-chambers little is left that need be changed. Of the different patterns, one should please the most exacting.

As to a cover for my hives, I can not become reconciled to use the modern light single-board or even the improved ventilated covers. A single thickness of lamber between the inside fixtures and the honeycomb is not enough, and if a single-board is required to make it safe—and it is—a better cover could be built, not costing more. Accidentally I once left the telescope-cover off from a hive during the noon hours, leaving the surplus-case protected only by a 1/4-inch board. Two hours later, when I happened along again, the honey was running out of the entrance of that hive, and a case of honey was ruined. A shade board would have prevented that loss. A regular telescope-cover, such as Father Langstroth used on his 10-frame single-frame hive, would have been still better. I have not yet found anything to suit me better. I think it is an advantage to have the cover made tall enough at least to take in one super. If made to take in two supers the cover becomes too heavy and expensive. It would of course be a good thing to have the two supers well-protected against loss of heat as well as against extreme heat; but if we do not have better honey seasons than we have had for two or three years, the single-frame cover will suit.

The honey-board is the next foggy notion. Father Langstroth made use of it; and in this way it was handed down to me. When I saw so many adopt and use the quilt instead, I also gave it a trial. For two years I used it extensively, but it did not please me as the board, and I discarded it for summer use. The bees have a non-com- mendable way of chinking in propolis between the quilt and the tops of frames or sections; and every time the quilt is raised more gla is crowded in, for the quilt cannot well be readjusted as it had been before. More propolis and stain is found on quilt-covered sections than on those entirely exposed. I would rather use the board, even on such supers as have sections unprotected at the tops.

A honey-board is also very convenient as a record-keeper. On many of my hives the record for 10 years may be found on the honey-boards.

A marvelous success—I would rather say change—has taken place in the supers, and most complicated arrangements have made their appearance. Quite a number of years ago, soon after Mr. Root invented his double-tier wide-frame, my brother and self hit on the same device un- known to any one else, and we were both working in use, except that we adopted a single-tier wide-frame and wooden separators. I have since, and before, used other styles of supers quite extensively, but I have not been able to find one that meets all my requirements and is as handy as this one. To be sure, I have changed the size of my sections several times, but still the wide frame is my favorite.

The objection is sometimes raised that it is difficult to remove the filled sections from the frames. Those who have never given the wide frame a trial are excusable for holding such an opinion. A friend from a neighboring town stopped with me this fall and looked over things; he ex- pressed just such fear. He was not in the business very ex- tensively, but said he wanted to go in, and before doing

so he wanted to find out what the best supers and appliances were, so not to be obliged to change later on when it would cost more to change. "If we all had been as careful as this friend, how many mistakes would have been avoided, how much money we could have saved!"

Well, it so happened that I did have a few full cases of honey on hand that had not been disturbed, but were ex- actly the same as the ones they came into the hive with, and in a few moments the doubts and fears of my young friend were dispater, for the filled sections came out easier than empty ones would. In fact, there is no difficulty whatever.

And then the advantage of having our sections pro- tected on all sides is not—well—to be sneered at. The popular section-holders, the T and other supers, leave just that part of the sections exposed that above all, should be protected. I always have my honey in my hive. I would not have it in the hive; thus the tops of the sections are first ex- posed to view when a case is opened, and, when they are soiled, they make a bad impression. I can understand that those who use such supers and have not a cruiser, will not know what kind of hives we in America use, not one in a thousand can be induced to try them. We Americans can hardly understand this attitude of the Germans; and yet, even in America, it takes a long time, sometimes, be- fore a good thing is recognized. Sometimes even a good thing is thrown aside, as is the case with the wide-frame super, the honey-board, and the telescope cover.

Ontario Co., N. Y.

An Interesting Cellar-Wintering Experience.

By E. S. Roe.

I KEEP my bees in the cellar, and have a lamp-stove to regulate the temperature during extreme cold spells. The cellar has no other deposit than the bees. The lower hives are about two feet above the floor, but otherwise so compact that only narrow aisles are left between the bees.

Yesterday (Dec. 31) the thermometer registered, outside, 28 degrees below zero; in the cellar the temperature was 2 degrees below freezing. So in the evening the lamp-stove was placed on the floor, and I went to bed and left the stove there, before, with a metal cover over the top for shading. The light coming from under the burner seemed to annoy the bees more this time than before, so a cheese-mould (zinc open at both ends) was placed over it. Every time the fire was adjusted, I covered the stove with a cover of zinc. The bees, being close at hand was placed around the lamp. The free draft at the top and the small holes in the sides I thought would give plenty of oxygen.

After watching the smoke for a little while, with an air of satisfaction, I turned off the lamp, replenished the fire in the heater, and prepared for the pleasures of dreamland.

I will never be able to tell how much I dreamed, but at any rate just as the Third Year and Old Century were leav- ing, the bees and I were undergoing a very unpleasant siege of lamp-black smoke. The strong scent awakened me, and on lighting a match I noticed it was just a little past midnight. The New Year's celebration, indeed, was being held in the house full of smoke—"a bad beginning"—but there was comfort in the last part of the saying—"a good ending."

The stovepipe was examined, and then the stove. The tray holding the lamp-stove was next, and the trouble found. The lamp-stove was all aglow. Flames were shooting from under the burner. A little red "vase" stood dan- ning from the perforations of the screw cap of the lamp, and a column of smoke was rapidly moving from the top. The blaze was soon put out, and with a cloth I was able to hold the hot and sputtering thing long enough to remove it.

The bees were surprisingly on their best behavior. Only one or two were heard flying. The hive, entrances
and covers of the top hives were covered with flakes of lamp-black. They had been carried up by the heat and then settled on the hives like falling snow. Of course, the use I made of the cheese-mould was the cause of the trouble. The heat being more confined caused the light to burn higher, which in turn generated the heat, greasing the flame on the increase, in this way acting on a principle of law that was rapidly carrying it to a serious condition—possibly to the end of explosion, loss of bees and loss of honey.

Each reader will be left to form the moral that will be of some practical good. I am thankful that smoke accompanied the excessive heat and came to notify me of the danger.

To-day the bees are quiet, and I hope they are as they seem—no worse for the experience.

TODD CO., MINN., JAN. 1.

Contamination of Queens Thru Hybrid Bees and Royal Jelly.

I HAVE two colonies of hybrid bees in an isolated position, with which I wish to try an experiment. I wish to breed Italian queens from Italian larvae by the plan given in your book. Now, if I supply the cell-cups with royal jelly from a hybrid colony, place larvae in them from a pure Italian queen, and place these prepared cups in a hybrid hive, the question will be whether something emerging therefrom be pure Italian? Be kind enough to reply to this question thru the American Bee Journal, as I am a regular subscriber to that excellent paper."

Thus writes a correspondent.

In answering the question, I will say that I take it that the questioner is in doubt about the part played thru the bees which prepare the food for the queen-larvae. He has evidently heard, thru some one having "locks hoary with age," something of the fact that the bee-keeping fraternity during the sixties, of "like food, like queens." As hybrid bees are used, quite likely, they giving the best results in queens of any variety of bees with which I am acquainted, except the Cyprians, I have and do use them very largely to feed and perfect queen-cells, and, after years of careful watching, and with years of success in perfecting Italian bees, said to be as good as can be found in the world, I fail to find wherein the food has anything to do with it, or the changing of the color, or the disposition of the progeny of any queen, in the least.

If royal jelly prepared by black or hybrid bees could convert the Queens thru the hybrid bees, surely the food prepared by Italians which were of such an orange color that they seemed like lumps of gold when flying in the sunshine, would contaminate the black or German race of Italian queens. I have no doubt a doubt in my own mind, by several experiments, that black queens brought to perfection thru the royal jelly prepared, and the nursing given, by the yellowest of the golden Italian bees, are not in the least degree different from those nursed by their own "blood." Hence I feel that I am justified in going on ord as saying that the queen progeny of any race or variety of bees are in no way changed as to markings, disposition, etc., thru the food given them. If there are those among the readers of the American Bee Journal who, after reading this, otherwise, I should like to have them tell us upon what they base their conclusions. While these nice points are of interest only to queen-breeders, in a dollar-and-cents way, yet they are making up the general fund of bee-knowledge which we are handing over to future generations; hence I believe the American Bee Journal will be willing to give all of the best thoughts on the matter which are sent in.

But before closing I wish to say a few words about that purity part which our correspondent seems to cling to, as being the ne plus ultra in the Italian race. I have objected for years, and do still object, to the calling of our Italian bees "queens pure,- for, from everything I can gather, they are nothing but what would be perfectly pure queens of a variety of bees. This is also proven by the fact that we have all shades and colors of these bees, from those having golden abdomens nearly their whole length (as shown in the workers), to those which are so nearly black that it takes an expert to tell whether they have any Italian blood about them, only as it is known that they were imported from Italy—the very same place from which came the progenitors of the most beautiful orange-yellow bees obtainable in this country. Had the Italian bees been pure, in a sense equal to that of the pure black or German bee, no such change of color could possibly have come about by years of breeding for color. But this non-purity part of the Italian bees is in no way detrimental, for the smallest bee at the head of all the bees, as to its industry and usefulness to mankind.

Onondaga Co., N. Y.
**** Grand ****

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Magazines and Post Fountain Pen to the Amount of $9.00 for $5.00.

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Read Everything in this Column. * Here are a few Sample Combinations.

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* These prices are not the publishers’ prices for these papers, but they are our special reduced prices when taken in connection with Gleanings. In many cases they are just one-half the regular rate.

How to Get the Price for any or all of the Papers Named Above.

1. Gleanings in Bee-Culture, one year, $1.00.
2. If you want only one additional paper, add the price found in the top of the column in which that paper appears. For instance: Gleanings, and Success (2d col.) will cost you $1.50.
3. If you want several papers in addition to Gleanings, each one may be had at the price named at the top of the column. For instance: Gleanings, Success (2d col.) and Rural New Yorker (3d col.) will cost you $2.25.
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CONDITIONS.—Offers subject to withdrawal without notice. Subscriptions to the Review of Reviews, Youth's Companion, and Country Gentleman must be strictly new. Neither the Review of Reviews nor Post Fountain Pen will be sent in any combination amounting to less than $2.50.

THE A. I. ROOT CO., Medina, Ohio.

A Very Successful Season.

Last season was a very successful one with me. I began the season with 20 colonies, secured over a ton of honey, mostly comb, and put 25 colonies into the cellar Nov. 14th, in fine condition. I was sorry that you suffered such a loss by water thru the fire, but I hope you will not be discouraged for we need the Bee Journal as much as ever. Success to you and it.

FRANCIS HALL.


Bees Did Well—Prospects Fine.

My bees did very well the past season. We have had considerable rain almost the whole time for good crop the coming season.

I was sorry to hear of your loss on account of the fire in your building.

B. P. SHIRK.


Short Honey-Flow— Bee-Papers.

The honey-flow here lasted only two weeks the past season. I secured about 2500 good, salable sections, but some of the bee-keepers around here who do not take a bee-paper got very little honey and some got none.

I have tried to get them to subscribe for some good bee-paper, but they either know too much, or think they can't afford it. My experience is that I can't afford to do without them.

EDWARD WILSON.


Management at Swarming Time—Is it the Effect of Eating Honey?

On page 808 (1900) Dr. Miller says in answer to question No. 1, in regard to management at swarming time: "The caged queen was put in at the entrance. Suppose the cage would not go in at the entrance, could it not be put between or over the frames, or in a corner of a frame where there is drone-comb, by cutting enough out for the cage? Also, the Doctor does not say how he confines the queen—whether the bees are allowed to enter the cage, or if they feed the queen thru the screen. Novices, like myself, perhaps would not understand it. Is there no danger of the bees killing the queen when she is releas'd?"

I am also interested in the question
A WHOLE GARDEN

For 14c.

We wish to offer this year some new

cultivars, and hence offer

25 The Northern Lemoi

25 The Dickey Lemoi

25 Momie's Favorite

25 Riesling

25 Emerald Green Cucumber

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We will mail you that entire 1.8c.

worth of splendid seed, and free, in

our large illustrated

Plant and Seed Catalogue on receipt

of this notice, post free. Order now.

Chace Onion Seed 50c lb and up

Potatoes, 50c per barrel and up! Catalogue above.

John A. Salzer Seed Co., Lincolns, Wav.

Please mention Bee Journal when writing.

Experience With a Clipped Queen.

I would like to tell of an experience I had with a swarm of bees that had a clipped queen. They came out, flew around awhile, then went back and

clustered on the front of the hive up under the shade-boards, staying there eight days. Soon another swarm came out with a young queen and clustered, and I hired them. Two days after this the old queen came out with a swarm, and the swarm on the front of the hive rushed after the bees had not moved when the other swarm came out. I moved the old hive from the stand, put a new one in its place, with the caged queen on the alighting-

boards. The swarm rushed after the queen, encircling the hive with the old queen. Why did the old queen come off with the last swarm?

Edward Knoll

Ontario, Canada, Jan. 25.

Not a Good Season—Yellow Wax.

The past season was not a very good one for bees in this locality. Last winter and spring were very hard on them, and I lost over half of mine, and did not have a swarm during the season. The bees stored very little surplus honey during the forepart of the season, but thru August and a part of September they did pretty well. I secured nearly all my surplus of surplus honey, and I got 10 colonies into winter quarters, one of which I am keeping on shares. This colony is from a hive of bees that had been the farm of the owner over 20 years, having been brought there by his father. Bees have been kept on the farm which I have, since 1850, without intermission. In the fall of

on page 89(1890), "Was sugar in the urine caused by honey and being affected in the same way, the doctor said the same thing. You have eaten too much honey. Now, Doctor Miller, I will hurry really refuse the plate and stop using sweets, and after six months' treatment the specific gravity was 20. I am now using saccharin to sweeten my coffee, but find that it raises the specific gravity to 26. Galen Institute says, "Eat honey if you crave it." I did one evening, and the next morning the specific gravity was 29."


THE POPULAR BUFFALO ROUTE

this summer on account of the 1901 Pan-American Exposition will be the Nickel Plate Road. Countless thousands will visit this one of the greatest expositions of modern times. The Nickel Plate Road will be the popular line. The excellence of its service is well recognized by the traveling public, and the reputation of its Pullman cars in their uniform coating to passengers is well known. When you go East see that your tickets read via the Nickel Plate Road. Give us your address, phone or call on John Y. Calahan, General Agent, 111 Adams, St., Chicago, Ill.

2-4a3t
1874 I had 7 colonies and father had 23, and in the spring I had none and he had 7. I bought a couple of colonies and in the fall of 1875 I had nine colonies and father had 56, but by the next spring I had none again, and father had only three.

I have an old log-gum in which my grandfather brought a colony of bees to this farm in 1871.

In order to yellow wax, a good plan for those who use wax-extractors is to let the melted wax run from the extractor into a pan of hot water. This will cause the wax to cool slowly, and the impurities will settle to the bottom of the pan.

I began taking the Bee Journal in January, 1883, and have nearly every number from that time, and I like it.

J. S. Barr

Trumbull Co, Ohio, Jan. 15.

Short of Stores—Sour Honey.

My bees are short of winter stores—shortest they have been in 15 years—and trying to rob oil and eat the propolis from the roof, was caused by too much rain during the past season—two weeks in April, all of June, until July 3d, and nearly all of October.

I purchased a lot of willow and popular extracted honey at a sale, and found that it had been extracted before it was ripe, and it is slightly sour and granulated. Can you tell me to what degree to heat it in order to reduce it to a liquid state? John M. Ryan. Marshall Co., Ala., Jan. 8.

[Try 160 or 170 degrees. But don't leave it standing for any length of time, as there would be danger of changing the color of the honey by almost burning it.—EDITOR.]

Getting Outside Sections Filled—Robber-Bees—Leaky Covers.

I can not report a very good crop for 1900 owing to the drought. The white clover crop was cut short in June, so the bees could work on it only three weeks. I secured the crop of cloverSecretary was killed by a lightning stroke.

I have tried the plan spoken of by Mr. Thompson in the Bee Journal, to get outside sections filled as well as the center ones. For the last six years I have practiced putting empty bai-sections to the outside of the super, and I find that it works fine.

When one is bothered with robber-bees about the hives, coal-oil is a good thing to use. Wet a cloth with coal-oil and rub it along any crack or crevice the bees are trying to enter—for instance, under the comb, or any robber will leave. I contract the entrance to any hive that robbers are bothering, and place a rag wet with oil where the robbers will smell, or better still, touch it, and they don't stay a second after smelling the oil. I never leave the rag very long after the robbers have gone.

I see quite a little in the bee-papers about leaky covers. I have hives in the home apiary that have been in constant use in the weather for 15 years, and not a single leaky lid in the apiary. Whenever a lid checks, take a good quality of shingles, paint them well, then shingle the cover: and all
"Poultry Raising on the Farm"

Good Instruments,

Don't confine these instruments with things bargain, and each is guaranteed, including the return. Any inaccuracies, including a free gift. For further information, write for samples.

BEE-SUPPLIES!

# Root's Goods at Root's Prices

Please mention Bee Journal when writing.

Tennessee Queens!

Fine lot of Choice Tested Queens for 1918. Good for common or large colonies, with or without the use of selected imported and select golden queens, toed 35 miles apart, and mated to selected drones. $1.50 each, with packer. Guaranteed Queens, from the same breeders, toed 3 miles apart, 75 cents each. No bees owners within 25 miles. None impulse in another colony. No extra cost for Queens. Send for Catalog. Contracts for all orders. Contracts for a dozen or more orders.

John W. Davis

Spring Hill, Tenn.

Fred W. Muth & Co.

One Minute, Please!

We beg to announce that we have gone into the bee supply and honey business. We are practical beekeepers and understand the difficulties of the trade, and know pretty well what the beekeeper wants and needs. We will give our best effort to serve the bee-keepers and the firm will give its exclusive attention to the bee supply business and the promotion of the sale of honey in this vicinity.

After visiting all the important manufacturers in the East, we have selected a line that will give the best of satisfaction. Our location—adjacent to the Suspension Bridge—is most central, and being only four blocks south from the Fountain Square, is right down in the business part of the city, and especially handy for our Kentucky and Indiana customers. Our facilities for prompt service are perfect, and our prices are quite as low as any other house in the business. Our Catalog has many new features. Send us your name so we can mail you one.

FRED W. MUTH & CO.

Southwest Cor. Front and Walnut Sts., CINCINNATI, OHIO.

Please mention the Bee Journal.

Dittmer's Foundation?

Retail Wholesale-Jobbing.

I use a process that produces every Essental comb in the best and most desirable in all respects. My process and Automatic Machines are my Foundation, which enable us to sell Foundations and Work Wax into Foundation For Cash at prices that are the lowest. Catalog giving Full Line of Supplies, with prices and samples, free on application.

GUS. DITTMER, Augustia, Wis.

the better if you give them a good dose of paint afterward. This kind of a cover will last out a long time. If the lids are flat nail a cleat lengthwise down the center, shave the corners of the cleat with a plane, then nail in the edges of the cover—that is, the eaves; then shingle as you would a gable cover, and you will have a small air-space left inside to give a little shade and make it a cooler cover in hot weather. The cleat can be one, or even two, inches thick.

EUGENE HAMBAUGH.


Past Season a Failure.

I have been in the bee-business three years, and the past season was the most complete failure. I will have to feed some of the bees to bring them thru the winter. But I don't see how I can do without the American Bee Journal.

ERNST E. BAKEN.

Wayne Co., Iowa.

Bees Having a Flight.

Today is warm and nice, and my bees are having a fine flight. I cannot keep house (and bees) without the "Old Reliable."—H. O. CONDON.


Good Season—Honey From Spanish-Needle.

This has not been a very good year for my bees. I got only 3500 pounds of extracted honey and 50 pounds of comb honey from 60 colonies, which is not nearly so well as they have done in years gone by.

I am wintering them outdoors. I made a box with three sides, leaving the front open. I used clover chaff for packing as it absorbs the moisture; they seem to be doing very well.

I move my bees every fall to the swamps of the Illinois River bottom, in order to get the honey-flow from Spanish-needle. I had 40 colonies down there last fall, and secured 1500 pounds of as fine honey as I ever saw.—JAMES GROVER.

Brown Co., Ill., Jan. 15.

Difference in Color of Wax.

Did any of the readers ever notice the difference in color between wax rendered from old brood-combs and that rendered from honey-combs? Invariably when melting honey-combs—that is, combs free from cocoons—I get a pale-yellow color of wax, while if melting old brood-combs I secure a rich-yellow, first-class article. It seems Mr. Hutchinson's experience has been the same. He says he is unable to say what causes the difference in color, and I am not sure that I know what causes it, but I am sure that by careful experimenting the cause can be found. It is possible that a broad-reaching colors the wax thru and thru? I think not. I believe it is the stain from the cocoons that gives the wax the brown or its rich-yellow color. We can tell in this way:

Melt up enough old brood-combs to get quite a lot of cocoons and residue; take some new comb and put above the piles of comb so that the melted wax will not run thru it. Of course a solar wax-extractor must be used.

My reason for thinking that the
stain from coconuts is the cause of the rich yellowness of the wax rendered from them. If an old comb is put into water it turns the water a deep color. Is it not reasonable to think that wax would be likewise affected?

W. T. STEPHENSON.

Massac Co., Ill.

Poor Season—A Bonanza in a Bee-Tree.

I lost my strongest colony last spring by neglecting to envelope the entrance when I put them away the previous winter. One day a gentleman who had two queens, so I united it with another, which left me with eight colonies, some of which I had to feed.

I sowed two acres of mustard in the spring, and the bees built up strong, and commenced to swarm about June 3d. Four colonies swarmed, and then the mustard played out, and buckweed failed, so they did nothing more until buckbrush bloomed, when they stored a little surplus, but I got only 60 pounds of surplus honey for the whole season.

I sowed three acres of buckwheat, and there were acres of heartsease and other wild flowers, but the bees did not seem to store any honey from them. We had four severe hailstorms, which might account for this.

I help to cut down a bee-tree last fall, and it was the sight of a lifetime. It was a thorn tree, and I think the bees have already left it in 4 years. The combs were a little over five feet long, and from 11 to 13 inches deep. Some of the honey was granulated; we got about 150 pounds from a wash-boiler, and a dash pan full, besides—I should think about 125 pounds in all. I hived the bees, and fed them up in the fall. I now have 13 colonies in the cellar, which I think are in fine condition.

LEWIS LAMKIN.

Woodbury Co., Iowa, Jan. 18.

THE MODERN FARMER & BUSY BEE.
EMERSON TAYLOR ABBOTT, Editor.

A live, up-to-date Farm Journal with a General Farm Department, Dairy, Horticulture, Livestock, Poultry, Bees, Veterinary, Home and General News. Edited by one who has had practical life experience in every department of farm work. To introduce the paper to new readers, it will be sent for a short time to -subscribers free for 25 cents. Sample copies free. Best Advertising Medium in the Central Address.

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Tells all about Bees in California. The yields and Price of Honey; the Pastarage and Nectar-Producing Plants; the Bee-Ranches and how they grow. An entire field of information fully covered by an expert bee-man. Besides this the paper carries the news of Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents; Sample copies, 10 cents.

THE RURAL CALIFORNIAN,
238 North Main Street, JACKSONVILLE, CAL.
Please mention Bee Journal when writing.

The American PoLyJournal
329 Dearborn Street, CHICAGO, ILL.

A Journal that is over a quarter of a century old and is still growing more interesting. It is the intrinsic merit of its own, and its field must be a wide one. The American Poultry Journal.

American Poultry Journal
50 cents a Year. Mention the Bee Journal when writing.

BARNES' FOOT POWER MACHINERY

Read what J. F. Parent, of Chariton, N. Y., says:—We cut with one of your Combined Machines, last winter, 74,000 bushels of 74-c. No. 1. 100 Honey racks, 50 brood frames, 2,000 honey boxes, and a great deal of other work. These machines have doubled the amount of honey-ives, etc., to milo, and we expect to do twice as much this year. It will do all you say it will." Catalog and price-list free.

Address: 934 Baby St., Rokford, Ill.
Please mention Bee Journal when writing.

A Reliable Concern. Every live and enterprising person knows that the basis for success is to make your business widely known by the most approved means. The American Beem Journal is the most approved means. The American Beem Journal is the only representative paper published for the Buckwheat and Hive Industry of the world. We are now offering extensive space for advertisements of the Bee-Careading and Hive-Building departments. The space just mentioned is for 84 new ones, to be inserted in the ADAH Reprint Number, which will be distributed to every subscriber to the ADAH. Advertisements will be charged at a reduced rate. The Bee Journel is a powerful agent in the promotion of the Bee-Careading and Hive-Building departments.

C. H. WEBER.

San Francisco, Cal.

HONEY and BEESWAX

MARKET QUOTATIONS

CHICAGO, Jan. 19.—Honey is selling slowly; this applies to all grades with the exception of white clear, buckwheat comb honey, which sells readily at 10c providing it is of the first quality. All other kinds of white comb honey sell at 5c. 6c, 7c, 8c, and 9c. Travel-stained and off-grades of comb are in demand at 6c, 7c, 8c, and 9c. Extracted, dark and buckwheat comb honey, 9c. 10c. Extracted, white, 7c, 9c, and 12c. Hives and white clover honey, 8c. 9c. Extracted, dark and buckwheat honey and other dark grades, 50c, 60c, 70c, 80c, 90c.

KANSAS CITY, Jan. 22.—Fancy white comb, 15c, 16c, amber, 12c; dark, 6c; demand good. Extracted, 7c; demand quiet. Bee- wax, 2c.

W. H. BREWER, Produce Co.,
St. Louis, Mo.

BUFFALO, Jan. 12.—All kinds of honey are quiet and difficult to make a sale. Outstanding only some sells, 10c; 1c, 1c; choice and No. 1, 15c; 16c; 17c; choice and No. 1, 18c; 19c. Some kinds in liberal supply; many to be recommended. Extracted, 15c; and not wanted in Buffalo. Bee-wax, 20c.

BATTGERSON & CO.

ALBANY, N. Y., Jan. 18.—Honey market is duty on grade, but still grade, strong on fair light demand. White bee in good condition, not tested, 15c, 16c, 17c. Other grades, 10c for comb, 18c, 19c. Beeswax, 12c, 13c; mist, 15c. Extracted, white, 8c; amber, 9c; mist, 6c; dark, 5c.

B. R. WRIGHT.

BOSTON, Jan. 18.—Fancy No. 1 white in cartons, 25c, A No. 1, 16c, No.1, 15c, 16c, with a fair light demand. White comb good, on call for dark honey this year. Extracted, 15c; light amber, 7c; Bee-wax, 27c.

CINCINNATI, Jan. 16.—Market very quiet. No change in prices. Fancy white comb sells for 1.40. Extracted, dark, sells for 1.5c, and lighter grades bring 65c-75c. Fancy white table honey brings from 90c to 1.00.

C. H. WEBER.

NEW YORK, Dec. 22.—Fancy white, 15c; No. 1, 14c, 15c; white, 14c, 15c; No. 2, 14c; 2c, buckwheat, 10c. Extracted in fairly good demand at 75c for white, and 7c for amber; off grades and Southern bars are at from 65c to 75c per gallon, according to quality. No much demand for black honey at present, but some little selling at 80c Per Bee-wax firm at 28 cents.

Demand continues good for honey; supply fairly good. Extracted continues in demand with enough supply to meet requirements.

HILDEBRAND & SOKLEEN.

DETROIT, Jan. 19.—Fancy white comb, 15c, 16c, 17c; dark, 2c, 3c; 5c, extracted, white, 70c-75c; amber and dark, 65c-60c, Bee-wax, 26c, 27c.

M. H. HUNT & SON.

SAN FRANCISCO, Jan. 9.—White comb 13c cents; amber, 11c; dark amber, 10c. Extracted, white, 75c; light amber 60c; amber, 55c. Bee-wax, 25c.

Honey stocks of all descriptions are light, and values are being as a rule well maintained at the quoted range. Firmness is naturally pronounced on light amber and water white alike, and the latter is becoming scarce.

HONEY MARKET.—We may have a customer within a short distance of you who wants your honey or may have a customer who buys with all the markets; therefore write us regarding your crop, stating quantity, quality, and lowest cash in consideration for a sample. We are ready to buy any business man in this city.

C. E. REIFFER, Chicago, Fairlithd, Ill.

DO YOU WANT A

High Grade of Italian Queens
OF CHOICE STRAWBERRY
Send for descriptive Card.
D. J. BLOCHEK, Pearl City, Ill.

Honey and Beeswax
From Alfalfa—60-
pound cans at 1c, and smaller cans.
SAM D. S. JENKINS, LAS AMANAS, COL.
Please mention Bee Journal when writing.
We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR

Hives, Extractors
OR ANYTHING YOU WANT IN THE
BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of THE AMERICAN BEE-KEEPER free, Address;

THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

AMERICAN BEE JOURNAL
Feb. 7, 190

24th Year

Day's Foundation. 24th Year

We guarantee satisfaction. ★★

What more can anybody do? BEAUTY
PURITY, FIRMNESS, NO SAUCING, NO
PATENT WEED-PROCESS SHEETING.

Why does it sell so well? ★★

Because it has always given better satisfac-
tion than any other. Because in 23 years there have not been any complaints, but thousands of compli-
ments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

LANGSTROTH on the HONEY-BEE - Revised

The classic in Bee-Culture - Price, $1.25, by mail.

Bee-swax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.

HOUSTON, TEXAS

[This cut is the full size of the knife.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The holsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How To Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us six photographs of the Bee Journal (with $7.50). We will club the Novelty Knife and the Bee Journal for one year, both for $1.75.

GEORGE W. YORK & CO.
St., Chicago, Ill.

#2 Please allow about two weeks for your order to be filled.

BEE-HIVES and HONEY-BOXES

In car lots, wholesale or retail. Now is the time to get prices. We are the people who manufacture strictly first-class goods and sell them at prices that defy competition. Write us to-day.

Inter-State Box and Manufacturing Company,
Hudson, Wis.

Please Mention the Bee Journal when writing Advertisers......
AMERICAN BEE JOURNAL

Feb. 14, 1901.

PUBLISHED WEEKLY BY

GEORGE W. YORK & CO.
144 & 146 Erie St., Chicago, Ill.

*Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

IMPORTANT NOTICE:
The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50c a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, Dec. 31 on your label shows that it is paid to the end of December 1900.

Subscription Receipts—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and duly credited.

Advertising Rates will be given upon application.

Reformed Spelling—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "dh" or "edh" to "th" when so pronounced, except when the "th" affects a preceding sound. Also some other changes are used.

The Bee-keeper's Guide

Or, Manual of the Apiary.

BY PROF. A. J. COOK.

460 Pages-18th (1899) Edition-18th Thousand-$1.25 postpaid.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without THE BEE-KEEPER'S GUIDE.

This 18th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to each present subscriber, for the work of getting NEW subscribers for the American Bee Journal.

Given for TWO New Subscribers.

The following offer is made to PRESENT subscribers only, and no premium is also given to the two new subscribers—simply the Bee Journal for one year:

Send us TWO NEW SUBSCRIBERS to the Bee Journal with $2.00, and we will mail you a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both for only $2.75. But surely somebody can get only TWO NEW SUBSCRIBERS to the Bee Journal for a year, and thus get the book as a premium. Let every body try it. WILL YOU HAVE one?

GEORGE W. YORK & CO., 144 & 146 Erie St., CHICAGO, ILL.

THE BEST WHITE

ALFALFA HONEY

Extracted Honey

ALL IN 60-POUND TIN CANS.

ALFALFA HONEY this is the famous White Extracted Honey gathered in the great Alfaflake regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfaflake extracted.

We have a good stock of the fine WHITE ALFALFA and WHITE BASSWOOD EXTRACTED HONEY that we can ship by return freight. Most bee-keepers must have sold all their last year's crop long before now, and will be ready to get more with which to supply their customers. All who have had any acquaintance with the above-named honeys know how good they are. Why not order at once, and keep your trade supplied?

Prices of Either Alfalfa or Basswood Honey:

For the purpose of selling again.

A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—one 60-pound can, 93¢ cents per pound; two cans, 9 cents per pound; four or more cans, 8½ cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. The cans are bont. This is all.

Absolutely Pure Bees' Honey.

The finest of their kinds produced in this country.

Read Dr. Miller's Testimony on Alfalfa Honey:

I've just sampled the honey you sent, and it's prime. Thank you, I feel that I'm something of a heretic, to sell several thousands pounds of honey of my own product and then buy honey of you for my own use. But however loyal one ought to be to the honey of his own region, there's no denying the fact that for use in any kind of hot drink, where one prefers the more wholesome honey to sugar, the very excellent quality of alfalfa honey I have received from you is better suited than the honeys of more market flavor, according to my taste.

C. C. MILLER.

McHenry Co., Ill.

Order the Above Honey and then Sell It.

We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

Address,

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

20 cents Cash paid for Beeswax. This is a good time to send in your Beeswax. We are paying 20 cents a pound—CASH—for best yellow, upon its receipt, or 28 cents in trade. Impure wax not taken at any price.

Address as follows, very plainly,

GEORGE W. YORK & CO., 144 & 146 Erie St., CHICAGO.
5. Yes, the street cars run within one-half block of our new office, at 144 and 146 Erie street. The Wells street cars can be taken on what is known as the down-town loop, and for 5 cents you can come to our office from the center or main business part of Chicago. If one happens to get on a North Clark street car there will be no harm done, as this line crosses Erie street two and one-half blocks east of our office. But the least walking will be done by taking the Wells street cars.

6. We are usually not very good guessers, and so you will have to explain about your having had “only one birthday.”

Management for Comb Honey.—Mr. L. Stachelhausen gives his method of producing comb honey as follows, in Gleanings in Bee-Culture:

As soon as the honey-flow commences, and the hive is now busy, we think it is best to set supers with sections on top of our hives, a hive is prepared with starters only. We bring it to the hive selected for the new manipulation. The old hive is set on the bottom board, and set aside to be handy for the following manipulation. The new hive is set on the old stand, and an empty hive-body on top of it. In all these operations I use smoke, but never too much, nor too close to cause them to fill themselves with honey. One of the comb-combs, with bees and all, is put into the hive and then the bees is brushed from every frame into this hive. The most important thing in this operation is, that the bees fill themselves with honey. A little sprinkling with a solution of sugar in water can be used if the bees do not suck up the open honey.

The combs from which the bees are brushed into the new hive are sorted into different empty bodies near by—comb-combs, honey-combs, or empty ones separately all. It is necessary to look for the queen. She is brushed into the hive with the other bees. At the same time the honey-body, lay a queenexcluding honey-board on top of the new hive; and a super with sections (containing preferably full sheets of foundation and some bar-combs) is set on top of this, and the hive is closed.

The next day the frame of brood is removed, and more super room given if needed.

Propolis.—As there is a possibility that propolis may yet become an article of commerce, the following from a report of a conversation reported in the British Bee Journal will be of interest:

“Propolis” was a remarkable product, medically used in liquid, not salve form as many supposed. It was considered to be a wonderful antiseptic and had been employed successfully for wounds in South Africa. It was supposed to take the place of iodine, and some experiments showed that with about 3 percent omission of the liquid certain bacteria were killed off in two minutes, and other bacteria in three minutes. This “propolis” was stated to be very useful for foot and mouth diseases. The mixture was also said to be very rich in oxygen and carboonic acid gas in a liquid form, and contained another alkaloid at present unknown. With regard to “propolis,” Mr. Harris would like to know, seeing that its antiseptic properties had been proved, what the general opinion was as to its efficacy in the treatment of foul brood.

Mr. Reid, who had examined the bottle and smelt its contents, said that the liquid smell of benzolamine, and might be a germicide. Mr. Bric suggested that the germicidal properties probably existed, if at all, in the unknown alkaloid.

Mr. Reid said that propolis, when taken out of the hive, always contained wax, generally it was nearly half wax, and wax invariably contained propolis, except when just secreted. It was possible to separate five or six different substances by the use of various solvents, but what those substances would do, or whether they were specific antiseptics, it was difficult to say. The bees themselves used propolis as if it were a propolis, it was intercalated over objects of aversion (such as a dead mouse), which got by means into their hive, and wax and propolis—always the latter—and which would cover the antiseptic provided for them, with their own, which was better. A large percentage of propolis would be found in the dark cappings of cells containing foul brood.

A Suggestion for the National.—At the last meeting of the Chicago Bee-Keepers’ Association the following was unanimously adopted:

WHEREAS, The National Bee-Keepers Association has provided that local associations may join it in a body by payment of 50 cents for each local member; and,

WHEREAS, Abundant advertising is necessary for the success of any enterprise; therefore,

BE IT RESOLVED, That we, the Chicago Bee-Keepers’ Association do herein resolve to urge the National Bee-Keepers’ Association to provide all local associations in America with printed matter setting forth the objects and aims of the National Association, so that the secretaries of such local associations may be able to put such printed matter into the hands of all bee-keepers in their territory and jurisdiction.

From the fact that there has been some call for information concerning the objects and work of the National Association, it would seem that there should be something printed for free distribution—that it furnish the desired information—so that it would not be so difficult for the officers of the local associations to get members.

It was at our suggestion that the provision was made in the constitution of the National Association to admit the members of the local associations at 50 cents each. We still
think that it was a good move, and believe that the provision would be taken advantage of if local bee-keepers understood about it, and especially if they were informed concerning the good work already done by the National, and also as to what it purposes to do.

In the interest of every bee-keeper in America. We trust that the board of directors of the National Association will act on the suggestion made by the Chicago Bee-Keepers' Association.

We also think that it would be a good thing if all the bee-papers would carry a standing notice, that every one desiring to learn about the work of the National Association could do so by sending to the general manager for literature that would explain the objects of the Association. It can not be expected that bee-keepers will unite with an organization until they know something about it. They must be led to see that it will pay them to do so before they will hand out their dollars-a-year-dues.

We believe that any legitimate organization will not suffer for the lack of funds if those who should be interested are shown that it is to their interest to support it, and that its objects are really wise, and for the advancement and defense of right principles and purposes.

Let the board of directors of the National Association prepare at once suitable literature, and begin its circulation as soon as possible thereafter, so that by the time of the next annual meeting its membership can be counted by the thousands instead of by the hundreds. We are ready to do our part in pushing the work of securing membership, thru the columns of the American Bee Journal, and have no doubt that the other bee-papers will do all they can along the same line.

With united effort we believe there is no reason why the National Bee-Keepers' Association should not have a larger membership than any of the other agricultural organizations now in existence in this country. We believe the machinery of our Association is all right, and all that is needed is to work it. It needs to have its joints limbered up with the oil of enthusiasm, and the motive power of earnest effort applied to start it and keep it going.

Weekly Budget

Mr. O. O. Poppleton, of Dade Co., Fla., wrote us as follows, Jan. 29th:

"Bees are breeding nicely with an abundance in the hives. They would be gathering quite a little surplus honey now if the weather was only a little warmer."

"I had the misfortune, a couple of weeks ago, to drop the nx on my left forefinger, just above the knuckle joint, cutting it quite badly, and breaking the bone. The surgeon thinks the finger can be saved without its being stiff. It is doing fairly well now, but it will take a year for the bones to knit so the hand can be used. I don't find any special fun in being one-handed."

We regret to learn of Mr. Poppleton's accident, and trust that in time his finger may be all right again. —

Editor Will Ward Mitchell of the Progressive Bee-keeper, after quoting the account we publish in the American Bee Journal of Jan. 10th, concerning their "fire-water" disaster, gives this appended paragraph:

"We regret our brother publisher's misfortune; and hope his mite will pay any back dues at once, as Bro. York has been giving us his best efforts, and the "Old Reliable" is far ahead of what it ever was before.

We know of nothing that would be more cheering to Bro. York than for delinquents to "pay up" and send in their renewals."

The Wisconsin Convention was held at Madison last week as previously announced. It was a good meeting, and quite well attended, considering the poor honey season the past year.

The officers were all re-elected for the ensuing year, as follows: President, N. E. Franke, of Madison; Vice-President, Miss Ada L. Pickard; and treasurer, Harry Lathrop.

Next week we will have more to say about the meeting and some of those who attended.

A Dozen of the wealthiest capitalists in the country—men who wield absolute control over immense business enterprises—will tell the readers of the Saturday Evening Post (Feb. 16th) why they remain in the race which they have already won.

Each of them writes frankly whether he makes money for its own sake, for the sheer joy of working, or to get the power with which vast capital invests itself. Curtis Publishing Co., Philadelphia, Pa.

Mr. H. C. Binger, one of our subscribers in Minneapolis, Minn., wrote us Jan. 28th as follows:

"Father passed away Jan. 15th, at the age of 67. He was born in Mecklenburg, Germany; when 28 years of age he came to this country and settled at Rockford, Ill. He was married to Miss Friederike Fischer, who, with five children, survive him. In faith he was a Lutheran, and was a kind and loving husband and father."

Contributed Articles.
No. 12. - Interesting Notes on European Travel.

BY C. P. DADANT.

Before I leave Paris and its surroundings, I must tell you of two very pleasant trips I took in company with my daughter and our good friend Mr. Gariel, of whom I have often spoken. The first was a visit to the factories of the famous honey-trade in the small town of Chartres—some 60 or 80 miles out of the capital. The flying express took us there in the morning and brought us back in the evening.

Of the factory itself I shall say nothing. It was a busy place, but those of our friends who are acquainted with American factories would find nothing of interest in anything I might depict, for their methods are not as practical as ours, and the work turned out is not as good, as I said in a former article, but this is only because that is made here, but I could perhaps give instances of the great economy practiced in the saving of material. This factory manufactures hives only as a secondary business, their main occupation being the making of railroad supplies of different kinds. I saw large piles of old railroad ties (which would be sold here for fire-wood) cut up into small pieces, and a good portion of the material set aside for the manufacture of a number of small articles which could very readily be cut out of this refuse. It takes more time, it is true, to pick out the sound wood, but the Europeans can not use our axiom, "Time is money," to as much of a purpose as we can, for altho with them time is also money, there are many things that are more valuable than man's time over there.

The cheapness of labor is very certainly responsible for some very queer notions. For instance, a certain manufacturer seriously asserted to me that it was cheaper for them to have the lines cut in the factory than to have them done by hand in the field. "It costs so little," he said, "and the work of a smoothing-plane is always nearer than that of a steam planer.

And in the use of second-hand lumber we need not be so afraid of the nails which would very soon spoil the steam knives."

I tried to discuss the matter but it was of no use, and it is also evident that many working men do all they can to discourage the employment of time-saving devices which they consider as their enemies.

We were splendidly treated by the manager, who is evidently an able man and who asked me a number of questions about America and its factories. He was well acquainted with a gentleman who was in the employ of the railroad company as civil engineer, and who had been sent to America to buy a number of locomotives, and whom I happened to meet on our trip across the ocean. So we had quite a talk about the great steps that America is making in her trade with the world at large, and the numerous exports which are just beginning to bring the New World into competition with the Old.

We partook of a very nice dinner in his home, close by the factory, and employed the afternoon hours previous to the departure of the train, in walking about the old city, its walls, and the little streets and churches, at their foot and in which the housekeepers were busy washing their linen. It was very picturesque. On another day we went with Mr. Gariel again, to visit an old and experienced bee-keeper—Mr. Delepigne, who, with his family of Paris. Mr. Delepigne is not only a practical apiarist, but is also a writer on bee-culture. He writes regularly for the weekly journal entitled, "La Gazette du Village," which might very properly be called the "Farm Journal" of
France, for it is a neat, newsy, and practical farmer's paper, full of interesting information. The trip to Meulan reminded me very much of "L'Abbe Constantin," by Halley. I have no doubt many of the readers of the American Bee Journal haveread that little book, for it has been translated into English and has become a classic.

Well, the kindly, good-humored, cure, his old servant, his little garden, the little church, the little village, and even the big castle at a short distance on the opposite side of the road—all these things look familiar altho seen for the first time. We found ourselves there with Mr. Giraud, whom I have mentioned as so successfully putting in practice the Doolittle method of queen-rearing, and with an old gentleman—a count who kept bees for pleasure—and we had quite a talk on America and our American celebrities in bees. If I am not mistaken, two of the persons present could read English and had read Gleanings and a few copies of the American Bee Journal and "A B C of Bee Culture.

Why it is that so few of the French can speak or read English is more than I can comprehend, but they seem to think it much more astonishing that not all foreigners can speak French. They seem to think that the French language ought to be an indispensable part of any good education.

Entrance Gate to the City of Chartres, France.

I think this makes the French more exclusive than other nations. Then their literature seems to encourage them in their ideas of exclusiveness, for it is certainly very wealthy in able works and books which have become classics, and more translations seem to be made from the French than from any other tongue.

We left Meulan after a very pleasant chat and a visit to the fine park of the castle across the way.

What a difference between European and American landscapes! I vainly tried to imagine myself in America, at different times. There was always something in sight to dispel the illusion. The village houses huddled together as in a nest; the white walls and red tile roofs; the magnificent country roads with their avenues of trees on each side; the little patches of land looking for all the world like so many elk herds lying side by side in the sun; the smooth little streams of water, running quietly even to the full to the edge of their grassy shores, and shaded with willows and poplars along their windings; the herded cattle, the two-wheel carts and their heavy loads, even the country faggots of brushwood—made a strange world. O, those buggies! What a look of contempt our farmer boys would give them! They are not buggies, but carts very gaudily painted, but so heavy! Wheels five feet high, shafts made of 4x4 timbers, springs to suit, harness ditto, and a big Percheron for a trotter. I nowhere saw one of our American spider-web buggies. I have no doubt that there are some in Paris, yet they must be scarce. There are plenty of fine carriages, and expensive equipages, but you can not, on the public roads, meet a light top buggy at every turn. Their lightest buggies are made to last, and are heavy in every particular. This seems an absurdity, for such vehicles as we use here, on our abominable American roads, would be a delight over there. The harness also is heavy. It seems as if they were afraid the horse would break it, and there is enough leather in the lightest harness to make three such harnesses as our buggy-horses wear.

A Few Words of Comfort for "Old Grimes."

BY "THE MILLER O' THE DEER."

"Old Grimes is dead; that good old man, We ne'er shall see him more."

So the old ballad has it, but it now seems that he was not dead, but sleeping, until the morning of some long ago when Rip Van Winkle, and he has only just awakened. (See page 20.) Poor, sleepy Old Grimes, who would have thought that one of your kindly, genial, helpful nature would have been missed in that way. But we feel great encouragement in the way of any one, even of one so lost to all rectitude as to try to invent new devices in beedom.

You kindly old men did, indeed, beat paths for the rest to follow, even as our forefathers blazed the rude trail to the frontier, but who now would care to stumble over the logs and stones of such paths, when the same end may quickly be reached by automobility? Those old paths are full of pretty places, romantic spots and picturesque corners where wild flowers lend their sweetness and the drowsy hum of the bumble-bee invites one to tarry and repose. We all love those places to rest in, and the companionship of the placid plodder of these byways, but they are not for present-day commerce, nor can we travel over them in up-to-date vehicles.

The feeling which caused you, dear Old Grimes, to complain, is but a sound and safe conservatism allowed to run riot. But then, we must needs be charitable to you, for your heart is clearly showed that you have in mind only the devices shown in ancient times, and which indeed needed bees from fairy-land to construct combs for use in them.

What a nightmare your dreams have been, for now, just half awake, you mutter of slicing-machines, of four-horse hollows, of long adjusting, of high prices, of revolutions of systems, of new outfits, and other fits and misfits. Come, come, Father Grimes, take a cold plunge, shake thyself and awake, for thou art still more than half asleep. Thy ideas and reasoning be as of cobwebs in thy brain, and are not worthy the 20th century.

Tis far from the thoughts of these troublesome inventive fellows to put obstacles in the paths of you old fellows—nor would they much rather. Why, for instance, a smooth highway, and when you longingly turn from its rush and bustle into the sweet, tho sleepy, quiet of the old paths, they would furnish you with a rugged cane to help your tottering steps over its stones and hummocks.

I know a little about some of these new-fangled machines, and to save you from further worry let me whisper to you that an uncappr costing $20, and that has to be "adjusted," is as far from the realized dreams of those ingenious fellows as your buggy was from the olden one newly nearly so, and much, and their capacious maw will take all the combs as they come, and deliver them to you neatly uncapped, and at the rate of 20 a minute, if your trembling hands can feed them in so fast.

Dear Old Grimes, we all love you for your kindly charities, and for that quaint figure in its "old black coat, all buttoned down before;" even tho the color is now rather gray from the dust of many years.

So let us help you as you tread That path of olden times; All undisturbed, rest in thy hut For evermore, Old Grimes.

Getting Bees to Swarm—Requeenng, Etc.

BY EDWIN BEVINS.

LAST spring I discovered a means of getting bees to swarm at almost any time when swarms are desirable. One of my colonies was wintered in two sections of a sectional 8-frame hive, sections 7½ inches deep. Early in May the colony got so strong that in order to prevent swarming I placed the bottom section on a box, filled with drawn combs. When swarming time came, I raised the upper story and put a queen-excluder under them, then shook the bees from every frame down in front of the entrance. I felt sure the queen was below, and could care the brood in bills. The paper story to mature and make room for honey to be stored there by the time there would be much to store.

No further attention was paid to these bees for several days until one day a neighbor express a desire to look over the apiary. In showing him around I happened to raise the cover of the hive and lift some of the combs. To my surprise I found brood in all stages of development, and every
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COMB FULL.

One of the combs I found the queen and put her below on the second story. At the next day but one, some one coming into dinner said the bees were swarming. I said, "What are the bees swarming for? I don't believe there is a queen-cell in the yard." But noticing that the air was full of flying bees I went out to see what it was they were coming from. It was from the hive in which I had put the queen below the day but one before. The cause of the swarming was not hard to understand. The bees clustered in two places, and, suspecting that each cluster had a queen, I hived them in two. One cluster was large, and I hived it on 9 Langstroth frames; the other I put into an 8-frame dovetailed hive. Each cluster had a queen.

After having them I went to see what was going on in their old home. I found a queen in possession there, and quite a number of cells, from which the queens had issued. I reduced the old hive to two sections, and left it that way for the balance of the season. When pack for winter it was so heavy with honey that I did not care to lift it. I took nothing from it in which to store for winter, with the understanding the season had been unusually poor one for honey. These were all the swarms I had the past season.

Another colony wintered in two 10-frame dovetailed hive-bodies on 17 frames, had a queen nearly or quite as prolific as the one just mentioned. The last of April the two stores of this hive were brought in under another story, and a queen cell was put into it. I kept the hive full of bees, and the queen seemed to be about half full. As the upper story contained much honey I removed the middle story to another stand, knowing that most of the bees would go back to the old location. I did not see this colony, as I had to start queen-cells I don't have a queen on the first comb I raised. Another mature queen was found on another comb. Then I formed a nucleus and gave it to one of the queens. The queen left in the hive proved to be uncommonly good one, even if it was reared in a manner which queen-breeders generally condemn.

SELECTING A HOME BEFORE SWARMING.

Do bees intending to swarm hunt up a place to go before the swarming takes place? I guess they do sometimes. One season I noticed bees in great numbers entering a hive which stood on another hive at the upper side of the bee-yard. The hive had some empty combs in it. I looked about to see where the bees were coming from, and found them pouring out of a hive at the lower end of the yard and taking a bee-line for the hive at the upper end of the yard—a distance of about 4 or 5 rods.

REQUEENING COLONIES IN THE FALL—MAILING QUEENS.

I unqueened and requeened one-fourth of the apiary last fall. Most of the work was done in October, but it was not finished until some time in November. One reason why I like to do this work so late in the season is because in almost every instance I found the bees too deep, and as they have their supers of honey and the weather was cool I don't have to be very particular about the time of introducing. In two instances there was a little brood, but as the queens were delayed I had a chance to destroy queen-cells. The queens were from different parts of the country, and from breeders of good repute, and I have reason to believe they were all safely introduced.

I shall continue to order queens to be sent thru the mails, as I do not believe that many are injured in transit. Four queens ordered last fall were received dead. One of them was delayed in the mails until the weather was hot. Two others had received such a shock that the cages were split from end to end, and had been tied up with string. The other cage had the queen and the bees all dead in it, doubtless caused by the same shock which split the cages of the other queens, as they came in the same mail.

When I received queens with pasteboard covering the entrance to the candy it was promptly torn off, and I had no question killed in consequence of being released too soon. I do not think that Mr. Fred Tyler need to worry about his bees getting too warm pack as he describes on page 766 (1900).

The Premiums offered this week are well worth working for. Look at them.

Convention Proceedings.


BY DR. A. B. MASON, SEC.

(Continued from page 8.)

MELTING CANDIED EXTRACTED HONEY.

QUESTS.—What is the lowest temperature at which candied honey will melt?

Mr. Aikin—I think about 100 degrees, or a little better, but you must continue the heat for a long time; about 110 to 120 degrees will melt it in a few hours. The highest degree that I wish to subject my honey to is about 160 or 170 degrees, after that it begins to boil the flavor. An additional question on the same sheet is: "What is the highest temperature it will bear without injury?" About 160 or 170 degrees is high enough. I would rather melt at 140 or 150, keeping it a longer time at that degree than to use the higher temperature.

APIS DORSATA AND THE NATIONAL ASSOCIATION.

QUESTS.—What is the attitude of this Association in regard to importing Apis dorsata, the big bee of India?

Mr. Aikin—If I am to answer that, I believe it is opposed. I don't know.

Dr. Mason—Opposed until we know more about it.

QUESTS.—Have any steps to procure or test these bees been taken?

ANS.—Yes, there have.

Mr. Benton—The attitude of this society did not seem to be that at the Buffalo convention, and I was wondering whether it had changed, considering your answer.

Mr. Aikin—I judged from the sentiment as expressed thru the bee-papers of late—I said I thought, I do not know. I suppose the only way we could come at it would be by taking the temperature of the people here now. Are you thru with this subject?

REQUEENING AN APIARY.

QUESTS.—What time of the year is best to requeen an apiary, all things considered?

Mr. Aikin—Dr. Mason, answer that.

Dr. Mason—Why, I really don't know. I prefer to do it during the honey-flow, myself, and by natural methods. I don't use the artificial methods.

A Member—Early or late?

Dr. Mason—Late.

A Member—How late?

Dr. Mason—For convenience, that is all. I don't believe it makes any difference as regards their good qualities which stage, early or late.

A Member—You would say just after the honey-flow?

Dr. Mason—Just as it is closing up, before it closes. They must have the vim and energy they have when the honey-flow is on.

A Member—How often would you requeen?

Dr. Mason—Once in two years.

MATING IN CONFINEMENT—SPREAD BroOD.

QUESTS.—Can the queen mate with the drone if the queen and drones are confined in a tent or other inclosure, say, 200 x 100 feet?

Dr. Mason—No.

QUESTS.—Is it any benefit to spread brood in early spring?

Mr. Aikin—Prof. Gillette, please answer that.

Prof. Gillette—Let some one with more experience answer that.

Mr. Poppleton—Yes.

A Member—Sometimes it is, and sometimes it is not, depending principally upon the man or woman who manages it. If you know how, it is all right; if you don't know how, go slow.

KEEPING EXTRACTED HONEY.

QUESTS.—How long will extracted honey keep?

Dr. Mason—I don't know; it has never been tried.
Mr. Aikin—I have some that is getting to be pretty nearly half old as I am.
Mr. Coggs—all I have some 30 years old.
Mr. Aikin—is it good?
Mr. Coggs—all I haven’t opened the package.
Dr. Mason—I have some that is 15 years old that stands open—good yet.

TO PREVENT GRANULATION AFTER FEEDING.

Ques.—For feeding what would you put with sugar syrup to prevent granulation, and in what proportions?
Mr. Aikin—Some use honey; I never had any experience, I can’t answer it.
Mr. Hatchinson—Honey is all right for that; about one-quarter honey is all right.
Mr. Benton—One-fifth will do.
Mr. Acklin—Percolate the syrup and you don’t have to put any honey in.

WHAT TO DO WITH FERMENTING HONEY.

Ques.—What can you do with frames of honey that is fermenting?
A Member—Extract it and sell it.
Mr. Aikin—Feed it to the bees, or make vinegar of it.
A Member—Will it do to feed to the bees?
Mr. Aikin—I wouldn’t feed it to the bees any time except when they could fly freely, and I have some doubt about it then; I said that because somebody else was recommending feeding.

SPENDING THE FUNDS OF THE ASSOCIATION.

Ques.—How large a percent of the funds of this Association should be used in the prosecution of adulterators of honey?
Mr. Abbott—It depends upon circumstances. We would have to decide that when the case came up.
Ques.—Would the Association deem it better to have a good, fat sum in the treasury, or should the money be very nearly exhausted each year in the various lines of work for which the Association was organized?
Mr. York—I think it ought to spend its money in the interest of its members. If more is needed at any time for legitimate purposes, call for more from the members.
Dr. Mason—Money is no good when it lies idle.

AN ASSOCIATION BRAND FOR HONEY.

Ques.—Should this Association prepare an association brand as a guarantee of purity of honey, which it can supply to certain applicants upon the unanimous approval of the board of directors?
Mr. Aikin—as far as my part I would answer that in the negative, until this Association becomes more properly a business concern.

BEEs POISONED FROM UNTIMELY SPRAYING.

Ques.—Is it a fact that bees are poisoned and brood killed when fruit-trees are sprayed while the trees are in bloom, and the bees are visiting them?
Mr. Aikin—Colorado people say so.
Mr. Benton—Other people say yes.
Mr. Aikin—A person in my county was convicted and fined for spraying his trees while in bloom, and thereby killing his neighbor’s bees.
Mr. Prisk—I think in referring to that the other day, when I spoke about the sulphuric acid killing the bees where the smelters were, somebody made a reply that they thought that smelters did not kill the bees. In our town we have large smelting works, and in our yard, and for blocks around, everything is killed. I have known arsenic to collect to a large amount in a few hours and to kill the shrubbery around there, and we thought that probably it fell to such an amount on the bloom that killed the bees. When we noticed the bees always came home as if they were tired out, and did not leave their hives.

ARRANGEMENT OF BEES WHEN SUPERING.

Ques.—When putting on the supers for comb honey should the natural arrangement of the brood be interfered with?
Mr. Hutchinson—I should say no.
Mr. Hatchinson—I think that question myself, because I tried an experiment this summer that convinced me it is profitable to interfere with it, and judging from this one experiment I say decidedly it is the right way to handle the brood. My experiment was to move all the eggs and unsealed larvae to the outside of the hive, to fill the hive full of brood, and put all the bees and unsealed larvae clear on the outside. The result was I got a big yield of comb honey, and the outsiders were filled up first. Whether it would work always that way or not I don’t know. Of course, I only tried it one season; but I think it is a subject worthy of further experimentation.

Mr. Abbott Mr. Hatch is appointed to experiment next season.
Mr. Hatch—I undoubtedly will.

THE HONEY CROP AND HANDLING.

Ques.—What percentage of the national honey crop is represented by the membership of this Association?
Dr. Mason—I don’t know, and I don’t believe anybody else does.
Ques.—Would it be practical for the Association to handle the crop of 1901 for its members?
Mr. Abbott—No, nor at any other time.
Dr. Mason—I don’t believe that; that is the last part of Mr. Abbott’s statement. I am a firm believer in cooperation.
Ques.—If impossible, by what obstacles is the possibility precluded?
Dr. Mason—That matter is like all other matters—it has to develop itself slowly. I believe that this Association will sometime get in position to handle the honey of its members; can’t be done yet; it is going to take time.
A Member—Is it not possible for this Association to go into Bartlett-stock combined and sell honey, buying all the honey in the country and handle it for the benefit of the members? I think it is possible. I don’t see anything to prevent it, if all the honey could come in here and be graded by interested parties.
Dr. Mason—Are you asking me that question?
A Member—Yes, sir.
Dr. Mason—I think I can answer that question. I don’t believe there are a dozen members of this Association that would be willing to ship their honey and wait for their pay; it takes money to run any business. Will you put the money in?
A Member—The honey will bring the money.
Dr. Mason—It has to be handled, and all bills paid; it takes money to run any business; this has to be develop.
A Member—Why can’t the bee-keepers, furnish that money pro rata?
Dr. Mason—Well, I don’t know why they can’t; but will they?
Mr. Aikin—I would like to say for the information of all interested, that some of us in Colorado have been thrashing that ground over and over again in the last four or five years, until we have got down to a working basis; I am going to tell you a little of that tonight.
Ques.—Should this Association undertake to find a market for its members?
Dr. Mason—It is answered in what has already been said—not at present.

WIDE AND DEEP HIVE-ENTRANCES.

Ques.—Is it an advantage during hot weather to use wide and deep entrances in the production of comb or extracted honey? If so, is there any danger of going to an extreme?
Mr. Wood—I use both large and small entrances, and I see no difference. I use chaff cushions on top of my hives the year round, and I find them better than none at all.

COMB FOUNDATION—COMB HONEY.

Ques.—Is it more profitable to use thin foundation than extra-thin in supers? and, if so, why?
Mr. Aikin—I believe extra-thin would be my answer, and the why of it as put before us this afternoon by Prof. Gillette.
Ques.—Is comb honey in drone-cells as pretty and as white as that in worker-comb?
Mr. Aikin—It depends up on who is looking at it: ordinarily it doesn’t appear as white looking.

REMOVING SUPERS—HONEY OozING OUT.

Ques.—When should the supers be taken off?
Mr. Aikin—When they are full, and the unfilled ones as soon as the honey-flow stops.
Mr. Holdren—What is the cause of honey oozing out of the cells after it is filled all up in that way?
Mr. Aikin—I don’t know why it is—fermentation, perhaps.
Mr. Holdren—What causes the fermentation?
Mr. Aikin—I wouldn’t know how to answer that, unless it is too much water—urine honey.
Mr. Holden—I had my honey in a very light place upstairs, and some of it got out of the box.

Mr. Abbott—Bees frequently gather honey that will ferment, especially in localities where there is basswood. Sometimes bees gather honey during damp weather that they cannot, fully ripe, and I have had large quantities of it ferment in that way, and just as soon as it becomes ripe it will granulate. In some seasons I was troubled badly with it in Missouri, and other seasons I would not have any of it. I think it is owing to the dampness of the honey when gathered, the honey will bear more or less of it.

(Continued next week.)

Report of the Utah Bee-Keepers' Convention.

BY A. F. STEVENSON.

The Utah State Bee-Keepers' Association held its annual convention in Salt Lake City, Oct. 6, 1900.

The meeting was called to order by Pres. Lovesy, and after the reports from committees were read he gave some general reports from different parts of the State. The meeting was then thrown open for discussion of topics of general interest to the fraternity.

General Reports from Members.

Andrew Nelson, of Emery Co., had harvested a very good crop of honey during the past season, but he said that something was wrong with some of the bees, possibly foul brood, and, if so, he would like to know of some way to get rid of it. The case was described, and a discussion among some of the experienced bee-keepers followed, and they decided that it must be pickled brood. Some time was taken in discussing cures for foul brood. The bees should be exposed to early in the spring, and if any brood is found with the backward presentation it is sure to turn out to be foul or pickled brood, and when such conditions are in evidence the bees should be transferred onto foundation in clean hives; but if they are left until rotten it is better destroy them and be done.

James Jackson, bee-inspector of San Pete Co., said there was some foul brood in Mt. Pleasant and other parts of the county, and it seemed to be almost impossible to get rid of it entirely.

Mr. Lovesy found in 10 years of experience that it was always best to transfer the bees just as soon as the backward presentation was noticed, even if at a time when the bees would have to be fed, as even at this early stage the disease will have been in the hive two weeks or more, and the young larvae in their agony have turned over, leaving the head in the bottom of the cell, which makes it impossible for them to hatch out.

Joshua Terry, of Salt Lake Co., reported a poor crop, and the situation very discouraging. His bees had died off during the season, as it is the usual case being smear-smoke. Mr. Cornwell of the same county was also a heavy loser from the same cause. He moved some of his colonies several miles from the smear-smoke, and they improved, and also in regard to the purchasing began to do better, while all of those left at home soon died. A resolution was adopted authorizing the Association to use all possible legal means to get rid of the nuisance.

L. Yeale, of Tooele Co., reported a fairly good crop, tho not as heavy as some others. Several reported a light crop in the southern part of Davis County, while in some of the northern portions the flow was good. They reported some cases of foul brood, and no inspector to attend to it, the people expected to have one soon.

I. Lysander had experience in packing for winter with burlap, straw, chaff, etc. Mr. Stevenson was also successful in packing with straw and chaff mixt, raising the covers about 1/2 of an inch for ventilation.

Geo. Hone reported that Utah County had produced only about half the amount of honey as others, the weather being dry. In speaking of winter packing he thought that two or three thicknesses of burlap over the brood-frames, with a super on top, was a good way.

Roderick Schach, of Salt Lake Co., reported a poor crop, besides having a loss of colonies. He thought for winter was all right, but the bees must have sufficient ventilation or they would sweat, get weak and damp, and then die.

A general discussion followed in regard to exhibiting at Fairs. Some of the officers of the Association for their efforts in supplying members with information as to honey prices, the history of keepers, crop prices, and thus benefit the bee-keepers and the industry.

Several from Weber County had a full average crop, some of the bee-keepers there averaging more than twice the amount of both comb and extracted that some bee-keepers on the Salt Lake and other counties secured. Mr. Reese secured over a car-load of No. 1 extracted honey. As prices have been above the average this season he is one of the lucky ones.

The President's Annual Address.

The many reports we have received taken as a whole are not very flattering or encouraging. While we have received some flattering reports of a good honey-flow and a good crop of comb for bee-keepers in those parts of the State, further south they have not been as good; and while in the northern parts of the State the reports have been fairly good in some localities, in the north counties, owing to the shortage in comb the reports have mostly been from 1/2 to 1/3 of a crop, the average in some instances being as low as 30 to 35 pounds. One of the remarkable features of the season has been that there was very little honey in some localities—favorable localities a few miles distant would there be a good honey-flow. These favored spots were generally in or near the base of the mountains, where there was plenty of irrigation, and few or no grasshoppers. To many of our bee-keepers as the last year we have been having a destroyming failure. Altho we had a beautiful spring, the dry, hot June—the hottest ever known in the State—dried up the bloom and irrigation; and as misfortunes seldom come singly, there the bees were left in many localities to feed in some localities that they ate everything green. When things began to look discouraging, both for the past season and the next, our friends—the gulls—came by the tens of thousands and devoured the grasshoppers that were hatched. So most of the bees have plenty of honey for winter, with some surplus, and the chances are more favorable for another season, on account of the work of the gulls.

The Association has been of material benefit to many of its bee-keepers, in keeping them posted as to the value of bee-products; we have adopted a committee by Mr. F. L. Thompson, of Colorado, and the bee-keepers that have been governed by the advice given, have saved money by it. This union of interest is certainly a step in the right direction, and we hope it will be extended to the purchasing of supplies next season. Too much credit can not be given Mr. Thompson and others in their unselfish interest in this matter.

But to return—there is still a matter of much concern to many of our bee-keepers. This matter has been thoroughly tested in Salt Lake County the past season, by placing colonies of bees in different directions and distances from the smelters, and we find that all bees placed within five miles of the smelters showed a marked diminution in the amount of honey made, and these colonies were off in from three to five months, while many 8 or 9 miles away died during the year. But bees placed within two or three miles of the smelters in the direction that the wind does not blow, do not seem to be affected at all. It has also been proven that much stock and vegetable matter have been destroyed by this smelter-smoke. Arsenic, or something of that nature, settles from the smoke on the trees and plants, causing a destruction of the bees. In the light of these facts some method should be adopted to have this poisonous smoke consumed, or otherwise prevented from being soon broadcast as it now is. E. S. LOVEY.

Mr. Ulrich Bryner, of Carbon Co., said that his bees were in good condition, and had done better this season than ever before. He secured 200 60-pound cans of extracted honey from 85 colonies.

Thos. Nelson, of Sevier Co., reported that the season's crop was considerably below the average.

Mr. Balliston, of Juab Co., reported a fairly good honey-flow in that county, but not as heavy as it had been in some years.

J. A. Smith, of Wasatch Co., reported a fairly good crop in that county, although they had harvested larger crops in other years. Wasatch is one of the counties in which there is a good flow of first-class honey in ordinary seasons. Mr. Smith heartily endorses the efforts of the Association in trying to keep up the work of the Association, thereby aiding the bee-keepers in building up the industry.

Uintah County reported the best honey-flow of the season, and is the banner county of the State. A score or
The mills of the gods grind slowly." It is thus with the Apis dorsata. If you give so much really advocated, I can assure you, however, that this undertaking is certainly making progress; one thing is certain, Providence is on our side, and, altho he has not yet succeeded in importing these bees, he has given us their native soil, and doubtless he has made a very considerable acquaintance to the star-spangled banner. I believe they are willing subjects, as there are no reports of their having joined the insurgents! I trust the opposition will not start such a report, and I do not think, perhaps, killed, or at any rate, without, of our little army, and driven the balance into the China Sea! Yet such a story would be just as reasonable as many that have been circulated in relation to this bee.

That is all in regard to the subject of marketing the surplus, which is quite out of place this season, owing to the fact that we have none to market; but if we should be fortunate enough to secure a crop again we should endeavor to maintain prices now that they have advanced.

The National Association has recently issued a pamphlet, larger and more complete but similar to the one we published over a year and a half ago. Such pamphlets are very useful. I wish that all this matter—showing the relation of bees to horticulture—that has been published by the Department of Agriculture, the various experimental stations, and other recognized authorities, with the experiments now being made at Ithaca and Geneva, in relation to spraying in bloom, and the benefits that could have resulted in one bulletin. This matter of the bee and its importance to agriculture can not be proclaimed too much—the people should be made to realize their obligations to the honey-bee.

I will briefly call your attention to Article 3, Section 2, of the Constitution of the National Bee-keepers' Association, which read as follows:

"Whenever a local bee-keepers' association shall decide to unite with this Association, or any branch thereof, for the purpose of receiving on deposit, or for the purpose of payment by the local secretary of 50 cents per member per annum, provided that the local association's membership dues are at least $1.00."

This is carrying out the ideas embodied in our State organization, and, if adopted by our association, would admit us to membership not only in our county and State associations, but in the National also, and all for the small price of $1.00 per annum. I would recommend that our constitution be amended so as to take advantage of this provision of the National Bee-keepers' Association.

In my several previous messages, with which you have been afflicted, I have by turns coaxed and scolded the bee-keepers of the county for carelessness, or indifference, shown by them for not taking greater interest in these meetings. The fact that you have realized but little from your bees for a couple of seasons should not deter you from aiding and strengthening our organization. Little by little you take it up, and you will see and feel and benefit you will derive from it. Do not wait for the secretary to urge you. Each of you has some subject—perhaps several—relating to our pursuit, upon which you have well-founded ideas. The more the secretaries can get him put you on the program. Take pride in your organization and pride in our pursuit; it may not be the largest industry, but it is just as honorable as any. Bees are said "to have been the heralds of civilization, steadily preceding it as it advanced." That they have always been held in high esteem by man can not be questioned, as they are mentioned as far back as history extends. They figured in the symbolical history of Egypt nearly 4,000 years B.C., showing with their presence that Egypt was inhabited.

Let me repeat, take pride and interest in your pursuit, that the bee may ever remain where history and science place it—the most interesting and important member of the animal kingdom.

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The Chicago Convention Picture is a fine one. It is nearly 8x10 inches in size, mounted on heavy cardboard back of the picture. It is the only fine picture that bee keepers ever taken in one picture. It is sent, postpaid, for 87 cents; or we can send the American Bee Journal one year and the picture—both for $1.00. It would be a nice picture to frame, and the not concerned with them, but think there are nearly 200 bee-keepers shown.

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The American Fruit and Vegetable Journal is just what its name indicates. Tells all about growing fruits and vegetables. It is a fine monthly, at 50 cents a year. We can mail you a free sample copy of it, if you ask for it. We club it with the American Bee Journal—both for $1.10.
Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, with a request that answers be sent. Please do not ask the Doctor to send answers by mail.—Errors.)

Boiling Foul-Broody Hives—Newly-Hived Swarm Leavino.

1. If I boil hives and frames that have been taken from foul-broody bees, will it kill the germ? and will they be safe to put bees in again?

2. Can one tell whether the disease is foul brood or pickled brood when it is found in an early stage? If so, how?

3. Last season in swarm-ing time it was quite warm, and in hiving bees they would leave the hives soon after being put in. A remedy was tried of cooling the hive with cold water, and after letting it drain put the bees in, but they would leave them. What was tried, and had but little success. The hives were new, and had foundation on each frame. Please suggest a remedy. What do you think was the reason of their deserting?

Answers.—1. Yes, and some good authorities say it is safe to use a hive of the kind without boiling.

2. You can hardly be certain till some advance has been made. It is the subject in the last volume of American Bee Journal.

3. When a swarm is hived and leaves the hive, in a large proportion of cases it is because the hive is too warm. Sometimes wetting with cold water will help, but if the hive stands an amount of heat it may still be hot in spite of the getting, especially if the hive is close. Let the hive be raised from the bottom-board, and perhaps the cover open a little for a day or two. Some give a swarm a frame of brood. Bees are not likely to desert this.

Queen and Swarming Questions.

1. What percentage of queens reared by a strong colony, and then 3 days before hatching being given to nuclei, would swarm the same year?

2. What percentage of virgin queens would swarm, if allowed to hatch before being introduced to nuclei?

3. Would it be better to let each nucleus have its own queen, providing each had 4 or 5 frames of sealed brood with one containing some eggs, and all being well covered with bees?

4. What would be the best method to increase from 30 to 55 colonies and keep swarming down?

5. Would it make any difference in the harvest if all old queens were replaced by virgin queens 45 days before the flow? or would it be better to give them fertile queens of this year's rearing, and what difference would it make in swarming?

Answers.—1. I don't know. If you will tell me what will be done with the queens afterward, I may be able to tell something about it. Your question is such as to suggest that you suppose a queen reared in a strong colony and given to a nucleus three days before hatching will give results as to swarming quite different from one that has not been given to a nucleus. I doubt that. It is not so much what has been done before the queen begins laying, as it is what has been done after.

Let me try to answer fully the spirit of your question, for there are some misconceptions likely to be entertained in the minds of beginners. It is a commonly believed opinion that a queen of the current year's rearing is not so likely to swarm as an older queen. The belief is right. And it is strong. It all depends. For a fact, it is a sure thing that a queen would not swarm before six months of age. At that time it was probably correct. Lately the opinion is held that a young black queen of the current year will not swarm, but an Italian queen may. There may be some difference between blacks and Italians in this respect, but I'm a little skeptical as to its making much difference. I think the rule was true of blacks before Italians were introduced—not because they were blacks, but because of the early age at which they would have swarmed. Before the introduction of Italians, there was little in the way of changing queens, making swarms by dividing, etc. Bees were left pretty much to their own devices. Leave them to their own devices today, and you may count that a young queen of the current year's rearing will not swarm till the next season, whether black or yellow. In other words, if a young queen is reared in a colony in the neighborhood of the swarming season, and left in that colony, she is likely to be queen and the swarm that season. I'm not so sure that any satisfactory reason can be given, but the fact seems to be well established.

If a queen is reared this season, and after being reared is put in a hive where conditions are favorable for swarm- ing, there will be no objection to the swarm. Let a colony be on the point of swarming, or take it immediately after it has swarmed and the swarm has returned; take its queen from it, and give it another queen, and that colony will likely make the next month's or month's and a half's repulsion. If a colony swarms and return (the queen was elipt), and I took away their queen, giving in its place a young queen that had not been laying more than two or three days. Promptly that swarm came out with the young queen not more than two days later—I think it was the next day.

If a queen is so old as to require superseding, and that supersede occurs about swarming-time under prosperous conditions, there is likely to be swarming, whereas there might have been no swarming if a young queen had been present that did not require superseding

I haven't given you, perhaps, a satisfactory answer, but it's the best I can do.

2. Probably just the same as if they had been put in the nuclei before being hived.

3. Four or five frames of brood well covered with bees would be rather a colony than a nucleus. A queen reared therein might be a very good queen, supposing, of course, that she was well reared and placed before, and such a nucleus queens would hardly be advisable if many were to be reared, because too expensive. A number of bees may be reared in one colony just as well as to let the colony rear a single cell, and when the cell is near hatching it may just as well be in a nucleus till the queen lays.

You would probably find Doolittle's queen-rearing book a profitable investment.

4. What would be best for one might not be best for another. For some, natural swarming would be best, preventing second swarms by hiving the swarm on the old stand with old colony close beside it, and removing the old colony to a new location a week later. For some the nucleus plan would be best. Studying conditions and hives from time to time give to each nucleus a frame of brood with adhering bees, or brood only, planning to give just enough help to build each nucleus up to good strength for winter.

5. It would probably make a big difference to give a virgin queen 45 days before the flow—so great a difference that you would not be likely to try it a second time. The harvest with you is likely to begin somewhere about June 10; want 5 days before that time would be in the latter part of April. As far north as northern Illinois you will hardly succeed in rearing good queens by that time. That is objection enough of itself. To put a virgin queen in a colony which will be in its 25th week in 2 months time is important to have it push to the ability of the colony. That is also a sufficient reason of itself. Neither would it be wise to think of giving a young laying queen in April. It would make chances for swarming somewhat less, but not enough less to overbalance the disadvantage.

Out-Apairy and Swarming—Feeding for Winter.

1. How could an out-apairy be managed where daily attention could not be given to it, mainly the swarming question, possibly 25 or 30 colonies, in a fine honey locality? Would the bee-entrance guard on each hive prevent swarming? What would be the result if they did swarm, and were allowed to get away as long as the bees had before the entrance guard was put in?

2. What would be a fair share (of honey) to give to a person for allowing me to place 10 or 12 colonies on his farm, everything to be furnished by me, he only to see to the shade-boards, etc., as he does not understand hiving swarms or bees at all?

3. What is the best time for feeding sugar syrup, for...
winter use? and how can you feed thru the winter in case of necessity? Some time since one colony starved to death for lack of food, not knowing how to feed syrup, but inasmuch as it is super with comb honey on the hive, it seemed to do no good. They were on the summer stands.

4. Can you name one or two good feeders, and tell how to use them?

5. Can extracting be done thru the winter as well as in the warm weather? Using frames for extracting, would medium (full sheets) brood foundations be right? and should they be wired in?

In my short experience I have found that the bees in hives not shaded, begin work earlier, and also they work later than those that are shaded.

WASHINGTON BEGINNER.

Answers.—1. Bee entrance guards would not in the least prevent swarming. It only prevents the queen from going with the swarm, and without a queen they would not leave. It would be just as well for them to swarm and be lost as long as the remainder did well,” but unfortunately the remainder will not do as well. Entrance guards might be safely used if you could visit the place as often as once a week, for the queens would be held in the traps awaiting over. If the feeding is done early enough, I prefer to have such large hives with so much room in the extracting-supers that the amount of swarming need not be considered.

2. That question is not easily answered, but at a guess it might do to give him honey enough for use on his own table. The amount of compensation would not be exactly in proportion to the number of colonies. A man would just about as soon have 10 colonies sitting on his ground as one. In some cases a man might be willing to pay for having bees on his place for the sake of having his fruit fertilized.

3. Just as soon as you are satisfied no more surplus will be stored. In some places—in a good many places—that might be in the last of August. That gives time to have the syrup well ripened and put in proper shape for winter. In any case, try to have all feeding done before September closes.

In case of necessity in winter, use comb honey or sugar candy, making sure that the food is so close to the bees that they will crawl directly upon it. Don’t think of feeding syrup in winter.

4. Root’s A B C of Bee-Culture gives the Miller feeder first place if the feeding is to be done on top. Put the feeder on top the same as a super: put in syrup and cover over. If the feeding is done early enough, I prefer a plan that is still less trouble. Put dry granulated sugar in the feeder, and then pour hot or cold water on it. The bees will do the rest. If you prefer to feed at the hive-entrance, the Boardman feeder is one of the best.

5. It is just as easy to extract in winter as in summer, if the combs are just as warm. If kept in a very warm room for 24 hours, you will likely be able to extract. If you can hang them overhead in the kitchen they will stand a good chance for heat.

The American Bee Journal

OCTOBER

The Afterthought.

The “Old Reliable” seen thru New and Unreliable Glasses.

By E. H. Hasty, Richards, Ohio.

WEIGHT OF NATURAL COMB.

Average weight of natural comb 10 grains to the square inch. Prof. Gillette, page 23. If we call the Langstroth frame 144 inches (usually less from being nibbled away at the bottom) the weight of the wax in a comb will be 1,440 grains, or 14,400 grains in a 10-frame hive. Now, if we assume that the 400 grains will cover the extraneous matter work into the new comb of a hive, we have just an even two pounds of actual wax. Practically, I think they usually work in a good deal more extraneous matter than that, but on the other hand, next to the bars all around there is much more wax than 10 grains to the inch. So a fair estimate of the actual weight in a hive, providing it all could be recovered, is two pounds for 10-frame hives, and one pound 9½ ounces, nearly, for the more common 8-frame hives.

MAKING ROOM FOR WAY-SCALES.

And so D. H. Coggshall thinks that it pays to cut off pieces from the comb to fill space—time. Bees place to use their scales of wax without building burns. I think he has a valuable idea—that is, valuable in long, strong runs of honey. When the combs are scant thickness, or not built down at the bottom, or when the comb is short, then the cutting would be rather a waste. Page 24.

FANNING AT THE HIVE-ENTRANCE.

I think Dr. Miller, on page 25, does a pretty good job at theorizing. A bee không can almost always take permission by the guards at a hive-entrance falls to fanning at once—plain way of saying, “Don’t you see, I am ready to go to work? and robbers do not work.” Guess it’s right. Still, let a fourth swarm come along, and the bees will have nearly empty and pretty well demoralized as to guards; let the swarm hang an hour till said hive gets cold—cooler than it needs to be; then hive the swarm and carry it away, leaving say 50 obstinate bees determined not to leave the limb. In the course of the day it will dawn upon them what fools they are, and they will return to the alighting-board. I should expect to see them fanning together there first thing they do. In this case there can hardly be fear, or uncertainty, and there is no need of the fanning being done; what is it? Fanning in the entrance draws outside the familiar smell of home. Perhaps that is what they want—before they have submitted to the inevitable quite enough to go in.

DOUBLE WALLS AND CHAFF ON A HOT DAY.

Mr. J. M. Rankin has got on track of a question that is of value—the actual effect of double walls and chaff on a hot day as compared with plain, single-walled hives. Thinks the working-force for a time mostly abandoned the supers of the single-walled hives. This is one of the things we want to be sure of before we are too sure of it, so repeated observations by different observers are desirable. For future comparisons Mr. R. should have given us the temperature in the shade in addition to that in the sun. Page 39.

COMB BUILT BETWEEN FINISH COMBS.

Dr. Miller is right in his answer to “South Carolina,” on page 43, that a comb built between two finish combs in a super is apt to be very thin. Even if so much extra space is given as to obviate that trouble the alternation doesn’t seem to be a good plan. Put in the first-rate, finish comb next one side of the super, then several frames with starters, then one or more partly built combs if you have them as I mostly do; then fill the rest of the super with finish combs. That seems to be the “how” to do it, providing you don’t want the bother of having them.

QUEENIE JEANETTE is the title of a pretty song in sheet-music style, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.
Feeding Bees for Winter.

Our bees went into winter quarters in debt to us. We had to feed about two-thirds of the colonies late in the fall, and unite many weak ones. If we had not fed they would have had very little honey to winter on. A friend about 30 miles from here fed his bees in November to keep them from starving.

We took only about 300 pounds from the colonies. We united some in the fall so now we have only 98, but as their fall honey was gathered from decaying fruits, etc., I fear they will not winter as well as they usually do. I am sure they winter better on sugar syrup if fed early and well sealed, than they will on such honey as they gathered last fall.

It has been so dry for the past few years that many bees in this locality have died. Some years our crop has been cut short by people spraying fruit-trees while in bloom. 

—Mrs. L. C. Antell.

Something About Bumble-Bees.

On page 44 I notice a letter written by S. T. Pettit, in regard to bumble-bees in winter. I presume the majority of people think the wintering of them will be different. I am sure they will go, but I think the queen goes South. My reason for thinking this is that I have never seen a bumble-bee in the spring until the weather become quite warm, and the flowers had begun to bloom. The queen starts her nest and increases very fast. If they stayed here all winter I should think they would come out as soon as the weather began to get warm, as do the honey-bees, green flies, and other insects.

There are three sizes of bumble-bees—queens, workers, and drones. The drones have very long bodies and are

Gleanings in Bee-Culture!

Gleanings for Jan. 1st contains these Special Articles:

Queen-Rearing in France, by — Giraud-Pabou
Candied vs. Bottled Liquid Honey, by Chalon Fowls
Wintering Bees in Clamps, (From Bee-Keepers’ Review) by — W. Z. Hutchinson
Conversations with Doolittle

Gleanings for Jan. 15th.

Co-Operative Organized Work, by R. C. Akin
An Extracting Outfit, by W. A. Gilstrap
Mintle’s Lightning Section-Folder
Stray Straws, by Dr. C. C. Miller, Every Issue
Picking Straws from Our Neighboring Fields, by Stenog, Every Issue

Our Honey-Bottling Symposium, Fully Illustrated, by G. A. Deadman, Earl C. Walker, and Walter S. Pouder

The Personnel of the Utter Trial by E. R. Root
The Belgian-Hare Business, by W. K. Morrison, of Devonshire, Bermuda

Six months, beginning Jan. 1st. Feb. 15th will close subscription for the year.

Cuba by The American Tramp

Mr. Howe was formerly with Coggshall, of New York, and has already given Gleanings readers glimpses of Cuban bee-keeping. Mr. Luces, of Puerto Principe, considers that conditions are not well known and gives information somewhat different from other writers. Mr. Boyley begins a series of articles entitled, “Glimpses of Cuba and Cuban Bee-Keeping.” Illustrated by photos taken by himself.

SPECIAL OFFER.—Each one of the issues mentioned above should be worth a dime to every bee-keeper, but we will send all three for only 10 cents. Hurry along your order before they are all gone.

BETTER YET—Send us 25 cents at once, and we will send you Gleanings in Bee-Culture issues, 6 months, beginning Jan. 1st. Feb. 15th will close subscription for the year.

Remember, Six months for 25 cents, and your money refunded July 1st if you are not satisfied. Mention the American Bee Journal.

THE A. T. ROOT COMPANY, Medina, Ohio.
quite yellow, being market better than most of the Italians in this country. The workers are smaller and darker, and are great lighters: I don't know whether the queens fight or not, but I think they do. The whole colony works for a living—the drones also. I don't know that they carry in any stores, but I have seen them working on thistles. Like the honey-bee drones they have no stings. I have heard of hives coming from one of them, and sucking the honey out of them, but I have never tried it.

Twice in my life I have found a single bumble-bee three or four inches across. I had one last year, and when building up until fall, just as the bumblebees do, then they all die or disappear.

The past season was the poorest we have had in 30 years. I have been in the bee business nearly that length of time, but have never seen anything like it. There was a pretty fair growth of white clover but it secreted no nectar. I have never had so much surplus honey gathered in this neighborhood. We have had no honey worth mentioning in the last four years, but we still have hopes, tho it seems a long time coming.

THOMAS WALLACE.

Poor Prospects for Next Season.

The prospects for a good honey season in this locality are away below par again, I am sorry to say. We have had only two fairly good rains thus far this winter, and there is a deficiency of over two inches of normal precipitation, which means a good deal in this land of "excess of sunshine".

Since reading of the Bee Journal's loss by fire I take pleasure in forwarding my dollar for renewal subscription, and hope all bee-keepers will be prompt in coming to the assistance of the journal which is devoted solely to their interests. The three successive poor honey seasons here have made it seem best for me to drop three other bee-papers, but I must retain at least one to keep in touch with the bee-keeping world.

F. C. WIGGINS.


Handled Bees 50 Years—Rearing Queens.

I am 62 years of age and have handled bees for the past 50 years. I lived in Rhode Island 30 years ago, and then I came to Florida. I commenced using the Langstroth hives and frames in 1865. In 1867 I bought 10 colonies of Italian bees from the imported queens. During the past two years I have introduced about 400 queens very successfully. For the 10 years that I have kept bees in Florida I have averaged 150 pounds of honey per colony, and increase from 12 to 40 colonies.

My bees do not always behave as nicely as the bees belonging to some
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GEO. H. STAHL, Quincy, Ill.

Nothing but Fall Honey.
Bees did not do much the past season. There was a great deal of white clover, but no honey in it to speak of. We had nothing but fall honey, and very little of that.

WM. WILSON,

Light Honey-Flow -- Feeding Bees.
The past year was a hard one on beekeepers in this locality. From June 1st the bees did not get a living from the flowers until about the first of September, when the asters yielded

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AMERICAN BEE JOURNAL

Feb. 14, 1901

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Jan. 19.—Honey is selling slowly; this season's crop is about half that of last year. White clover and basswood comb honey, which sells readily, has provided the most grades No. 1 or better. All other kinds of white comb honey sell at from 14c to $1, and candied white comb at from 10c to $1 per pound. Grades of comb, 13c; amber, 12c; amber extracted, 7c; and cuckoo, 6c.

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Successors to C. C. Clemmons & Co.

BUFFALO, Jan. 17.—All kinds of honey are so quiet and in demand that the dealers will not take anything but choice samples, fancy 16c; few, 16c; choice No. 1, 12c; few, 14c; but dark, 10c, and all kinds in liberal supply; some may have to be reclassified. Extracted, 78c, and not wanted in Buffalo. Beeswax, 22c.

BATTRESSON & CO.

ALBANY, N. Y., Jan. 18.—Honey market is dull on all grades now, with light stock and light demand. We have from 2 to 12c, not candied, 15c; mixed, 18c; buckwheat, 12c; maple, 12c; and extracted, white, 80c; mixed, 60c, dark, 55c.

H. R. WRIGHT.

BOSTON, Feb. 8.—Fancy No. 1 white in cartons, 15c; No. 2, mixed, 10c; No. 3, dark, 5c; and No. 4, dark, 2c. Generally good fair. Absolutely no call for dark honey this year. Extracted, white, 80c; light amber, 70c.

BLAKE, SCOTT & LEE.

CINCINNATI, Jan. 16.—Market very quiet. No change in prices. Fancy No. 1, mixed, 10c; No. 2, mixed, 5c; No. 3, dark, 1c; and No. 4, dark, 1c. Extracted, dark, sells for 55c, and better grades are from 65c up to $1. The market thus far would bring from 85c to $1.

C. H. W. WEBER.

NEW YORK, Dec. 22.—Fancy white, 15c; No. 1 white, 14c; No. 2 white, 12c; amber, 1c; buckwheat, 10c. Extracted in fairly good demand at 75c for white, and 7c for amber, very good grades. We are importing dark honey from 65c to $1 per pound, according to quality. Not much demand for extracted buckwheat as yet. We are selling amber from 4c to 10c per pound, and have amber, buckwheat, and dark grades. Sells about 10c.

W. E. HILDEBRAND.

SAN FRANCISCO, Jan. 9.—White comb 13c; amber, 11c; extracted, white, 75c; light amber, 70c; extracted, amber, 55c; and extracted, white, 65c. Beeswax, 22c.

R. H. CAMPBELL.

BEESWAX MARKET.

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Send us TWO NEW SUBSCRIBERS to the Bee Journal with $2.00, and we will mail you a copy of Prof. Cook’s book FREE as a premium. Prof. Cook’s book alone sent for $1.25, or we club it with the Bee Journal for a year—both for only $1.75. But surely anybody can get only TWO NEW SUBSCRIBERS to the Bee Journal for a year, and thus get the book as a premium. Let every body try for it. Will YOU have one?

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144 & 146 Erie St., Chicago, Ill.

THE BEST WHITE
ALFALFA
Extracted Honey

BASSWOOD

All in 60-pound tin cans.

ALFALFA HONEY

This is the famous white
Extracted Honey gathered in the
great Alfalfa regions of the
Central West. It is a splendid
honey, and nearly everybody who cares to eat
honey at all can’t get enough of the Alfalfa extracted.

BASSWOOD HONEY

This is the well-known
light-colored honey gathered from the rich, nectar-laden
basswood blossoms in Wis-
consin. It has a stronger
flavor than Alfalfa, and is
preferred by those who like a
distinct flavor in their honey.

We have a good stock of the fine WHITE ALFALFA and
WHITE BASSWOOD EXTRACTED HONEY that we can ship by
return freight. Most bee-keepers must have sold all their last year’s
crop long before now, and will be ready to get more with which to
supply their customers. All who have had any acquaintance with
the above-named honeys know how good they are. Why not order
at once, and keep your trade supplied?

Prices of Either Alfalfa or Basswood Honey:

For the purpose of selling again.

A sample of either, by mail, 8 cents; samples of both, 15 cents—
to pay for package and postage. By freight—one 60-pound can, 9½
cents per pound; two cans, 9 cents per pound; four or more cans,
8½ cents per pound. Cash must accompany each order. If ordering
two or more cans you have half of each kind of honey, if you so
desire. The cans are boxy. This is all.

Absolutely Pure Bees’ Honey,

The finest of their kinds produced in this country.

Read Dr. Miller’s Testimony on Alfalfa Honey:

I’ve just sampled the honey you sent, and it’s prime. Thank you. I feel that
I’m something of a bee-keeper. I sell several thousand pounds of honey of my own pro-
duction and then buy honey of you for my own use. But however loyal you ought to be
to the honey of his own region, there’s no denying the fact that for use in any
kind of hot drink, where one prefers the more wholesome honey to sugar, the very
excellent quality of alfalfa honey I have received from you is better suited than the
honey of most market flavor, according to my taste. C. C. MILLER,
McHenry Co., III.

Order the Above Honey and then Sell It.

We would suggest that those bee-keepers who did not produce
enough honey for their home demand this year, just order some of
the above, and sell it. And others, who want to earn some money,
can get this honey and work up a demand for it almost anywhere.

Address,
GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

26 cents Cash paid for Beeswax. This is a good time to send in your Bees-
wax. We are paying 26 cents for a pound—CASH—for best yellow,
upon its receipt, or 28 cents in trade. Impure wax not taken at any price.
Address as follows, very plainly,
GEORGE W. YORK & CO., 144 & 146 Erie St., CHICAGO.
Editorial.

Slow Cooling of Beeswax and its effect upon color has attention again in the Beekeepers’ Review. Editor Hutchinson says:

The American Bee Journal admits that the slow cooling is the only way to avoid the dirt, and that the wax simply allows the dirt to settle and that is the only way that slow cooling can have any effect upon the color. But it still clings to the idea that the dirt or color of wax comes from its impurities. Here is where our old friend is making its mistake. The color is in the wax itself. Dark wax will remain dark, no matter how slowly it is cooled; yellow wax will be yellow altho so full of dirt that the wax could be seen. Any one who cares enough about this can easily satisfy himself:

Let him get a cake of dark, black wax, melt it and keep it a vessel until with some sugar dissolved in water, so as to confine the heat, and cause it to cool very slowly. When cool it may have a clean label of dirt having settled to the bottom, but it will be dark. If you doubt this, try it yourself.

Next, take a cake of the brightest yellow wax, melt it and stir into it a lot of the refuse, or slumgum, or dirt, scraped from the bottoms of other cakes of wax: mix these in well, then cool it just as slowly as you possibly can. The wax will still be yellow, but full of foreign matter. Again I say, if you doubt this, try the experiment.

All of which goes to show that there is no particle of difference in actual belief on either side. Our good friend of the Review wants us to say that different samples of beeswax have different colors independently of the amount or kind of dirt in them, so that there may be a very dark color in wax that does not come from impurities. If Mr. Hutchinson will turn back to the first number of this journal for this year, he will find on page 4 this sentence: "There is no desire whatever to deny that two specimens of wax entirely free from impurities may be very different in color." If he had kept in mind that sentence, he would hardly have said, "But it still clings to the idea that the dark color of wax comes from its impurities." For that conveys the idea that all dark color comes from impurities. There is no real difference as to belief at that point.

Let us get right down to where the point of divergence comes. Take Mr. Hutchinson’s last illustration—some bright yellow wax melted with a lot of dirt stirred in and suddenly cooled. To make the illustration clearer, suppose a lot of lampblack stirred into the wax. We both believe exactly the same thing about it. We both believe that the wax that is in the cake, separated from the foreign particles, is bright yellow, and that all the no yellow color appears to the eye, the black color is entirely due to the lampblack that is there. Then ask, "What is the color of that cake of wax?" he says, "Yellow;" we say, "Black." Of course, he may say that it isn’t the wax that is black, but the lampblack. But we believe our answer is more in accordance with the every-day talk of people. Put the cake of wax before a witness in court and ask him its color. He looks at it on the outside, and then breaks it in two, and he testifies that it is black outside and in. Take this handkerchief and rub soot all over it. Mr. Hutchinson would say, "The handkerchief is white. The soot only is black." Common people would say, "The handkerchief is black.

If Mr. Hutchinson should contract for a lot of bright yellow wax, and when it arrived be found it one-fourth dirt, he would hardly feel satisfied if the consignor should say, "That’s bright yellow wax, just what I contracted to send you;" neither will he be satisfied if he is told that a fourth will be deducted for the weight of the dirt.

Referring to the issue of this journal for Jan 17th, the American Beekeeper says:

Editor York now asserts that his journal has never pretended to claim for slow cooling anything more than that it allowed the foreign particles time to settle.

We do not believe that Editor Hill is a man who would intentionally misrepresent, but that statement, so far as we can understand it, might be understood to mean that some change had been wrought in the views or the statements of this journal. So far from being the case, it is true that precisely the same assertion was distinctly made in this journal the first time any editorial belief on the subject was given, as Editor Hill will see if he turns to the issue for Nov 16th, 1901.

Mr. Hill then asks, "Why, then, has the Journal so emphatically opposed our assertion that slow cooling has nothing to do with rendering dark wax a bright yellow?" Simply because the assertion is not believed to be true.

Let us see if we can express, in as few words as may be, just what we do believe. The most of the wax in this country is of a bright yellow if properly cleansed, but when rapidly cooled, as is likely to be the case with the inexperienced, it has mixt in it more or less foreign particles that give it a dull or dirty color. If allowed a long time in cooling, it will become clean, just as that is, state suitable for the settling of the foreign particles, and thus the dirty-looking wax will become bright yellow.

A Michigan Foote Brood Law. Another attempt is now being made in the Michigan legislature to secure the passage of a law providing for the appointment of a bee-inspector for that State. Editor Hutchinson, in the January Beekeepers’ Review, had this to say in 1887:

Once more have the beekeepers of Michigan, in convention assembled, appointed a committee to labor for the passage of a needed bee law, a law that will empower the governor to appoint an inspector who has been recommended by the State Beekeepers’ association, and who will have authority to destroy foul-broody colonies when the owner can not or will not properly treat them. There is also to be renumeration for colonies that are destroyed, the same as the owners of cattle diseased with tuberculosis are reimbursed for their property when it is destroyed for the general good. A resolution was also unanimously carried recommending the passage of the law, and this resolution will be read before both houses of the legislature.

There was an attempt, two years ago, to pass a similar law, but it failed, principally because of the apathy of beekeepers. No one informed that only 30 letters were received by members asking them to vote for the measure. The present introduduction will not secure its passage; the members must be urged to vote for it, and good reasons must be given, showing why the measure is needed. It must be remembered that the majority of people know very little about bees or beekeeping, and the members of the legislature must have explained to them the contagious character of foul brood, how it spreads from hive to hive, and from apiary to apiary, and from county to county, and that it is impossible to prevent this spreading until there is some authority to destroy careless, ignorant or willful beekeepers to rid them of apriaries of the disease.

Members should also have their attention called to the value of the bees to the fruit grower and horticulturist by their work in fertilizing the blossoms. The loss to the country from this source should be greater than the loss to beekeepers. If beekeepers will only wake up and do their duty in this matter, the bill can be past. There are hundreds of beekeepers in this State, and yet only 20 of them had sufficient interest in this matter to write to their representatives and ask him to vote for this measure, giving the reasons why the law is needed. If there is no foul brood in your county, it may be in your neighborhood, nearer than you think. You little know how soon you may need help.

In order that the beekeepers of Michigan, who should be more interested in this matter, may know who are the members of their State legislature, we append a list herewith. When writing your senators and congressmen, "Senate Chamber, Lansing, Mich.;" address your representative, "Representative Hall, Lansing, Mich.;" Do this at once, and besides giving reasons why the law should be past, let him know that you fully expect him to use his influence and vote in favor of it.

LIST OF SENATORS.

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence</th>
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<tr>
<td>Arthur L. Holmes</td>
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<td>James O. Murfin</td>
<td>Detroit</td>
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<tr>
<td>William C. Duff</td>
<td>Detroit</td>
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<td>Seth T. Goodell</td>
<td>Canton</td>
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<td>James W. Holme, Jr.</td>
<td>Adrian</td>
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Osborn, Frank A. Kalamazoo
Perkins, John J. Barry
Roper, F. H. Chicago
Randall, E. S. Oceana
Rend, J. Herbert Manistee
Rice, W. A. Newaygo
Rieh, Arthur L. Bay City
Riegel, John Michael Bay City
Robins, S. F. Blue Lake
Rodgers, Lincoln Muskegon
Rulston, George W. Bay City
Sanderson, S. Saginaw
Scott, Andrew J. Saginaw
Scotty, Thaddeus D. Oakland
Seibel, Albert C. Newaygo
Simpson, Newton C. Manistee
Totten, William, J. Antrim Dist.
Vanderkooy, Henry B. Kent
VanOven, Jacob J. Kent
Wade, Theobald Allegan
Walker, Edward A. Genesee
Ward, Charles P. Manistee
Waterbury, I Roy Oakland
Wetmore, James C. Michigan City
Whitaker, Byron C. Waukesha
Wills, George W. Bay City
Wright, Henry D. Allegan

LIST OF REPRESENTATIVES.

Name                  County or District

Adams, C. Spencer     Van Buren
Altvater, Robert      Jackson
Ames, Dr. J. W.       Wayne
Ballentine, Silas L.  St. Clair
Barr, James M., Jr.   Kent
Baumgartner, Leonard  Saginaw
Baum, Jacob          Wayne
Bland, John Edward    Wayne
Brodie, Earl A.       Alpena
Brooner, John E.     Bay County
Boyd, William         Calhoun
Brand, Norris H.      Jackson
Burns, David F.       Kent
Bushnell, William B.  Branch
Burke, Charles R.     Macomb
Campbell, Thomas G.   Midland Dist.
Carter, John J.       Genesee
Chapman, Ira G.       Cheboygan
Colby, Sheldon J.    Calhoun
Curtiss, William L.   Cheboygan Dist.
Dennis, Orville       Wexford Dist.
Dingley, Edward N.   Kalamazoo
Dunn, James           St. Clair
Dupre, Charles C.     Jackson
Duffy, Michael S.     Clinton
Ferry, Darter M. J.   Huron
French, Charles B.    Monroe
Gee, James J.         Calhoun
Gibson, Albert C.     Genesee
Gooch, Benjamin       Burt
Goodrich, Lester A.   Hillsdale
Gordon, John R.       Marquette
Handy, Sherman T.    Dickinson Dist.
Harly, Anson R.       Ingham
Hartung, E. N.        Newaygo
Hastings, Ernest W.   Grand Traverse Dist.
Hennas, Lawton T.    Ionia
Henry, John          Saginaw
Holmes, John W.       Gratiot
Hunt, Fred A.        Clinton
Hurt, William A.     Eaton
Kerr, Angus W.       Houghton
Kiddler, Charles B.   Lapeer
Kirch, William S.    Livingston
Kinnison, Luther C.  Macomb
Labadie, C. H.       Montcalm
Laird, W. Carver      Montcalm
Lane, John           Montcalm
Lowrey, Berry J.     Montcalm
Lupke, James W.      Montcalm
Marks, Henry          Wayne
Martindale, Frederick C.  Saginaw
Ullery, Samuel T.    Shiawassee
McCall, L. H.        Eaton
McCallum, George P.  Delta Dist.
McClure, William W.  Wayne
McKay, William        Tuscola
Medick, John         Ionia
Mears, James M.      Genesee
Moore, Franklin S.   St. Clair
Murdock, J. D.       Huron
Murphy, Christian     Sanilac
Nash, Edward P.      Kent
Neal, Frank S.       Alpena
Nevins, B. A.        Allegan

NOTES ON THE WISCONSIN CONVENTION.
As we promised last week, we will now endeavor to jot down a few noteworthy events of the recent annual convention of Wisconsin beekeepers, which was held at Madison, Tuesday and Wednesday, Feb. 5th and 6th.

By previous arrangement, at 3 o'clock Monday afternoon, Editors E. B. Root and W. Z. Hutchinson, with the writer, met and boarded the Chicago Express at Milwaukee & St. Paul train at the Union Depot here, and started for Wisconsin's fair capital, we arrived about 1 p.m., and "put up" at the ’Simons' House.' Here is where the beekeepers and other devotees of rural industries usually stop. And the boarding is good; but the sleeping—well, we have seen doziers and sweeter resting-places.

Mr. N. E. France, the energetic and enthusiastic president of the Wisconsin Association, was the first of the clan to meet us in the hotel. He had reserved for the 'three editorial boys' a room with two beds. But it was too late for supper at the hotel, so we had to look up a restaurant, and were directed to one which seemed to be patronized by State senators (the legislature being in session), so at least two-thirds of the editors were satisfied. But from 9 to 10, we staved, the journalistic trio returned to the hotel, where Editor Root began a lengthy nocturnal conversation with Mr. France in the waiting-room, while Mr. Hutchinson and this little editor went to their third-story room and retired, each taking a bed, and remarking that when Mr. Root came up we would see which one had the mitten (that time) if never before in his life. It's an advantage to be small in size sometimes.

As we expect to publish a report of the convention—especially the excellent papers read—we will not dwell very much here on the meeting. We do want to say, however, that Mr. France is a splendid presiding officer of a beekeepers' convention. He keeps things going, and in a very interesting way. As A. I. Root was recently called the 'Pooch' of American beekeepers, Mr. France well deserves to be called the "Pooch of Wisconsin beekeepers."

The first, or Tuesday, evening was devoted to a stereopticon lecture by Editors Root and Hutchinson, one manipulating the slides while the other explained the pictures. This was a most successful effort, and one which was thoroughly enjoyed by all present.

Editor Hutchinson had previously planned for the taking of a photograph of the "editorial triplets," so on Wednesday morning we three called on one of Madison's best "photogs," and engaged him to do the job. As each of us had on a queen-bee button, he 'caught on,' and insisted in calling Mr. Hutchinson the 'king-bee,' presumably on account of his (Mr. H.'s) height and dignified appearance. We understood afterward that we were also taken for three senators (both) by the lady clerk who entered the order for the sitting. (We all survived, however.)

At 1:15, on Wednesday, Mr. Root and the writer decided to take the train for Watertown, and call on the G. B. Lewis Co. Mr. Hutchinson was to follow on a later train, by another route. We had our first taste of the hotel, and gave us a cordial reception, and showed us all over their great factory, where hives, sections, basket boxes, etc., are turned out in any quantity desired. It was both surprising and interesting to see how rapidly the basket boxes are made by machinery in the hands of bustling boys.

About an hour before leaving, Mr. Lewis ordered a two-seated sleigh and a pair of high-stepping black horses, with sleigh bells on all four, and gave us a ride in the breathing air of Watertown.

We saw pretty much the whole town, which covers nine square miles, and has a population of about 10,000 people. It is a delightful place, and if Mr. Lewis is a sample of its inhabitants, it is all right.

Just before taking the sleigh ride, we called on the firm of woodland & Stone. They are large manufacturing concern, and have employing from 30 to 50 hands, many of them being girls. They use a great deal of honey in their enormous business, and prefer Wisconsin honey. They list over a dozen things in which they use honey, viz.

(Cuban wafers, honey-bar (feed), honey-cake (feed or plain), honey custard cake (feed), honey pie (rifle), honey confectioners' (feed), honey gels (feed or plain), honey coconut fingers (feed), honey gels (feed or plain), honey coconut gum (feed or plain), and honey coconut jumbles (feed).)

We had the pleasure of meeting Mr. Stone, who was enthusiastic over the use of honey in the preparation of good things to eat that are baked. He is an earnest advocate of pure honey, and will have no adulteration. He knows of no other sweet that can possibly take the place of honey when it comes to keeping a cake or coco-y moist and good for a long time.
Contributed Articles.

No. 4.—Extracted Honey Production.

Can not Produce Both Combed and Extracted from Same Colonies—Limited Swarming Best—About Equipment—How to Make a Strainer,

BY R. C. AIKIN.

It is practically out of the question to produce both comb and extracted honey from the same colony. I know, by experience, that it is not practicable to do it, both in an average field and in the hands of an average apiarist, it can not be made a success. Some of the things necessary to get both and be a success, would be a sure and positive flow, lasting long enough and of sufficient quantity to fill the sections put on. A flow giving two or more supers, may be taken in part in each by allowing the sections to be well nigh completed before adding the extracting-supers, or by lifting the latter and giving sections under it. But the job is beset with so many difficulties, I would say let none but experts undertake it, I will give up trying to tell how to do it.

I have already told you something about size of hives and their manipulation in building up colonies before the flow, and also somewhat about control of swarming. I will repeat, if you want best work and most honey obtainable where flows are somewhat uncertain and of short duration, the less swarming the better. This applies more fully to summer flows—a fall flow is different because one has all summer to build up, and may be able to double, treble, or quadruple, the number of colonies and still have good working ones.

There are other things besides bees and hives needed in producing extracted honey. A honey-house becomes a necessity, even when the apiary is very small. If one has only a half-dozen colonies or so, a small room or tent may be used in lieu of a honey-house specially built for the business, particularly when comb or section honey is produced; but when extracting and producing from 15 or more colonies, a room should be eqiupd for this alone. Extracted honey production needs a larger equipment of tools and appliances than does comb, and needs more care and labor in getting it into proper shape for market. So far as the handling of the two products (comb and extracted) is concerned, there is more labor in the extracted, but in the preliminary work or management of the bees the comb takes both greater skill as an apiarist, and more labor. But I am not discussing the comparison of the two, hence will continue my subject.

Of course you want an extractor. As to whether a 2 or 4 frame machine, I think there is no very great economy in using the larger. I have used for many years a 2-frame machine, and now have a 4-frame one. I do not think I would go back to the 2-frame one; I consider the 4-frame size enough better—especially for extensive producers—to justify its use. If crank help is not convenient and cheap, the larger machine has the advantage. I would also use a reversible extractor.

The extractor should be set solid that it may not shake.

Uncapping and Extracting Honey.
It should also be conveniently arranged to get combs into and out of, having the uncap combs where the crank-man can reach them easily. I have my uncapping arrangements to the right of the extractor, and just far enough away that there is room between it and the box that receives the cappings to have a rack or hive to receive the uncap combs. I herewith present photographs of these fixtures as I have them set in my honey-house. The combs to be uncap are to the right of the knife-pan, and when uncap are past to the left to a receiving rack right close to the crank. This rack does not appear in the picture because it is down behind the capping-box. Immediately to the right of the capping-box and hanging on or attached to it, is a small trough-like vessel containing water in which the knife lies when not in use. A small oil-stove keeps the water hot. A hot, wet knife cuts better than a cold, dry one.

The bottom of the capping-box is prepared with an incline to one point where is an outlet, and above this is a false or secondary bottom made of wire-cloth of 4 or 5 meshes to the inch, galvanized wire just like the extractor screens. The cappings drop upon this screen and drain thru to the outlet and the honey passes off at once. Just beneath the uncapping-box, and extending from under it to the left clear to the extractor, is my strainer-box. This is made of lumber about a foot wide, using 4 pieces, two of them 6 feet long and the other two about 20 inches. The short pieces or ends are gained into the sides about 1 1/2 inches from the end, the gains about 3/4-inch deep and about 1 1/2 inch narrower than the thickness of the end pieces that are to go into them. The ends of the side boards are then beveled down this 1/2, so that when the box is put together, and driven and thoroly nailed, the joint becomes flush inside and outside. A caution may be taken by putting white lead or linseed oil in the groove or gain before putting together; this makes a closer joint and prevents decay.

The bottom of this box is made of galvanized iron or of tin. The box can be made any size desired—I have made two or three of different sizes, usually the width to correspond to the width of the tin or iron that is to make the bottom, and as long as desired. The metal for the bottom should be enough larger than the outside measure of the box, so that it will project beyond the wood 1/4 to 3/16 inch, this projection to be turned up and pounded snug up against the lumber, after the iron is nailed on. The metal is laid on the box and nailed with flathead 1-inch or 3-penny fine nails, driving them about every inch. Do not drive the nails in a straight row, but zigzag them or alternate, one near the outer side of the board, and the next near the inner side, just so there is no danger of missing the wood.

After it is nailed, take a strip of about 3/4 or one inch thick—you can make these by ripping out from the edge of a board. Nail this strip over the metal bottom clear around, using about 6 or 8 penny nails and driving right thru the metal into the edge of the wood. The side springs in as the bottom sagged. After these strips are nailed—on the box being mouth down, of course, while you are doing the nailing—you really have a little box just the depth of the thickness of these strips. Now cut one, two, or three strips as long as the inside width of the box, and 1 1/2 or 2 inches wide, and the same thickness of the strips nailed around. These strips are to be just long enough to drop in lightly across the bottom between the strips, and nailed thru the rims into their ends, nailing from the outside. These cross strips put in tight give the bottom a strong tension and prevent any sag. The rim and strips also support the bottom just their thickness from whatever set upon, and shield the tin or iron from being dented or bruised from any hard substance beneath.

This strainer-box also has a sub or false bottom made this way: A wooden rim or frame is made of strips about 1 inch by 1 1/2, and one or more strips of the same size and length as the ends put across spaced equidistant from the ends. Upon this frame is nailed a sheet of galvanized wire-cloth such as is used in the extractor-baskets. This screen is then placed in the box, being in its outside measure just scant the inside of the box, and rests on little cleats nailed to the sides of the box 2 or 3 inches above the bottom. On this false bottom or screen, spread a piece of cheese-cloth that is big enough to cover the whole top of the screen and reach up and lap or hang over edges and ends a little, and you have a very good and complete strainer. When the cloth becomes clogged, remove and wash it.

Larimer Co., Colo.

Bee-Keepers and Bee-Supply Dealers.

An Inquiry Into a Matter of Equity, in the Court of Public Opinion.

BY "COLORADO."

I WILL restate the proposition because I failed to convey the exact point to the dealers in my first letter, on page 69. At any rate they did not get my idea fully.

THE QUESTION.

The excellent and only safe rule of buying bee-supplies for cash enclosed with order affords unequal measure of protection, of justice, of equity, to the two parties to the trade transaction. The rule makes the seller absolutely safe, but leaves the buyer to carry numerous risks risk of error in count, risk of unsafe packing, risk of error in cutting, risk of destruction en route, risk of misreading or misapprehending the order, and other risks. Can one of both sides buyers devise a rule that will be equally fair, and equally protective to both parties?

THE ARGUMENT.

I am not prepared to offer a substitute. But I am studying the question.

Dadant says no rule can be laid down. I fear this is true, but this view is not creditable to the writer. Most of the dealers drop into a discussion of giving credit to buyers. To this extent they misapprehend the point of my query. Plainly, there should be no credit. The only rule to right prices is the cash rule.

I do not ask you, Mr. Manufacturer, or Mr. Dealer, to surrender an ounce of the protection that you have, But I want an equal share with you.

If the buyer pays his cash weeks before he gets his goods, the rule is not a spot-cash method for the buyer.

Experience has taught me something about writing orders. If I instruct the dealer to fill my order within a certain time, or else return the inclosed remittance, I invariably get prompt attention. Otherwise I may wait indefinitely, altho the dealer may have my cash. We buyers often fail to state our wants clearly.

Commercial honesty—I mean the ethical code governing business men—is superior to individual honesty. I
Do Bees Puncture Fruit? Not Their Nature.

BY PROF. A. J. COOK.

I have received from Hon. Eugene Secor, general manager of the National Bee-keepers’ Association, the following interesting correspondence:

PROF. A. J. COOK—

Dear Sir: I send you a copy of a letter received from Prof. Slingerland, of Cornell University, New York. I would like to know how you coincide with the opinion of his senior professor regarding the structure of the bee’s mouth. I have been led to think differently. I had been intending to send Prof. Slingerland as an expert witness in a case in which I am engaged, after receiving this letter. I changed my mind and did not ask him to go. I will rely on your statement of the case whether you agree with him or not. Yours truly.

The following is Mr. Slingerland’s letter to Mr. Secor:

ITHACA, N. Y., Nov. 20, 1890.

Mr. Eugene Secor—

Dear Sir:—Yours of the 11th inst. at hand. I enclose a copy of my Rural New Yorker article. I am as far as I can go in the matter. I was not inclined to go to offer, and I do not feel competent to testify regarding the capabilities of the mouth-parts of the honey-bee to bite, suck, or chew. But as Mr. J. H. Comstock, head of the Entomological Department, is as much a student of insects as you are of bees, you may desire to testify to them. He has kept bees and has taught the structure of their mouth-parts for years. For me to prepare myself sufficiently to testify with knowledge would require more time than I am able to devote to it. With Mr. J. H. Comstock, I do not think I should have any trouble to reverse the verdict of the lower court. I do not know enough about the mouth-parts to help you any.

I have just seen Prof. Comstock, and he says that he sees no reason, from what he knows of the mouth-parts, why a honey-bee should not be able to bite into a grape or peach. Hence, I doubt if you could get any testimony from him.

Sincerely yours.

J. H. SLINGERLAND.

I regret that these letters were mislaid during my absence from home and have but just come to my notice. Of course it is too late to be of any use in the lawsuit which was then pending. It is, however, a matter of such general importance that a full consideration of the subject will not be out of place.

I fully agree with Prof. Slingerland, that no one in the country is better qualified to give an opinion in general matters of entomology than is Prof. Comstock. I do not wonder that he made the remark that he could see no reason from the structure of the mouth-parts of the honey-bee why it might not be able to bite into grape or peach. I should greatly hesitate to state that a bee could not puncture ripe fruit with the mouth-parts referred to. I am rather inclined to the opinion that they could do so if they only knew their ability and had the curiosity to prompt the quest. I am, however, entirely certain that bees never do bite into fruit. They never attack a fruit until the skin of the fruit is intact, or the color is retained and the bee makes no visit. It certainly is the habit of bees ever to leave unmolested any and every sealed vessel like sound grapes, cherry or pear.

I presume I have experimented more in this direction than any one else in the country, and therefore I may claim with some assurance the ability to give a correct judgment in the matter. I have repeatedly taken clusters of sound grapes, that were very attractive to bees, and squirited them with pin or needle so that the juice would ooze out, and then placed them near the hive, or upon the alighting-board of the hive, and often upon the frames above the cluster of bees on the hive in the same way. They never attempted the nectar to be gathered in the field, at which time, as every apiarist knows, the bees are ravenous to gather from any possible source. The bees would suck the wounded fruit but leave every other grape entirely alone. This does over and over again in all ways with the same results. The bee has a large brain for an insect, but, brainy as it is, it seems unable to form a judgment in the matter of the coveted juice if the latter be scaled up by the skin of the grape.

Every grape-grower has observed at some time when the grapes of the vineyard are very ripe, and when the weather is sultry and humid, that all at once the bees will rush to the vineyard and commence to sip juice from the grapes in great numbers. Of course, in such a case the presumption would be that the bees had bitten into the grapes. Examination proves, however, that this conclusion is utterly at variance with the truth. The overripe grapes affected by the sultry, humid atmosphere, were squashed, and the tiny droplet of oozing juice hailed the eager bees and they rush to the vintage with one accord. No wonder the vineyardist blamed the bees. The truth blamed the vineyardist, as he being unable to have allowed the grapes to come so overripe. In such case, I have hung sound grapes among those visited by the bees, and not one was touched.

Some years ago, I was lecturing in the famous fruit region of South Haven, Mich. In my lecture, I stated the truth that bees never bite into fruit, and go or attack the fruit to sip the juice, except that bird, wasp or Nature had set the latter to flowing previous to the visit of the bees. Many fruit-growers present were vehement in opposition to my view. They were certain that I was wrong. I replied that I would show them, without question, that they had already express the wish that I would come the following summer and lecture to them again. I had express the fear of my inability to do so on account of college duties. I gave them an account of my experiments as given above, and said that I was not sure that bees could not eat into grapes. I was absolutely certain that they did not. They said that if I would come the next autumn they would prove to me that I was wrong. I replied that I would show them, without question, I would show them, that they had already express the wish that I would come the first train. I added, however, “Look closely before you send the tele- gram for if I show you after I come that I am right and you are wrong, then I shall want not only expenses, but pay for the return trip.” Many present said, “We’ll have you here next autumn.”

The telegram never came. I lectured there afterwards many times, and was gratified to find that the opinion on the question was entirely changed. The pomologists were one in the matter.

Some years later, I was lecturing in the grape-growing region of Sandusky, Ohio, where there was almost an exact repetition of my former experience at South Haven, Mich. The Sanduskians sent no telegram, but repeated my experiments, only to be disappointed in the same way. I would be askt how can I be so certain that bees never do puncture grapes, when I acknowledge a possibility that they might be able to do so as far as the anatomy of their jaws is concerned. Bees, like all other animals, not excluded ourselves, are creatures of habit, often habits, that may cause deleterious results from the简单的 act of one even the selection of the feed-bag to balance it on the horse. They simply didn’t think that meal as well as a stone could balance meal. While I feel sure that bees think a little, they are away behind us in this respect. They may be thinking about the flower-tube in search of the precious nectar. They never go in quest of the sweet unless the escaping odor summons their presence. It is easy to understand why, with their limited thought capacity, they are not slow to hasten to orchard or vineyard that they may not stay the waste. It is not, then, a simple question whether they can or cannot pierce the tender skin of overripe fruit. They never do so. And so
Valuable Experiments Conducted at the Geneva Experiment Station, New York,

BY ERNEST K. ROOT.

At the convention of the New York State Association of Bee-Keeper's Societies, held in Geneva on Jan. 9th, we had the very great pleasure of listening to an address by Prof. S. A. Beach, of the Geneva Experiment Station, detailing the various series of experiments that were instituted to determine the advantage, if any, of spraying trees while in full bloom. These investigations had been requested by a certain class who believed that spraying during the flowering period increased the value of the honey done by bees on the orchard. Prof. Beach called attention to the fact that a certain manufacturer of spraying outfits, had sent circulars broadcast over the country, advocating and urging the administering of poisonous mixtures during the time bees work on trees. Then there were also some among the fruit-growers of New York who advocated spraying at such times, but who could not carry into effect such practice because a law had been enacted by the legislature, making it a misdemeanor for any one to spray during the time the trees were in bloom. Some of the fruit-growers (not all) sought on several occasions to have this law repealed; but being foiled they finally secured the passage of an amendment which provided that trees might be sprayed during blooming-time for experimental purposes. The object of this amendment (and it appears the bee-keepers did not object to it), was to determine whether there was any advantage in spraying when the trees were in bloom, irrespective of any damage that might accrue to the bee-keeper. As a result of this amendment a series of experiments was begun at Geneva, and also at Cornell.

In the conducting of the experiments, Prof. Beach stated that several conditions were kept in mind: what was the effect of spraying while the trees were in bloom? Did the spraying at such times affect the blossoms? Did it kill the pollen? And if not, did it affect the setting or the development of the fruit? What part did the bees play in the matter?

Some bee-keepers, he stated, were inclined to make sweeping assertions to the effect that no fruit could set without the agency of the bees. This was altogether too strong a statement, because the importation of the bees was most important in the fertilization of some kinds of fruit-trees could not be denied. That question might be considered settled.

In the experiments that had been conducted, it was found that the blossoms that were sprayed just at the time they were being affected by the insects were either killed or injured. If the spraying was administered only during the blooming-time the poisonous mixtures did not go to the right spot, in a good many cases, for the simple reason that no cluster of apple blossoms were either killed or injured. Some blossoms would be closed and others opened at one and the same time. Some blossoms would be exposed to the effect of the spraying-liquids; and if no more spraying were administered after blooming-time, then those blossoms that were not open would not receive the benefit, and the fruit-eating insects in the other, would be destroyed.

He further showed that the spraying-mixtures are exceedingly harmful to the development and growth of the delicate pollen. Some pollen was gathered and taken into the laboratory and mixed with a thin syrup, then afterward a certain portion of spraying-liquid was applied, of the strength that is used in spraying trees. It was found in every case that the pollen failed to grow. Then the spraying-liquid was reduced 50 percent, and still mixt with pollen and syrup which had been prepared, and still the pollen-grains failed to grow in most cases. The professor said he was a decided in the opinion that spraying during blooming-time was exceedingly harmful to the delicate reproductive organs, and to the pollen itself in the flowers of the fruit-trees. He believed that bee-keepers who tried spraying strawberries while they were in bloom, and much to his sorrow. He mentioned a number of instances of fruit-men who formerly believed that spraying during blooming-time was the correct practice, but now had been compelled to change.

In the experiments that were conducted in four orchards located in different parts of the State, a certain set of trees were set apart and sprayed while in bloom, and only then covered with the paper bag. In the experiments there were every indication that those trees that were not sprayed during blooming-time yielded from a third to a bushel and a half more of fruit. In some cases they sprayed a half of one tree several times during blooming-time, leaving the other side of the tree not sprayed. There was a marked difference in the setting of the fruit on the two sides of the trees, and that difference was decidedly in favor of the side that had not been sprayed. In fruit-growers in fruit orchards in different parts of the State; and in one instance, at least (the professor would not give the name) a certain fruit-man who believed that spraying during blooming-time was the right thing to do, estimated, after his trees were sprayed he whole orchard at such time, that he had lost nearly a thousand dollars. He had had enough of that business.

The Professor stated, however, that there was one instance in which the fruit-man finally sprays his trees to prove to be advantageous; and that was, to kill the apple-scap that might come on at just that time; but even in such a case it has not yet been proved that spraying before and after bloom may not be equally efficacious. But generally speaking the conclusions held by all the professors that blooming-time was not only wasteful but decidedly harmful as well, cutting down the supply of fruit to an extent that, if generally practiced, would amount to thousands of dollars of fruit being lost.

On the evening of the first day we listened to an excellent address from another professor of the same station—Prof. V. H. Lowe. The experiments that had been conducted under his direction were for the purpose of determining the value of spraying trees while in bloom. He said one set of nine small pear trees (it was not practicable to use large ones) were enveloped in a hood of sheeting. This hood was large enough to slip down over the tree, something like a tent, and the sheeting was tied around the trunk of the tree. The object of this was to keep out insects, ants, bees or anything that might assist in pollinating the blossoms. For the purpose of ventilation, some windows were made in the sheeting, and the openings so formed were covered with the paper bag. On all of these so covered, there was a large number of buds, and all the conditions were favorable for a good crop, except that the flight of insects was entirely cut off. Now, then, for the results:

Out of the whole lot of trees covered, there was just one fruit. On another set of trees not covered there were 145. In the other case, where it was not practicable to envelop the whole tree, the blossoms were enclosed in the bag, the mouth of the bag being tied around the trunk of the limb. In one such instance there were 2483 buds of an apple-tree that were thus covered with the sheeting. Out of that number just one fruit matured. There were still plenty of blossoms on the tree, but none showed. Where the limbs were not covered. In one case, where the sheeting broke open so that insects could get in, there were 13 perfect fruits from 818 buds. It was clearly shown that bees and other insects are most important part in the pollination of average fruit-trees.

When the Professor was asked how much of this pollination was attributable to bees and how much to other insects, he said he could not get in their work. The professor being referred to a similar set of experiments made some years ago at the Michigan Agricultural College, showing the same results, said that the bees were altogether the earliest insects out; that a large number of them was in the bloom it is too early in the spring for other insects to be of any value. In his opinion the covering of the limbs or the
Convention Proceedings.


BY DR. A. B. MASON, SEC.

(Continued from page 10.)

LAST EVENING SESSION.

The convention met at 7 o’clock, with Pres. Root in the chair.

Pres. Root—The pure-food commissioner of Illinois, the Hon. A. H. Jones, is present, and will address us. I have asked Mr. York, the president of the Chicago Bee-keepers' Association, to introduce him.

Mr. York—Some other States have been heard from, but finally Illinois has caught up with them. For a long time we work to organize a Pure Food Commission in this State, and succeeded at the last session of the legislature, when the new law was past which provides for a pure-food commissioner. It is dear to the human heart, it is something good to eat. That is what we are all striving for, to get the very best product we can; and if there is anything better than honey —real good, pure, old-fashioned honey—we have not yet discovered it.

There has something been said about the Illinois State Pure Food Commission; if there is anything on the part of the commission I can say, it is also for my friend, Dr. Eaton, the State Analyst; if there is anything that will build up this cause more than another, it will be the State Food Commission. You have here, as I can testify, a very zealous friend in Dr. Eaton. The reason why I speak of that is, that all these food products come to him for analysis, and he must pass upon them. Now, I suppose that a good many of you who have been rather like good old Jacob of old, wrestling with the bee-question, have not thought of what a pure-food commissioner and a State analyst have to do. Think of it! When you look around over all the vast products of the State and see what we have to encompass, it is almost beyond imagination. You can hardly appreciate what we have to do; but I want to say to you that there are the following articles: the beehive products—butter, honey, maple sugar—there are the adulterated products—I don't care whether it is honey, I don't care whether it is maple sugar, or what it may be—we have them, in the State of Illinois, on the run. [Applause.] And we are going to keep them on the run. [Applause.] This is the last time that I want to recollect, the time of meeting with the Retail Grocers' Association of this State, down at Rock Island. There were 1200 or 1500 of them. I want to illustrate how we are doing in Illinois. Before I had talked to them, you will see how I proceed. You—sir—gave your address. We want the people to know that we have an ancient law, the food laws of Illinois, and we want you upon each bill that you send us, to make the statement, that these goods were manufactured in conformity with the food law of Illinois." And that pretty generally has been required, so that to-day, I don't care whether it is baking powder, I don't care whether it is maple syrup, or for what the article is, we don't have very much trouble now.

I said to them, "If you do this, gentlemen; if you see that is done, and then it proves to be an impure article, we will then prosecute the manufacturers and not the retailers.

What was the result? I will give you a little inside history of it. The secret history on the quiet—don't want you to say anything about it to those baking-powder people or any of them, how we managed it. The first people who objected to this were the Royal Baking Powder people; they said, "We have been manufacturing Royal Baking Powder 25 or 30 years; now to compel us to change, the label will be equal to saying to the public, our goods are impure."

I went to work with Dr. McMurty, the analyst for the company, and showed him wherein it was to their interest. I told him, "We feel confident the Royal Baking Powder is one of the best products." I remember Dr. Watson, one of the early revolutionists of this Association, who said, "You will not find a man who is better able to detect the adulteration of the goods, that are brought to market, to which the Bee-keepers' Association of this State want to give a good product. All you have to do is to say to the manufacturer, 'We want a pure article, something that will comply with the food laws of Illinois, and we want you upon each bill that you send us, to make the statement, that these goods were manufactured in conformity with the food law of Illinois." And that pretty generally has been required, so that to-day, I don't care whether it is baking powder, I don't care whether it is maple syrup for what the article is, we don't have very much trouble now.

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For instance, you take maple syrup; it is worth about $1.40 a gallon; glucose is worth from 40 to 50 cents, and so on all around the line. It is, of course, by codifying both its label and its price, that it is, it gives the maple syrup manufacturer a show, whereas heretofore he has had none, and they have pretty nearly driven the maple syrup manufacturer out of the market; but, still, when you look at this it is only a show.

As I said, we want to uphold the very best articles; that is one reason why this law was instituted, so that the consumer may know exactly what he is getting, and pay for what he gets.

I once, your secretary, Dr. Mason, notified me that we were limited to five minutes. If I exceed the time, you will "call me down;" but I heard him say this evening what a nice, noble band this was. What was it he said? He had not heard a profane word, had not seen any one smoking, nor any one profane in his conversation. I understand that. If there is anything that ought to lift one above the plane of all these common, grotvelling things of earth, it is pure honey; it is the cause that you are engaged in, and others seeing your good works will enter into it right, like you are doing, and sell under proper colors.

This Commission, in all seriousness, this Pure Food Commission is to let the people know just exactly what they are getting, and when we do that there is no mistake, and we are helping you out. You are the bee-keepers as soon as you put the great banner of the pure food movement into the market, and other products that come in competition with yours; whenever they are compelled to label their goods just what they are, then the honey man has his innings, and he has a fair showing done, that is the exact object, as I understand it, this Commission is trying to attain.

In conclusion, I want to say to you that we have a very fine laboratory; we are located at 1623 Manhattan Building; Dr. Eaton, our State Analyst, has charge of it, and you have every benison of all the laboratory.

We have said to the other retail associations and manufacturers of the State of Illinois, whenever you find any one coming in competition with your business, that is manufacturing any product that is not what it represents itself to be, you notify this commission. We will send an inspector and inspect them, and then we will do the next thing—we will bring the strong arm of the law to bear upon them. Whenever we find from any reputable citizen that any one is violating the law by selling or manufacturing any article for other than what it really is, and palming it off for something that is inferior, all you have to do is to report that, and we will at once send an inspector, and we will seize the fellow, or cut him up to the tune of $1,400, or make him pay tribute to Caesar. [Applause.] So that if any one in your town, and you know it—if you live in Illinois—is violating this law, is running his business contrary to law, I want to tell you, as the State is doing, we will stand firm and willing, and anxious, for it is our duty, and we are paid for it, to see that the law is enforced all over this State. If it can be done here in Illinois, it can be done in every other State in the Union.

Another thing I might say while on this subject. Last October I had the pleasure of meeting with the National Commissioners' Association of all the States here at the Palmer House, and there a committee on rules was appointed to try to get rules and regulations that would apply alike to all the States—rules upon the law; and then another committee to formulate a law, so that each and every State might have the same law. Up to this time, each State has made its own laws, and I think that this has made a great deal of trouble, and I think in the next few months we can obviate a good deal of that. Of course the law can't be changed until the respective legislatures of the different States meet and pass new laws—a new law that may be suggested by this committee. We are trying to arrange so that every State can work in harmony, and when the producers of honey in one State produce honey, they know that the law that is put upon it will go into every State in the Union, that is the idea.

We are trying to help out in the interest of pure food, and especially pure honey; for we all believe in that, even if the glucose man won't say a word against good honey. I was speaking with a gentleman just the other day who had no interest in the glucose business, and whenever you see in Illinois a man that is imposing upon your rights, by making an inferior article, that does not come up to the law, if you will just report him, he will suddenly cease to do business, or else he will come to the law.

A. H. Jones.
Questions and Answers

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—Editor.)

Flat-Bottom Queen-Cells.

I have made a lot of artificial queen-cells, a la Doolittle, with flat bottoms. Since making them I have been informed that the bees will not accept them as readily as the round-bottom queen-cells. Which is the better?

COLORADO.

Answer.—I never before heard of queen-cells with flat bottoms, and I don't believe the bees would like them. Still, you can hardly be sure about anything without having the bees try it, and it is possible the bees might accept queen-cells with flat bottoms.

Amount of Honey in 10 Frames—Spacing Frames.

1. How many pounds of cap honey is there in 10 Hoffman frames (9 inch) before it is extracted?

Answer.—If I choose to place 8 frames in a hive, how far apart can they be put?

CALIFORNIA.

3. Is there any danger of the bees building combs on the cover?

Answer.—If I don't know what you mean by "9 inch," unless it be the depth of the frame, the usual depth of the Hoffman frame being 9¼ inches. Possibly frames well filled may contain as much as 60 pounds of honey, if there is no pollen in them.

2. That depends upon the width of the hive; but you probably have reference to having 8 frames, in a 10-frame hive. In that case you would space the frames about 1½ inches from center to center.

3. If you put 8 frames in a 10-frame chamber, and the cover is only ½ inch above the top-bars, as is generally the case, there will be no danger, I think, that the bees will do much more at building comb above than with the 10 frames.

Hives Damp and Moldy in the Cellar.

My nine colonies of bees are wintering in the cellar. They are in 8-frame dovetailed hives. The cellar is moderately dry and warm—vegetables keep well in it. The hives were brought into the cellar for winter and rests there Nov. 20th, the bottom-boards removed, and the hives placed crosswise upon a shelf some two feet from the ground. This shelf is about a foot wide, so the middle of the hive rests upon it, leaving a space three inches or more open at each end of the bottom of the hive for ventilation. The hive-covers have remained sealed down as on the summer stands. I noticed, Jan. 30th, on raising a hive-cover, that it was wet beneath, so much so that water dripped from it, and some mold appeared on the top of the frames. The colony, to all appearance, was strong and vigorous. I should judge all the other colonies are in the same condition as this one examined. What would you advise me to do with them?

MAINE.

Answer.—Your bees may come out all right if you let them entirely alone. But it is certainly no benefit to them to have water standing on the cover, and if that water drips on the bees it may be a damage. The moisture from the bees comes in contact with the hive-cover, and the hive-cover is so cold that the moisture condenses upon it just as water from the air settles on a pitcher of very cold water on a hot summer day. If the cover were warmer, the moisture would not be so much inclined to settle upon it. Try it by a thermometer, and try to keep it somewhere in the neighborhood of 45 degrees, or, to be more exact, keep it at the temperature at which the bees are most quiet. If the air of the hive is much warmer, it may be a good plan to raise each cover and put a common nail under it, so as to make a small crack for the air to escape.

The Hum of the Bees in the Apple-Tree Bloom is the name of the finest beekeeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and the "hymn" hummings, if we may furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at $1.00.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can hear by sending in the names and addresses when writing us on other matters.

The American Fruit and Vegetable Journal is just what its name indicates. Tells all about growing fruits and vegetables. It is a fine monthly, at 30 cents a year. We can mail you a free sample copy of it, if you ask for it. We club it with the American Bee Journal—both for $1.10.
Gleanings in Bee-Culture!

Gleanings for Jan. 1st contains these Special Articles:

Queen-Rearing in France, —by Giraud-Pabou
Candied vs. Bottled Liquid Honey, by Chalon Fowls
Wintering Bees in Clamps, (From Bee-Keepers’ Review), —by W. Z. Hutchinson
Conversations —with— Doolittle

Gleanings for Jan. 15th.

Co-Operative Organized Work, by R. C. Akin
An Extracting Outfit, by W. A. Gilstrap
Mintle’s Lightning Section-Folder
Stray Straws,—by Dr. C. C. Miller, Every Issue
PICKINGS from Our Neighbor- ing Fields, by Stenog, Every Issue

Gleanings for Feb. 1st.

Our Honey-Bottling Symposium, —by G. A. Deadman, Earl C. Walker, and Walter S. Pouder
The Personnel of the Uter Trial by E. R. Root
The Belgian-Hare Business, by W. K. Morrison, of Devonshire, Bermuda
Co-operative Organization, by R. C. Akin
Cuba, by The American Tramp

SPECIAL OFFER.—Each one of the issues mentioned above should be worth a dime to every bee-keeper, but we will send all three for only 10 cents. Hurry along your order before they are all gone.

BETTER YET—Send us 25 cents at once, and we will send you Gleanings in Bee-Culture 12 issues, 6 months, beginning Jan. 1st. Feb. 15th with all several articles too.

Cuba, by Harry Howe, Robert Luaces, and A. L. Boyden

Mr. Howe was formerly with Coggshall, New York, and has already given Gleanings readers glimpses of Cuban bee-keeping, Mr. Luaces, of Puerto Principe, considers that conditions are not well known and gives information somewhat different from other writers. Mr. Boyden begins a series of articles entitled, “Glimpses of Cuba and Cuban Bee-Keeping,” illustrated by photos taken by himself.

Remember—all 6 months for 25 cents, and your money refunded July 1st if you are not satisfied. Mention the American Bee Journal.

THE A. I. ROOT COMPANY, Medina, Ohio.
Bees Did Poorly.

The bees did poorly in this locality the past season. I did not get any swarms, and hardly secured honey enough for winter stores.

This is my second year of bee-keeping, and I have five colonies now which I transferred into new hives.

D. E. Evers.

Jan. 29.

Prospects Good for the Coming Season.

The past season was a bad one for the apiaries in this State. Most of them are left in a mix-up condition; many are disused, nearly all are reduced in number of colonies, and there must be many that have been wiped out of existence.

From my 10 colonies, spring count, I increase to over 130, extracted 6,000 pounds of very fine sage and buckwheat honey, and rendered over 100 pounds of wax. I have sold but little of the honey, and I shall make the wax into foundation.

The prospects for the coming season are much more favorable than they have been for three years, and if the conditions continue I will have a rich harvest for the bees. Yesterday I went out of apiary, some 25 miles from the city, to "size up" the situation as to the prospects, and came away in good spirits, although I got a good soaking before returning. Last year we had 457/100 inches of rain: this year to date we have had 9 inches, and it all.

G. B. LEWIS COMPANY.

WATERTOWN, WISCONSIN, U. S. A.

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with one of these systems. They are handsome, strong, sturdy, and durable. Selling on our plan you can exchange until you are satisfied. We have no agents

but sell all goods direct from our factories to the purchaser at wholesale prices. We are the largest manufacturers of manuka and hives in the world, selling to the consumer exclusively. We have purchased the place successfully for 13 years. You must have no risk

as we ship our goods anywhere for examination and use. We have the largest selection in the country as we make 150 styles of vehicle and 65 styled hives. Catalogue free.

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Treats also of the famous, non-poisonous, acidless, Violet Bee Klee, which is guaranteed to cut the very worst of the spring, self-ventilating, oil-steam, and electric brooders. This is the last of the year. Many orders for this stock. Three or more boxes or cases refunded. Send for free samples. Ask for book of prices and poultry free.

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You can't afford to buy a "shoddy" vehicle when you can have a genuine Hickory. You can't afford to buy a vehicle that will break under the greatest test. "Spleet Hickory" will stand up through the most severe test. We sell to dealers and manufacturers only. The prices are very reasonable. We stand behind our goods. We are the manufacturers. We sell vehicles and harnesses direct from factory.

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AS A PREMIUM

For sending us ONE NEW SUBSCRIBER to the American Bee Journal for three months with 30 cents, we will mail you FOUR of these pretty buttons for wearing on the coat-lapel.

(You can wear one and give the others to the children.) The queen has a golden tinge.

This offer is made only to our present regular subscribers.

NOTE.—One reader writes "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one of the buttons. We all like to have the people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of more or less honey, at any rate, it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."

Prices of Buttons alone, postpaid: One button, 8 cents; two buttons, 6 cents. Each: 5 or more, 5 cents each. (Stamps taken.) Address, GEORGE W. YORK & CO., 118 Michigan St., CHICAGO.
Farmers and Sweet Clover.

We have had two poor seasons here, but the indications are fair for a good honey crop next season.

Farmers in this vicinity have begun to see the benefits of sweet clover. One of the leading farmers of this section sowed 10 acres of clover to sweet clover last July, and says he will get two crops of hay next summer, plow the third crop this fall, and raise wheat on the land the next season. Thus he raises a full crop each year, and improves his land by the rotting of crops, which he says is the cheapest fertilizer he can get. He expects to plant another 10 acres of clover next spring, and the latter part of July or the first of August some of his clover seed among the corn in the fields, which will not use the use of his land any way. He thinks the clover improves the yield of wheat about 10 bushels to the acre. He has been experimenting with it for several years. He intends to commence keeping bees, and if he does he will make a success of it.


C. W. SNYDER.

Poor Prospects for Next Season.

I have 80 colonies of bees in 8-frame Langstroth hives, and run them for comb honey. As the past season was a poor one in this locality they did not average above 25 pounds per colony, and I do not think that the honey-crop of Utah would average more than 10 pounds per colony.

Brood barn has been quite prevalent here the past two years; it seems that the disease has a tendency to follow a poor season.

The prospects for the coming season are not very bright; we depend upon irrigation for bee-forage, and as but little snow has fallen up to date, if we do not get more snow the season will be disastrous indeed to both farmers and beekeepers.

E. E. NELSON.

Utah Co., Utah, Jan. 28.

Bee-Moths and Millers in Apple-Trees.

I had 25 colonies of bees during the past season, 20 of which I had under the grape-vines, and in the orchard under the apple-trees. Only one colony out of the 20 under the grape-vines was bothered with moths, while all 5 of those under the apple-trees had moths in them. I put two under a crab-apple tree which bore deep-red apples, one has fallen at intervals conducive to the most good. We may reasonably expect enough more rain to round out the year, not only to the benefit of the apiary, but to all other industries which require it.

I do not think there will be any overproduction of honey, however favorable the season may be, because so many apiaries are in such poor condition. It will take most of the season to get the colonies in good working order again, therefore I do not anticipate that the Eastern market will be overstocked with California honey.

My year is up, and I want the American Bee Journal for another year, because of the benefit I derive from it.

ALBERT ROZZELL.

Los Angeles Co., Calif., Jan. 28.

SALTZER'S RAPE SEED

SALTZER SEEDS GET FREE CATALOGUE

AMERICAN BEE JOURNAL

Feb. 21, 191.

200-egg incubator for $12.00

When you can get an incubator and Brooder that works as satisfactorily as the "SUCCESSFUL" Incubator, it must be evident what a value the money spent for the incubator will be. It is a necessity in every apiary that desires to rear a large supply of swarms.

The "SUCCESSFUL" Incubator is the very best that can be purchased today. Patented to the American Bee Journal Co., Des Moines, Iowa.

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Electric Hand Wagons

They aren't priced over the wheel, but do their work. Electric Steer Wagons, Buggies, or entaiers. Any kind of cart you want—any number of cart on $20 to any wagon—Catalogue Free.

ELECTRIC CART WORKS, Des Moines, Ia.

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WE MAKE INCUBATORS

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For $1.00 take Vegetables, Garden Fruits, etc., by mail. Free. We guarantee every stock we sell for life. Catalogue free. California Seed Co., Los Angeles, Cal.

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THE BART HATCHER

The 20 egg incubator that hatchs equal to the highest price kind. Has hatched 100,000 eggs from 500,000 hatched. 20 EGG INCUBATOR, Des Moines, Iowa.

Wanted! Two or three apiaries for cash, located in Colorado. Give full particulars in first letter, and lowest cash price; comb honey preferred; ask for cash; make offer for several colonies. I will repay you the full cash price. Ia. J. C. STANLEY & Son, Fairfield, Ia.

IT MENDS BREAKS

The "Pre" Premium combined rifle and sporting gun, made by Key's machine shop, has so far satisfied the most exacting customer, that it has been recommended to others. It has a steel barrel and a steel action, and is exquisitely finished. The guns are made in 

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Why Fuss with Hens?

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Send 25c and receive our free Catalogue No. 11.
under a fall apple-tree which bore apples about the color of lemons, and two under a winter apple-tree, the apples having a brownish color (rash coats), and the worms from these trees drop on the hives underneath them, and work their way into the hives and around the sides, and in each instance the eggs were of the color of the apples in the tree above the hive on which they fell.

It is my opinion that the worms that fell from the trees crawled into the hives the color of the tree from which they came until they become millers.

The hives which got into the colony under the grape-vines were of a natural color.

I went into the country to visit a friend, and while I was there he made apple-cider, and asked me to help him, which I did. We went to the orchard and gathered the very best of the apples, cutting out the cores and all the rotten and worm-eaten spots. After throwing the cores away I noticed hundreds of millers gathering on them, then I looked up and saw as many among the trees, and some of them alighted on the apples. The next morning I examined the apples, and found that the millers were stingling them, and planting their eggs in those that were ripe or matted. The millers sting the apples at the stem, at the blossom end, and on all sides, and when the eggs are hatch into worms they work themselves toward the heart of the apple.

I would like to know if it does any good to spray the trees while they are in blossom. Some of our professors claim that the pears are infested and the blossoms are killed when the trees are sprayed. I do not believe it does any good to spray the trees, as my observation is that the millers plant their eggs in the apples after they have matured, AUGUST ROSENBERGER.

Iroquois Co., Ill., Dec. 10, 1900.

[See the article on spraying fruit, on page 120 of this number.—Editor.]

Convention Notice.

California.—The annual convention of the California B. K. A. Bee-keepers’ Association, will be held in the Chamber of Commerce, at Los Angeles, Feb. 2d and 3d, 1901, beginning at 1:30 p.m., on the 26th. Several valuable papers have been promised, and we expect an interesting convention. J. F. MCINTYRE, Sec'y, R. WILKINS, Pres.

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Honev and Beeswax.

Market Quotations.

Chicago, Jan. 19.—Honey is selling slowly; this week’s selling was 150 at 12c; dark, 65c; white, 35c; and buckwheat, 65c; each. New crop. Beeswax, 25c. Per lb. 1,900 cwt. 1,200 cwt. 350 cwt. 150 cwt. 100 cwt. 50 cwt. 30 cwt. 15 cwt. 10 cwt. 5 cwt. 1 cwt. 1/2 cwt. 1/10 cwt. 1/100 cwt.

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Honey and Beeswax.

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An address by Joseph Choate, Ambassador to Great Britain, on the career and character of Abraham Lincoln—his early life—his struggles with the world—his character as developed in the later years of his life and his administration, which placed his name so high on the world’s roll of honor and fame, has been published by the Chicago, Milwaukee & St. Paul Railway, and may be had by sending six (6) cents in post-age to F. A. Miller, General Passenger Agent, Chicago, III.

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We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

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On Feb. 12th, and on each Tuesday until April 30th, the Chicago, Milwaukee & St. Paul Railway will sell one-way second-class tickets at the following very low rates:

To Montana points. $25.00
To Nor. Pacific Coast points. 30.00
To California. 35.00

These tickets will be good on all trains, and purchasers will have choice of 6 routes and 8 trains via St. Paul, and 2 routes and 3 trains via Missouri River each Tuesday. The route of the Famous Pioneer Limited trains and the U.S. Government Fast Mail trains.

All ticket Agents sell tickets via the Chicago, Milwaukee & St. Paul Rail-

way, or for further information address F. A. Miller, General Passenger Agent, Old Colony Building, Chicago. 6A1

Tennessee Queens! Five lots of Choice Tested Queens reared last season, daughters of select imported and select imported queens, reared 30 miles apart, and mated to select drones, $1.50 each; untested warranted Queens, from same breeders, either strain, 75c each. No bees owned nearer than 25 miles. None impure within 3, and but few within 5 miles. 10 years’ experience. Discount on large orders. Contracts with dealers a specialty.

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in car lots, wholesale or retail. Now is the time to get prices.

We are the people who manufacture completely first-class hives and sell them at prices that defy competition. Write us today.

Inter-State Box and Manufacturing Company,
HUDSON, WIS.
QUEEN-BEE (Magnified) AND EGG.
Photograph from life.
Long-Tongued Bees
ARE DEMANDED NOW.

ONE Untested Italian Queen FREE as a Premium for sending us TWO new subscribers to the American Bee Journal for one year (with $2), or, one Untested Queen FREE as a Premium for sending us FOUR new subscribers (with $4.00).

We have arranged with one of the oldest and best queen-breeders (having many years' experience) to rear queens for us the coming season. His bees average quite a good deal the longest tongues of any yet measured. The Breeder will use direct from Italy, having imported her himself. Her worker-bees are large, somewhat leather-colored, very gentle, and scarcely requiring veil or smoke. They stored red clover honey last season.

Orders for these fine, "long-reach" queens will be filled in rotation—"first come, first served"—beginning about June 10th. It is expected that orders can be filled quite promptly, as a large number of nuclei will be run. All queens will be guaranteed to arrive in good condition, and all will be clipped, unless otherwise ordered.

CASH PRICES of these fine queens will be as follows: Untested, $1.00 each; Tested, $2.00 each. Send all orders to

GEORGE W. YORK & CO., 144 & 146 Erie St., CHICAGO, ILL.

20 cents Cash *** This is a good time to send in your Beeswax. *** paid for Beeswax.

Best White Alfalfa or Basswood Extracted Honey
ALL IN 60-POUND TIN CANS.

ALFALFA HONEY......

This is the famous White Extracted Honey from the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.

A sample of either, by mail, 8 cents; samples of both, 15 cents— to pay for package and postage. By freight—one 60-pound can, 95 cents per pound; two cans, 9 cents per pound; four or more cans, 85 cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. The cans are box.

Order the Above Honey and then Sell It.

We would suggest that those beekeepers who did not produce enough honey for their home demand this year, just order some of the above-mentioned Honey. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

Address,

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

The Bee-Keeper's Guide:
Or, Manual of the Apiary.
—By—
PROF. A. J. COOK.

460 Pages—16th (1899) Edition—18th Thousand—$1.25 postpaid.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book publish-to-day. Fully illustrated, and in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is so equipped, or his library complete, without The Bee-Keeper's Guide.

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GEORGE W. YORK & CO.,
144 & 146 Erie Street,
CHICAGO, ILL.
CHICAGO, ILL., FEBRUARY 28, 1901.

No. 9.

41st YEAR.

Editorial.

Joining the National in a Body.—Several local associations have already taken advantage of the provisions in the constitution of the National Bee-Keepers’ Association, which reads as follows:

"Whenever a local bee-keepers’ association shall decide to unite with this Association as a body, it will be received upon payment by the local secretary of $1.00 per member, provided that the local association’s membership dues are at least $1.00."

Referring to this matter in a recent letter to this office, Dr. A. B. Mason said:

Ernst Young—I have just forwarded a draft to General Manager Secor for the amount of fees required to make the members of the Cayuga Co., N. Y., Bee-Keepers’ Society members of our National Bee-Keepers’ Association. Also, I have just received a letter from the Worcester Co., Mass., Bee-Keepers’ Society, making inquiry as to the terms on which their organization of 40 members can join the National.

Won’t you just suggest that all the local bee-keepers’ societies on this continent “go and do likewise”? Also add that it is necessary to send the name and post-office address of each member with the membership fee.

A. B. M.

Layer.—I have just received a letter from General Manager Secor, saying: “New members are coming in all the time, and the finances are in a healthy condition.” That’s the kind of a “morning” to have, and to hear, and to belong to.

A. B. M.

We are indeed glad to learn of more bee-keepers’ societies taking advantage of the low membership fee when joining the National in a body. We believe the Wisconsin State Bee-Keepers’ Association was the first thus to join, and was followed by the Chicago Bee-Keepers’ Association a month or two later. At the recent meeting of the Wisconsin Association the memberships were renewed for both the State and the National associations. This is just as it should be.

The fact that more organizations are “enquiring the way” is a healthy sign, and should ultimately increase very largely both the membership and the treasury of the National. It will be surprising to all, what can be done in many ways when bee-keepers once unite, not only to defend themselves, but to push their interests on every occasion when to do so is both proper and right.

We have been greatly encouraged during the past month or two on account of receiving so many membership fees at this office, all of which have been duly forwarded to General Manager Secor, who doubtless has promptly mailed individual membership receipts. We are ready and willing at all times to receive such dues and send them to Mr. Secor.

We wish there might be more local societies organized under the provision of the National constitution, as before quoted, and that all such local organizations might see their way clear to elect two delegates to the National convention each year. This would not only be an honor conferred upon those delegates, but would furnish the kind of representation in the National that every local association should have. Suppose there were 50 local associations scattered over the United States and Canada, each one of which should send two of their best men to represent them in the National Association. If the representatives would attend the National there would be an assured attendance of 100 of the best bee-keepers in all the country. This of itself would institute a great convention, to say nothing of the attendance of bee-keepers residing within 100 or 200 miles of the place of holding the National convention. Of course, there should be more than 50 local societies in the United States alone.

What we would like to see is this: Let there be county and district associations holding an annual meeting, and sending one or two delegates each to the annual State convention; and each State association send two delegates to the National. This would give representation to the humblest members of the pursuit. Membership dues of $1.00 in the county or district association should be sufficient to make each bee-keeper a member of all three organizations. Twenty-five cents of the $1.00 can be retained by the local association; 25 cents to be sent to the State organization; and 50 cents to the National, just as is provided for now.

We fully believe this scheme is entirely workable, and that some arrangement ought to be made at the next National convention providing for this plan, or something similar. We are ready to cooperate along any line that will give promise of uniting the bee-keepers, and building up an organization that will be able to take care of their interests.

The Anti-Bee-Legislation, as recently proposed in the Wisconsin Legislature, has received its deserved quietness. Mr. N. F. France, president of the State Bee-Keepers’ Association, wrote us as follows about the matter, Feb. 9th:

"This morning the Legislative Agricultural Committee of the Assembly, for the purpose of obtaining the support of the bee-keepers, has voted a resolution for the establishment of a bee-keepers’ association, with which the proposed bee-keepers’ association would be affiliated. The resolution has been referred to the Agriculture Committee for consideration, and will be brought up for a vote at the next session."

Mr. France has been working almost night and day since the State bee-keepers’ meeting, Feb. 5th and 6th, to accomplish the above action. We knew he would be successful, for there was no issue of the bill referred to. For instance, the great poultry industry of Wisconsin is not taxed. Why, then, tax bees, which are so much more uncertain stock than poultry? Personally, we think bees should be taxed at a small value per colony, but not before poultry is put on the property list.

Again, the bill proposed to tax those bee-keepers who desired to practice migratory bee-keeping. It provided that any bee-keeper who desired to move his apiary to another field where the bees might take advantage of a better honey-flow, must pay a license fee of $A per colony per month before he had the right to move into another township. That is, if he had 100 colonies which he wished to move to another field for four months, he would have to pay a license fee of $400!

No sane legislator would favor such injustice, we are very certain.

The Apiary of Mr. F. M. Wagner is shown in two views on page 135. No. 1 presents it with the revolving roof in a horizontal position to shade the hives from the noontide sun. It shows the roof in a slanting position to protect from the afternoon summer sun, or from chilling winter blasts.

In a letter accompanying the photographs, Mr. Wagner says:

The hives are the 10-frame, with an all-wood blanket between the brood-chamber and the super, but held up from the frames so the bees can pass over from frame to frame. The super is then filled lightly with short straw. A little ventilation is provided to overcome the climate (Adams Co., Ill.), under a trial of four winters—south of the 40th parallel, and three miles east of the Mississippi River.

Value of Bees to Aliskc Clover.—Secretary Cause, of the Ontario Bee-Keepers Association, said at the last convention that the nearer a field of Alsike clover is to an apiary the better the yield of clover seed. He had applications from two men who wished him to locate bees near them. The value of bees to fruit-growers and farmers is being recognized over and over and time goes on. Ignorance is a hard thing to overcome, but it’s yielding over and over.

Tin Cans vs. Barrels.—Mr. J. J. Martín, in his address in Bee-Culture, offers another argument in favor of tin cans for shipping honey. He says: "Freight rates on honey in tin cans, as compared with barrels, are $1.10 per 100 pounds; on honey in barrels, $1.30 per 100 pounds; on honey in glass, $1.30 per 100 pounds. Observe that the weight of bees, bees and glas is in the same class. The railroad companies evidently know where the greatest risks are."

Comment is unnecessary.
**Weekly Budget**

Prop. A. J. Cook writes us that the "bull-dog ant" of Florida, mentioned on page 72, is "Camponotus esuriens, Smith" which he learned from Dr. L. O. Howard, entomologist of the Department of Agriculture, Washington, D. C.

The offician of the Ontario Co., N. Y., Bee-keepers' Association is as follows: President, W. F. Marks; vice-presidents, H. L. Case, John Pagnoni, New Albany; secretary, F. Geymer, of Naples; treasurer, L. B. Smith; and honey inspector, E. H. Perry.

Mrs. Artie Bowen, of Mereed, Cal., writing us Feb. 12th, said:

"I think this is going to be a good honey-year in California. The bees in this locality have wintered well so far, and our winter is about over. The almonds are coming into bloom, and within two weeks our orchards will be in full bloom."

Mr. W. E. Flower, of Montgomery Co., Pa., is one of the noted bee-cranks around Philadelphia. He it was who gave a short illustrated talk on bees when the National convention met there in 1891. It was enjoyed by all. We understand that he expects to give another talk on the same subject at Franklin Institute very soon. There will be a male quartette to sing "The Hum of the Bees in the Apple-Tree Bloom," accompanied by piano, cornet, and two violins. They are good players and singers, as they all belong to the church choir of which Mr. Flower is a member, and they will doubtless make things hum. Mr. Flower expects to have a lot of new slides to show, and some new jokes and stories to help entertain his audience. Mr. Flower knows how to do it, and will be able to give a good entertainment.

Mr. L. H. Biemrege, of Ogle Co., III., writes us that during the meeting of the National convention in Chicago last August, he suffered a stroke of paralysis so that he had to leave for his home before the close of the meeting. It left his nervous system in bad condition, especially affecting his eyes, so that it is very difficult for him either to read or write. He was 78 years old last New Year's day. All will unite in hoping that he may soon recover. He reports his bees as wintering well.

Rev. A. B. Metzler, of Will Co., III., whose questions were answered on page 99, writes us Feb. 16th, that the case he cited in your note is the case of a friend of his. His child was born on Feb. 1, 1844, and all the February 1st dates since that time have been "mothers' days!" That's very good. We will forgive him for the joke, seeing he sent his dollar membership fee for the National Bee-keepers' Association.

Bishop Wm. A. Bills, of Salt Lake Co., Utah, wrote us Feb. 16th, that bees were a failure in Salt Lake county last year, though in previous years he had over 350 pounds of honey per colony. He sent us two clippings about bee-keeping in Uintah Co., Utah, mentioning one firm of bee-keepers who had 160 colonies of golden Italian bees that averaged 3814 pounds per colony last season. Ashley Valley, in which the county sits, is about 20 miles long by 6 wide. Central, the county seat, is a busy little city, and is centrally located in this valley. It is a progressive town, with neatly graded streets, paved sidewalks, and well-equipped businesses. In the matter of taxes it stands as a model. It has never levied what is known as a town tax, and all debts are paid off on a par, with a balance in the treasury. Very likely they are not cursed with saloons.

Bee-keeping seems to be a new industry in Ashley Valley, but it is making astonishing strides, and one that promises to forge still further ahead in this sterile desert section. The honey-source is principally sage and the grade produced is of the finest. By the end of the season the government gave one 340,000 pounds were sold out of the local consumption, 340,000 pounds were sold at a price of 5 cents per pound. The success which has followed the efforts of bee-keepers in that part of the State is encouraging them to equip their apiaries with the latest appliances, which are an absolute must in the bee-keeping business. It is a little less than marvelous that so much real sweetness should be found in what was once such a desert-like and forbidding region.

Mr. G. Gleesman, of Sioux Co., Iowa, wrote us as follows Feb. 16th:

"The American Bee Journal is a welcome visitor each week. I could not get along without it. By the way, the wood binder is just the thing. Every subscriber should have one so he can file away the journals each week, and always have them all together, ready for any reference he might want."

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**Convention Proceedings.**


By Dr. A. B. Mason, Sec.

(Continued from page 122.)

Pres. Root—We will now listen to Mr. R. C. Aitkin, on the subject of Co-operative Organization Among Bee-keepers.

To organize is proper, right, and just. Like all else, organized combinations may be powerful for good or evil, according to the inclinations and desires of the organized. Condemn not organization, only its improper use.

Never in the history of the world have there been times of so great organization as at the present. Unions, associations, syndicates, trusts, etc., exist on every side. Were it not for organized business in social affairs, we never would have reached the heights of luxury, wealth, and power, now enjoyed by the present age. Even the anarchist organizes to break down governmental order. We organize for mutual help in all lines of business, industries, education, religion, and government.

But for what shall the bee-keepers combine? This, our national association, is largely social and scientific, with a little business mix in now and then, and a mutual protection against unjust financial and moral enemies. So far this is good, but it does not cover, by a long way, the ground it should to help the people where they need it most, in properly distributing our product.

These are days of specialization, as well as organization and co-operation. More and more do we become dependent upon one another in all our affairs, as we grow in organized work. How long will our government, the postal system, railroads, churches, schools, and the very many great organizations need, to stand, that is the only test of the future of those concerned? It is plain common-sense that in these days when specialization is everywhere prevalent, in almost everything, that those who produce our food—wheat, corn, potatoes, butter, eggs, meat, fruits, etc.—there should be co-operation.

But what is the great need of the bee-keeper to-day—in what particular direction should he co-operate to obtain best results? Is it on the social side? Surely not. We have social facilities in our organizations here and there, and in our class journals. The crying need of to-day is business co-operation.

Producers bring their wheat and other grain to the elevators; cattle, hogs and sheep to the stock-yards; and fruits to the local depots. In every producing locality, the products of that territory find buyers and places to deliver and store the products—facilities for handling. Just take one good look at the facilities everywhere established for the accommo-
dation of the principal product of any locality. We have ten bushels of wheat and my neighbor his hundreds or thousands, there is one common price and I can take my ten bushels and sell it and have my check just as quickly and surely as the large producer on his hundred. Now, turn your attention to the natural products—can you go to town, any and every town, and any day, and there sell your products? You may sell a few pounds or cases to your local dealer, just what he needs for immediate retail. Should you produce more than the half dozen cases your grocer wants, and want to get cash out of it, what will you do? Well, ship it to some city market such as Denver, Kansas City, Omaha, Chicago, or other practical market; "consign" it to somebody you do not know, take all the chances yourself, get your money when you can in the
"sweet by-and-by," or order honey pushed into the market, which means to give it away. Looks gloomy, doesn't it?

Honey-producers are so scattered, the product so limited in a given locality, that there is no inducement to put in proper facilities for the handling of the goods. Comb honey is somewhat regular and has a reasonable standing, but extracted, as handled by most producers, must not get out of sight of the producer until it is eaten, for you know how they turn "sour," and be it ever so fine, some one other product can be sold at any and at times, and for spot cash, honey must beg to be taken in dribs!

Tell me, if sugar would go liquid in the grocery, must the capital outlay be the same as for honey? Must he handle from 1000 cases of sugar and 1000 cases of honey, a few acres of corn, of apples, wheat, and of such a few bushels: a half dozen hogs, one or two bees, etc. such are the masses, and are the people that must and will sell at just prices, or possible, small dealers and producers.

These small producers are said to ruin prices, and the charge is true to a limited extent. But can we blame these people and after all what can we do? They are at the mercy of the men who have a greater civil and economic position, and perhaps might realize, and that quickly, and since there may not be a demand for their product and it is pushed out to ship to distant points, they are practically compelled to force the market, and the stock sells for less than its real and true value, and so prices are not what they should be.

It is necessary, then, that provision be made whereby, especially the small producer, may have a market for his product. The large producer is told to buy up the little lots, and get them out of the way, but large producers have difficulties to face, too. It does not take many little lots to require several hundreds of dollars even thousands to buy them. The large producer has to face the fact that if he competes in the general markets, and with other large producers and shippers, he has a very small and pitiful run for his product, and to do this causes him to reach out to the limit of his own capital and ability. Yes, even the large producers, too, are struggling to keep from being eaten up by the still larger ones.

In these days when our products are transported hundreds and thousands of miles to be distributed—in reality exchanged for other products which we have not in our own living, but which we think, or suppose, have—and social conditions almost compel us to have—there must be facilities for carrying out the economically exchange.

Look again at the immensity of the systems of transportations of products. The packing companies have their special cars. The railroad companies have cars specially designed to transport fruits and deliver them successfully at distant points; and grain, sheep and cattle cars. Not only this, but everywhere distributed throughout the country are both the gathering and distributing facilities. The large cities are constantly in position to handle a certain amount of produce and ship. In a single department, but what of it? Small producers, 500 or 1,000 miles from these places, do not want to consign. They can not afford the local freights and other expenses. The 10 or 20 cents per case of charges that the small producer can not make must fall to him than do the hundreds of cases of the large producers and commission and other dealers to them. These small producers have honey to sell, and must sell.

In short, most of all, is the facilities for gathering the product and relieving the poor small producer by paying him for his honey and wax. These facilities must reach out from some central place and come close enough to the little apiaries so that their product can be delivered to the consumer, and get a fair price for the minimum of freights. That such system is very much needed is surely evident, but as yet the solution of the difficulty is not clear. Many difficulties lie in the way, yet none but can be overcome.

I shall not attempt to lay down set rules to govern in working out this question, it can only be by cooperation. I say by cooperation, not by it pure and simple, according to the general acceptance of the term. I think I know enough of human nature to know that this Association can not in open convention work out such problems and carry them to completion. We have ideas as to what we need, but how to obtain the results we do not know the end result, at what is needed and advising, yet there will be such diversity of opinions that no tangible thing can be arrived at. Your humble servant has been thru the mill and knows a few of the difficulties to contend with, how a convention will wrangle, and suggest, and advise, and demand, etc., then in the end tell a committee to go ahead and bring order out of chaos, yet not a dollar for the expense of doing it.

Discussion in convention is all right, and appointing committees is all right, but committees need financial help. Select for the committees straight, honest men—men who are the most familiar with the business world and methods, who yet have the facts at hand. Remember that we must do much as we can, not as we like. We want to put our product as near where it ought to be as possible, but in doing this we have great difficulties to surmount.

Having selected proper organizing committees and given them necessary funds to carry on the work, empower them to act—I would say almost absolute power. When your committee runs against unforeseen stumps they can not pass and disregard and accumulate fences for the houses to pull up or get around that stump. They must act, so give them full power. Here is the weak place—the people can not or will not see the great difficulties in the way, get discouraged and quit.

In organizing, remember that there are State and other laws to comply with, there are business customs that you can not ignore, that others have rights as well as you, and that you will have to set arbitrary prices and make extravagant demands. Yet, want to get in touch with the whole world so far as possible, for in these days even oceans do not separate neighbors and co-operators. Strive to understand each other. Help others and thereby help self. Two, three, or more producers should come together. I do not think for one minute that there is or can be over-production—no, never, while our neighbors just across the waters are starving by the millions.

When the bee-keepers are fully organized in a co-operative way, the head national office will know what you and I are doing, north, east, south, and west. The sub-State offices will know what is known at the general head, and in turn transmit to the various local branches or to the individuals, the facts according to the need and demand. Is it a mighty undertaking? Yes, but results would be mighty. Will it harm anybody? Yes, just about as you are harmed by the complete postal system that takes in almost the world and carries your mail almost for nothing.

Do you catch the spirit? Then proceed to co-operate. Some are now at it, but hampered by the utter indifference, jealousies, or greed, of the many. To help a brother helps you; to tear him down destroys both.

R. C. AIKIN.

Pres. Root—The matter is now open for discussion. Mr. Aikin comes from a State where they have an organization that carried out some of the ideas he has advanced before. They are not only in practice, but doing practical work and do produce results. Many of you probably have not had any experience in this line and possibly do not care to discuss it.

Mr. Aikin—Mr. Mason has a matter that he wishes to bring up before the Convention before we close. Are you ready to present it at this time?

(Continued next week.)

"The Hum of the Bees" in the Apple-Tree Bloom is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is the property of some to which the best bee-keeper may not as yet be written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at $1.00.

The Premiums offered this week are well worth working for. Look at them.
A CORRESPONDENT sends in some questions and wishes me to answer them thru the columns of the American Bee Journal. His first question is, “Can a five-banded queen be bred—or a queen whose bees are five-banded—from pure Italian queens?”

My first answer is, “Yes,” for the simple reason that there is no such thing as a pure Italian bee or queen, when viewed in the sense of a pure race or variety, as the German or black bee is pure. At best, the Italian bee is only a thoroughbred, and that these five-banded bees have been produced from what was originally only three-banded or lighter-colored bees, is a good proof that the above assertion is correct.

Perhaps it may be well for me to give right here a bit of history. In the early experiments of Mr. Cyprian, the so-called five-banded bees—the “golden Italian” more nearly expresses what they are, for there are many queens in this country to-day which give bees whose abdomens are a solid golden or orange yellow the whole length, except the tip; no bands whatever to be seen on three and four-banded stock. The history is this:

In the early seventies, H. A. King, then of Ohio, and Jas. M. Brooks, of Indiana, were breeding for yellower bees than the average of the older Italian stocks showed. In 1872 I procured some of Mr. King’s stock, and continued to improve them till near the eighties, the apicultural world having lost sight of Mr. King, meanwhile. At that time I exchanged a part of my stock for some of Mr. King’s, afterward, by purchase, got the last of his very best stock, he going out of the business. In the early eighties I sold one of the best queens I could rear, along the yellow line, to L. L. Hearn, then of West Virginia, he and myself exchanging bees, and from that time for the next three or four years, if I am correct, all of the so-called five-banded bees, of Italian origin, that are in the world to-day, spring from the King-Brooks stock. Others produced the so-called five-banded bees by a promiscuous crossing of Cyprian, Syrian and Italian stock, but such have shown their origin by their bad qualities, to a greater degree than either parentage.

OLD OR YOUNG BEES WORKING IN THE SUPER.

The second question is, “Is it the old or young bees that work in the surplus arrangement? I had supposed it was the younger bees, but a neighbor contends that it is the old bees.”

To that neighbor of yours, if he will try the experiment of changing a black queen for an Italian about June 20th, some year, noting the time the first Italian bee hatches, and on the forecast of the 14th day from that time look at the entrance of the hive, he will find none but black bees issuing therefrom; while if he removes the cover from the surplus arrangement he will find nearly all of the bees there to be Italian. If he does not so find, his experiment will prove different from any I have ever tried, and I have tried this in experiments several times.

When a colony is in a normal condition, I have found what Elisha Gallup gave in the American Bee Journal during the early seventies, to be quite correct, namely this:

Three days in the egg form, six days in the larval form, and 12 days in the pupa form, making a period of 21 days from the egg to the perfect bee. Very warm weather will hasten the matter, while very cool will retard. Thebee when it first emerges from the cell does nothing but feed itself for the first day or two, when it commences to become a nurse. Then the nurse becomes the super foreman, doing this from 12 to 3 p.m., and it continues these playsests occasionally till it is from 14 to 16 days old. The young bee takes its first flight or playsest, marking its location, vindicating its excrement, etc., when six days old. The older bee when it is fully equipped with wax, nectar, secreting wax, building comb, etc., till it is 14 to 16 days old. The young bee takes its first flight or playsest, marking its location, vindicating its excrement, etc., when six days old. The older bee when it is fully equipped with wax, nectar, secreting wax, building comb, etc., till it is 14 to 16 days old. The young bee takes its first flight or playsest, marking its location, vindicating its excrement, etc., when six days old. The older bee when it is fully equipped with wax, nectar, secreting wax, building comb, etc., till it is 14 to 16 days old.

Shipping Queens by Mail—Unusual Experience.

By G. G. Foppleton.

ONE is very apt to give a wrong impression whenever he himself goes to work to give an explanation or reasons for that statement. This was especially true of the statement I made during the late Chicago convention, while the question of shipping queens by mail was being discussed. I had "abandoned the breeding of queens by mail." Of course, the inference was that the mails were responsible for the poor quality of the most of my queens obtained that way, which was only true to a limited extent.

For some reason which I can not explain, I have failed in getting even a fair proportion of queens that would do well. This applies only to the queens I have received since I came South—not to those received when I lived in Iowa. This is what I 15 or 20 years ago I had "abandoned the breeding of queens by mail." Of course, the inference was that the mails were responsible for the poor quality of the most of my queens obtained that way, which was only true to a limited extent.

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usually before the white clover honey-flow commenced—giving them these queens from the South. These nuclei thus given laying queens so much earlier than I could rear queens myself, would do enough better more than to pay first cost of the queens, be in better condition for the coming winter, and save me all the labor and expense of rearing extra early queens. No practical honey-producer in the North needs to be told what this means.

I observed closely for years, and could detect little or no difference between the quality of these queens and those of my own rearing, some of them proving among the best queens I ever owned. Were I now keeping bees anywhere in the North, I should make a very large use of early queens from the South. I should, of course, get them as able and careful breeders as I could, and I don’t think it should have any special fears of injury to queens in the mail.

Why queens would reach me all right when I was in Iowa, and don’t so in Florida, is one of the unexplained mysteries of bee-keeping. I only know the facts, not the reasons therefor. Perhaps some of the readers of the American Bee Journal can give us more light.

Dade Co., Fla.

No. 13.—Interesting Notes on European Travel.

By C. D. DABANT.

I HAVE well-nigh exhausted my subject, unless I take you on the ocean with me, or unless I take you to the place of my birth and make you acquainted with the companions of my young days, and show you in detail the narrow, winding streets of the old city, or the lonely ram-part walls. You would wonder at the lack of life in their business streets, but would admire the whiteness of the houses, where coal smoke is unknown. You would wonder at the numbers of roaming dogs, at the habit the people have of walking in the middle of the street, owing to lack of room on the sidewalk where two people can not pass each other without one of them having to step off into the gutter.

In bee-culture you would see but little of interest, and yet we could not very well do so without Europe, our European bee-keepers. Did they not originally invent the movable frames, which Langstroth only made more practical by hanging them free from the inner walls all around? Did they not invent the first rudiments of comb foundation? Did they not give us the honey-extractor, the perforated zinc? Do they not, from time to time, give us the most interesting scientific experiments? The microscopic studies of Count Barbo, of Milan, made into 32 lithographs some 25 years ago, are yet at the head in the way of plain descriptions of the anatomical structure of the bee. But for practice, for production on a large scale, with the most economical results, give us America.

But it is strange to see the very deep ignorance of the masses concerning America, on the Old Continent. Somehow they have a very clear idea that we are all millionaires, all Vanderbilts, Gouds, or Rockefellers, but they can hardly separate our millionaires from the Indians and the buffaloes. To them the United States is a country full of machinery and wealth, and yet half savage. The geography of the new continent is one of the things to come. They have a faint idea of the location of Chicago—somewhere near New York, or on the big Salt Lake. After two months of travel I had to give up the idea of enlightening any one as to where I lived by saying “in Illinois.” So I had become accustomed to using the term, “On the Mississippi.” Once while traveling thru England I met a gentleman, who, after I had given him that answer, said, “Oh, very well. Do you live above Niagara Falls or below?” That is about the extent of the knowledge that most of my French acquaintances could show of the geography of the United States. Yet they are all very well acquainted with countries that seem to us rather remote. Africa, Madagascar, Siam, and China, seem to be very familiar. But those places have not built up as America did, and what answered in their geography 50 years ago is still about right at this day, while the growth of America makes a new map necessary every 10 years.

A reader of the American Bee Journal puts this question to me: “How would you like to go back to Europe to live?” Not at all. America is the country for me. I should like to re-visit the places I saw—I admire the beauties of the European cities, of their buildings, which are certainly more artistic and better taste than our plain, square brick boxes, which we call business houses or factories. They do not have a 20-story sky-scraper by the side of an ugly 3-story square brick house as we do here; and around their monuments it seems as if a part of the ornaments had been lavished on all the surrounding buildings. This is true of either London or Paris. But give me America for a neat farm-house, with a good barn far enough from it to keep the pigs and the manure smell out of the front yard. Here we have no peasants and there is an opportunity for every one.

America, in my mind, has been made what she is by her cosmopolitan condition. She draws from everywhere. All languages are hers. All nations join here, and each brings the knowledge and the views from his own. The Dutch and the Spanish, the Italian and the English, the French and the German, all bring their customs, their habits, and from the friction of all these elements light is evolved. America is especially prone to adapt herself to all sorts of things. Nothing is good enough for her if something better is to be had, and also we must acknowledge that the first results of
this mixture of so many things are many incongruities, yet the general good is sure to come from the apparent chaos. It matters not which of their many tongues, even French, if it is good it is accepted here: while the good thing, over there, will not be acceptable if it comes from antipathic sources. "We have always done this way" is a very good rule.

And not France alone is slow to take a proposed progress. The Anglo Saxons, who would have us think that they lead in every sort of progress, have strenuously opposed the introduction of the metric system, or of the English system in their money, because it was not decidedly English, no doubt, and they stick to their shillings and penceys and yards and pennyweights, while America bravely accepted the metric system, just because she saw that it has been used in her farmhouses and city streets, away 10 years and when you come back none of his implements of cultivation will be the same as 10 years before. He has outprosgest them all.

Even our new spelling reforms show that we are not content to remain stationary. I lately bought a new book, "Newest England," which treats of New Zealand and the wonderful reforms they are making there, faithfully trying co-operation, government ownership, and enough different forms of socialism to scare any conservative. Well, the writer of this book, who seems to love progress, still uses the English spelling—"valuour, labour, neighbour, fav'rous, plough." If we have dropped the useless letters in some of our newspapers, why not keep on improving? Or had we best go backwards and write "myrour" for "mirror"?

But if the Europeans are slow to take hold, there is room for improvement here too. The country is new and we try to go fast—too fast in some things. Our structures are often flimsy, our bridges insecure. Our roads are horrible, our architecture a salamagundi of all ages and styles. With our excellent railroad coaches, we have the most inefficient and expensive transportation. Our express companies' "skin" us to the quick. We need parcel posts such as in Europe. While passing thru Paris, when first arriving in Europe, we had to give out some linen to wash, but could not place it in our baggage. The post office is the only authority for the country. "I will send it to you by parcel-post," said the kind woman. "What, twenty pounds of linen?" "Why, yes, it will cost you 10 cents." And sure enough, we received our linen by mail, 20 miles away, for something less than a cent a pound.

While in Switzerland, a friend loaned me an umbrella, to go some miles in the rain. I ask how I could return it to him. "Oh, by mail!" "By mail!" "Yes, it will cost your 5 cents.

How many of my readers know that we can send a half pound of samples of merchandise to any point in the Postal Union for half as much as it will cost to send the same package to our nearest post-office. Half a pound can be sent to the other side of the earth, to the Fiji Islands, for 4 cents, while it will cost eight cents to send it to the post-office next to your own, in your own county. Yes, yes, America can learn something yet.

The Long-Tongued Fallacy as Applied to Bees.

BY R. C. HUGENTOHLER.

A DMITTING that long tongues in one species of animal life can do wonders in extracting sweetness, and carry it back to the hive, it is not too elaborated as to make it more palatable to those who are fond of this sort of luxury, I am still extremly slow in applying this principle to Apis mellifica. It has been argued with much show of reason that the enormous yields of certain colonies of bees over all others, is attributable to their longer reach of tongue. The micrometer has argued long and eloquently in support of this theory, and the honeyed jury (I dare not say jurymen) have been deeply moved by the long tongue of counsel, and are ready to swallow another tongue, and dish another! It is not yet decided which has the longest tongue.

In order to defend the above theory successfully, it will be necessary, in comparing the results of labor, to have the shorter ended tongues employed in flowers whose chalices refuse to yield up any, or all of the coveted treasures to the short tongues, and willingly bestow it upon the long ones.

In the summer of 1897, when the hills overlooking our town were robed in white, and gusts by thousands sat down to the banquet of the flowers amid a glorious burst of harmony, and drank the health of the same, I had one colony that gathered 140 pounds of nectar, choice enough for the gods. The general establly was 50 pounds. Was the large amount gathered by one colony due to long tongues? I answer no. Can not all honey-bees drain the chalices of white and sweet clover? And even if they could not drain the sparkling cups emitting inviting odors, at what time had they had the chance? What need of cistern-pole when full unto the neck?

Again, in 1899 I had two colonies which gathered 100 pounds—double the amount stored by any of the balance of the apiary. That year,

Smiling May, she promised me that I might smack my lips; But later on green peas were in even shorter supply; And finally, with back to me, as she was going out.

I'll back again next season when time signals thee to rout.

So, sore-disheartened was I; When May's sister came along.

She sang me her sweet-clover song Which pleased my ear and filled mine eye

With joydrops for another year. Until sweet June should reappear.

So melting poetry to prose, we had a fine flow of nectar from a 20-acre field, 1 1/2 miles to the north, which had been flooded by a flood and planted by that handy occupant—sweet clover. Learn of him thy opportunity to watch, and hold on with his might. He, an ardent lover of thin soil, sent his servants on weighty errands after treasure deeply hidden, and which had been carried up, did intoxicate with delight my teeming kingdoms which, when flooding cloud and wind bore down on them, er masse came sailing on low down, till at flood-tide, they filled the main street of our town, scarce over my low head! Fair sight! Well worth a poet's eye.

We conclude then, that the superiority of one colony over many others in amount of nectar gathered, is due, not to the superiority of organs employed, but to superior industry, which characterizes a good colony. In the one, each worker respectively, a particular colony manifested superior results in amount of labor performed because of a superior organ in its individuals, would be manifestly an error. Let us remember in breeding for long tongues to gather a doubtful amount of red-clover nectar (for the meager results from the humble-bee indicate no purple goblets filled), that the characteristic energy of colonies is not dependent upon long tongues, tho they may accompany them. Nature, it seems, in the providence of God, has provided the means by which the new con-"rider between Apis mellifica and the sparkling nectar in the rosy chalice, which, if overcome by the ingenuity of man, would doubtless yield some nectar, but, taking all things into consideration, be undesirable.

—Hamilton Co., Ohio.

Cuban Bee-Experiences—Honey and Wax.

BY GEO. R. O'KONENBAUGH.

T HE rain has been coming down in torrents all day, making one feel like doing something desperate, but instead I came up here on the peaceful mission of writing to the "Old Reliable." On Oct. 10, 1900, I thought I was going to leave Cuba for good, never to see my bees again. I was the most disappointed bee-keeper that ever struck this island, as it was no trifle to lose 475 colonies in 10-frame hives with two supers on each, and one with containing a queen. When I first began to work this sanitary district of the hives were rotten with what I pronounced foul brood, as some of the bees were ship here from Havana city. But I do not now think that it is foul brood, as I tried the McEvoy plan but got a failure. I have by this time pronounced it chilled brood, pickled brood and bald-headed brood, caused by pollen that is poisonous to the brood.

Every colony that I have is very badly affected with paralysis, which is probably also caused by that same poisonous pollen, as their abedous are filled with pollen, and they act as they would in a bad case of constipation. I have tried many remedies, but none proved of any avail.

When I arrived here the second time—Oct. 15th—there were only 170 colonies left, the others having swarmed out, and the hives were badly cut inside with mites. I have extracted about 16,000 pounds of honey up to this time.

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I have not been at all successful here in rearing queens on the Doolittle plan.

In "Gleanings in Bee-Culture," T. Smith says that Editor Pender, of Augusta, gives his experiments, and claims that 4 pounds of honey will produce one pound of wax. What a foolish thing to put into print, and how unreliable the statements are. I claim to be one of the sugar-honey experts of the United States, and I will give a more reliable statement as to how many pounds of sugar is required to secrete one pound of wax. I have written the following rule which can be relied upon as very nearly correct, according to my knowledge and judgment.

Twenty-four cubic inches of comb will hold one pound of honey, and one pound of comb honey contains one ounce of wax; therefore one pound of secreted scales turned into comb will hold 10 pounds of honey. Now I am going to contradict myself right here, but let me digress a little. I don't know how it is, but it is a fact that requires 3 pounds of sugar to produce one pound of comb honey. I have had good, strong colonies that have been fed with sugar syrup from June 10th to Sept. 10th—a Heddon feeder kept full at all times—yet I could never make the best colonies store much over 200 pounds of comb honey each.

If that is true, then good comb-builders require about 12 pounds of honey to make 1 pound of wax, and I have had bees that were supposed to be poor comb-builders that required 16 pounds of honey to make 1 pound of wax. At the foregoing one can readily see that producing sugar-honey or feeding "any old thing" to produce wax, does not pay.

Cuba, Jan. 15.

Questions and Answers.

Conducted by

Dr. C. C. Miller, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—Edcors.)

Saccharin as Bee-Feed.

Some time ago I saw some remarks about saccharin as a bee-feed. Is it any cheaper than sugar for bee-feed or is it injurious to bees? Where can it be obtained?

Indiana.

Answer.—Saccharin is said to be 300 times sweeter than cane-sugar, but I think you will find a dollar's worth of granulated sugar better than a dollar's worth of saccharin for the bees. You can probably get it of your druggist. It will cost you something like 30 cents a pound as much as sugar. and while you may have as much sweetness in a pound of it as in 300 pounds of sugar, you would by no means have the same amount of nourishment. The amount of carbon would not be present.

A Colony Taken From a Bee-Tree.

I found a bee-tree last fall rather late in the season, and I didn't like to cut it, but I was afraid some one else might come along and not think the same as I did. So the next day after I had a little cool, they took up a march to the hive and got it a little but very much. I was after the bees, so after I cut the tree I got the hive ready to put in the bees. I was very careful about the work. The colony didn't seem to be very large, but after I had an opening big enough to look in, I was very much surprised. In place of the hive, I had to get two wash-tubs and a pail. Such a sight—nothing but honey, and yet plenty of bees also.

After I had all the honey out, I started to coax in the bees, but they were not powerful enough to take the hive full of honey. I got them in once, all but a handful. I thought perhaps the queen was among them, but I could not find her there, and they all came out again. By evening, when it got a little cool, they took up a march to the hive and got more, and very nearly all went in. Some got under the log.

I left the hive until the next morning, when I went back to look after the bees. When I got there they just started to come out, and I closed up the entrance and took them home, and placed them along side of my other bees, and opened the entrance again. They started to fly just as fast as they could get out, for about two minutes, then they stopped. There were plenty of bees then, yet, so I sat down and watched them. Pretty soon, to my great surprise, I saw some of the bees coming back with pollen on their legs.

Now, what I want to get at is this: Do you think the queen is there? Why should they carry pollen, and not my other bees? If they don't, let them out all winter? They seem more noisy than my other bees.

Illinois.

Answer.—Very likely the queen is all right. In any case it is best not to disturb them till spring. Then when the weather is good and the bees are flying about, you can decide whether the queen is present by looking whether there is any brood. If no brood is present it may be your best plan to unite it with one of your strongest colonies that has a queen.

Crowding in New Bees.

I have been keeping bees for six years—just playing it while in the ministry, and so keep only a few colonies. I am wintering 8 colonies, using dovetailed Langstroth 10-frame hives with Hoffman frames. I appreciate your answer to others very much, and so will ask one or two myself.

If a hole were bored in the end of a super with wire-cloth tacked over it—bees would the ventilation be helpful or harmful?

2. Would light entering in be helpful or harmful?

3. Would you advise boring a hole there?

4. If advisable to have a hole there, how large should it be?

Illinois.

Answers.—1. I don't know.

2. I don't know.

3 and 4. I would not advise it.

Now that I've answered all your questions, suppose we sit down and talk over the matter a little. Allow me first, by way of parenthesis, to congratulate you on your good judgment in choosing something so interesting to "play at" while working in the ministry. It seems just a little strange that there is so much difference between this country and Europe as to the proportion of the clergy engaged in bee-keeping. In Germany, practically, a very large number of clergy are leading bee-keepers are clergymen or professors and teachers in schools and colleges. When I say "leading bee-keepers" it does not necessarily follow that they devote their time mainly to bee-keeping, nor that they keep a large number of bees. But in their moments of leisure they give earnest attention to the subject, and are among those who have added most to our stock of knowledge on this most interesting subject. Father Langstroth, who brought about the Langstroth frame, discovered the layering-hive, belonged to the clergy. So does Dr. Dzierzon, who has done more than any man living to advance bee-keeping.

But now to our subject. At one time I was on a visit to Adam B. Carlin, who was one of the leading apiarists of Indiana, and was at the time of his death. He was putting on sur plus boxes (it was before the day of sections), and when he put the hive-cover over the boxes he propped up the back end of the cover something like an inch. As he was propping up one of the covers, he looked up and said in his earnest
way, "I consider that very important." Mr. Grimm did not tell why he thought it important, and I think I didn't know enough to ask him. But I thought he was a safe man to follow, and as I adopted sections very shortly after that time, I began to see that he had been right. When he changed to supers, I provided an opening as nearly like Mr. Grimm's as I could by shoving the super forward so as to make a space of one-fourth to one-half an inch at the back. I found that this work quite satisfactory, for one super with 56 sections was very heavy, and on some other accounts I was led to change to the T super, which I now use. With this I still kept the opening at the back by shoving the super forward. A difficulty that I had before noticed to some extent seemed now to be aggravated. The sections next the opening proceeded very slowly compared with the others. The opening to the outer air at this point prevented the bees from building comb to a considerable extent. So I gave up this opening, closing the box entirely above, relying only on the ventilation from below.

After this change, however, the amount of swarming increased a great deal, making it look as if the ventilation rifle was the cause. I tried to keep on shoving these frames with keeping down the best swarming. Another thing helps greatly to strengthen that belief. For years I have generally had a few colonies that were allowed to have three or more stories, with a large open gap between each story, the combs being used for extracting, or kept as store-combs. I do not remember that on these colonies ever swarmed, and I attribute this immunity from swarming in a great measure to the large amount of ventilation that was thus provided. In the light of all this, it would look as if it would be a good thing to have the ventilation you propose, providing you are working for extracted honey, the air and the light not being objectionable. With comb honey the hindrance to comb-building is less, in the way of ventilation, for the holes are not needed, and the bees will be pretty sure to fill it up with bee-glue. It is hardly advisable to bore a hole in any case, for you can get better effects by shoving the super front or back. This distributes the ventilation, instead of having it all at one spot with the hole.

Questions on Swarming.

In your book, "A Year Among the Bees," which I bought of you in the spring of 1887, you say on page 49, "When it comes time to put on supers, they (brood-frames) are reduced to 4 or 5 frames."

1. Do you still practice this contraction of the brood-chamber before swarming?

2. When a colony swarms do you hive the swarm in a contract brood-chamber before swarming?

3. And if contracted or not, do you use starters or full sheets of foundation in brood-chamber?

New York.

Answers.—1. Alas for the changeableness of bee-keepers! It is not safe to count on anything to-day the same as 15 years ago. Spring, I day, practice contraction now. Up to the time of putting on supers I give all the room needed for brood-rearing, even to two stories of 8 frames each. If the bees will use it. At the time of uncapping, I will put in but 5 of the best frames of brood, if the colony has more, and give it enough to make 8 if it has less. Some would say that is contracting, and some would say it is exchanging room in the super for room in brood. At any rate, my practice is to have each colony have 8 frames of brood at the time of putting on supers.

2. If I were hiving a swarm, I would give it four or five frames of brood to start with, and add more later.

3. I always use full sheets of foundation, of which I do not wish to be sure of all worker-comb. One of the abilities of German bee-keepers, the late C. J. H. Gravenhorst, practiced giving a frame of foundation for each frame with narrow starters, counting that very little drone-comb would be built in, and when they were filled giving enough combs or full sheets of foundation to fill out the hive.

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The Afterthought.

The "Old Reliable" seen thru New and Unreliable Glasses.

By E. E. Hasty, Sta. B Rural, Toledo, O.

The Bee Keeper and the Bee Supply Dealer.

In "Colorado's" letter and its replies, on pages 69 and 70, we have a first-class rumpus, albeit by no means a new one, and not likely to become a closed incident very soon. How much human nature can see in man when we get him in print once! Man who doesn't like a situation seldom fully appreciated by the man who doesn't like it. Just hear the latter fellow's replies pop off—as he talks of buying a car-load of supplies "right unseen," and a thousand miles off." Not so bad as he imagines." "Do not consider the dilemma of our Colorado friend a serious one." "Very little trouble in getting or giving satisfaction." Ahem! And, in good sooth, if the fellow is plump and candid enough, we rather like him, at least to the extent of a good laugh. "Why should I contribute to make it perfectly safe for my customers to order of my competitor? If I have given them satisfaction, and no cause to complain, let them keep on buying of me." And we get reminded that much of the trouble arises from our own too fierce cheapening of everything we would do well to stop and consider—yes, d's a large amount of considering. First a pinch of "live" and then a pinch of "let live" should go in the peace-pipe which we are to smoke. The two little girls who never squarred reported their secret to be. "Addle lets me and I let Addle." But, as to the manufacturing Addle we don't quite see our way clear to "let Addle" while she is in her present frame of mind. For one thing she doesn't realize what a prodigious lot of mistakes—some annoying, some expensive, some both, but not entirely spoiling the goods— go out to her absent customers. I take it that part of these are scoured about a little, and salved over by a little apology, and the lawyer part never necessary at all. New York.

A Trick the Bees Played.

That trick which Mr. Bauckman's bees played, page 60, was a very unusual one. It is unusual for a swarm to plunder the home hive, and again unusual for a plundered hive to survive and amount to something later on.

Keeping Bees on Shares.

Yes, that's so; the man who is keeping your bees on shares can not be dissimul very well if unsatisfactory. Also, if the season proves so bad as to afford no hope of anything to divide, he might take himself off without saying a word. You think your bees have a keeper when they are totally neglected. Page 66.

So Utterably Uttered, you know.

The Utter case being so "utterly uttered," and all that's fairly utterable being already uttered, I think I'll skip it, and forbear to utter. (Or thusly our bread brandeth butter.)

That German Uncapping Fork.

So Mr. Kvetzinger has an uncapping fork—but does not tell his editorial visitor whether he has ever "made it go" or no. Suspicious circumstance. Motors that never "move" are not as a class a very hopeful class. Perchance the uncapping fork may be the idea of that kind of amateur who wants to lift off the cappings without taking any of the honey—and the amount of time it takes to do it may not appeal to his mind very strongly. Page 68.
Good Prospects for a Crop.

My bees are wintering very nicely. They have a good flight Jan. 23rd, and prospects are good for a crop of honey this year. I think white clover has been damaged any this year.


Worms Destroying Alfalfa.

Bee is in fine condition. They bred up strong in October, with so plenty of first-class stores I expect them to come out all right in the spring. I have a few bees prevented last season after July, but almost nothing earlier. Worms took most of the first crop of alfalfa; I am told that these worms drove at least one family away from their home, crowning up the north side of their dwelling until they were two inches thick on the roof.

Other Colorado people are as much down on sweet clover as I was some years ago when I wrote it down in the American Bee Journal, and got a good drubbing for my doings. I am going to plant two pounds of it on my own land, "just for greens," and chance it. Some of our neighbors say if I do I will rue it.

The bee industry in this country is in its infancy, the understand there are about 4,000 colonies of bee in the county, of which less than a dozen people own from 50 to 250 colonies each, and the balance are scattered mostly among people who are "not experimenting." I have a lot of requests for the future are very bright indeed.

We have lately organized the "Lamar, Colo. Bee-keepers Association," of which your humble servant has the honor to be corresponding secretary. James H. Wing, Publisher, Co., Colo., Jan. 4, 1901.

P. X.—Poganne (Tarloq) got back from Alaska in September, and says he found humbe bees, also manes, carpenter, and tal- or bees, 40 miles above the Arctic Circle. J. H. W.

Bee Keeping in Clarke Co., Wash.

Mr. G. W. Durkee, of Wisconsin, a reader of the American Bee Journal, has sent me a paper with inquiries regarding bee-keeping in this part of the State of Washington, and thinking that many other Washington readers can better afford to be interested, I beg to answer Mr. Durkee thru this medium. The questions are as follows:

1. Are you located near the Columbia River? From what does your main honey supply come? Honey from clover, white clover, sweet clover, and honey-dew? What is your average surplus per colony in a fair season?
2. What does honey sell for? How do you winter your bees? What do sections and foundation cost out there?
3. How do you winter your bees? What are bees worth per colony? Is there any opening for a bee-keeper in Clarke County?

Answers.—1. Yes, on the edge of the highland joining the lowlands along the river. White clover, fireweed, and Syringia are found in the main part of the region, honey is from the order named. We have no honeycomb and sweet clover, but once in a great while we get some honeydew, very rank flavor in it. But in average winters this stuff is all right for stores. Bees have a sufficiency of winter food, having a good flight for more than a couple of weeks at a time.

2. This question I am unable to answer further than what I have stated in my reports in this paper.

3. I have sent the market quotations in this paper for San Francisco, and add to those prices about one cent for comb and one-half cent for extracted honey, and you will come very near the prices that honey sells for at wholesale in Portland, Ore. Of course, if you are not your own salesman you will have to deduct freight, commission, breakage, etc., to get the net prices realized by the producer.

4. I winter the bees in one-story single-walled hives. I put two sticks 3 x 4 x 11 inches, one piece of wire fencing, then a barapu cloth, and one-half dozen double sheets of newspapers and the flat hive-covers of our frames, and the top of the sheetard to keep off the rain. In the coldest part of winter I leave the whole entrance 3 x 12 inches opened when possible, and in February, in the coldest part of the year, in February, I again contract the entrance to about 3 x 3 or 4 inches for an average colony, as I am always kept busy doing business, and have ten or twelve less or very small, they are better able to keep their combs and inside of the hives free from dampness and ice. The bees in keeping up the temperature to rear their young. I have no doubt it would pay in the coldest climate to have the top of the brood-frames than I do, for then so much ventilation would not be necessary so that the consumption of winter stores would not be so great. However, my bees have come thru the winter season in very good condition, and have never used more packing than mentioned above.

5. Sections are high in price. I have a 1901 cases purchased by me, Portland, Ore. In No. 1 sections are quoted $4.75 per 1,000, and foundation from 50 cents per pound for honey to 3 cents per pound for wax, in thin, in 10 pound lots. If you come out here to start in bee-keeping, I would advise you to purchase a frames somewhere, and make your own sections, frames, hives, etc. Lumber is cheap. While we have no bawoo, spruce is plentiful, cheap, and good to make sections from. I have found Oregon and Washington cedar to be the best material I know of for hives and frames. The man with average intelligence can make his own hives, frames, sections, etc., with the saw mentioned above, and even one able to make his own bee-business, even after a poor season, when money is scarce with the bee-keeper. Of course, if you have a little it would be better to purchase the frames and the Bee-Culture, and read the directions there given for making hives, and the proper use of the Barnes frames. I can not grudge, I hope the editor will not object to the special recommendations given to the saw and the book, as I give them for the benefit of bee-keepers, and write from actual experience.

I feel I owe much of my success in bee-keeping to the American Bee Journal, with all its beloved and able writers, that I want to do what I can towards paying a little of the debt.

7. Bees can be bought in box-hives from farmers here at all prices, from $1.50 to $2.50, but of course it is much cheaper to find enough bees in that way to make a reasonably good start, and you will perhaps also have to work more bee-keepers will not sell per colony for bees in one-story dovetailed hives.

There is very little territory in Clark County worth anything for a specialist beekeeper that is not already occupied, but there are good localities farther north and along the Columbia River.

T. H. WAALE.


Bee Cleaning Up Unfinish Sections

As autumn was closing I had 50 pounds of unfished sections. I desired to use these for hives the coming season, I concluded to let the bees empty them by placing them in tiers over the boxes (in same position), and allowing but one bee to enter at a time; but having a rich neighbor owning the square above (in town, on the square also, the very much encumbered), I concluded it would be unsafe to allow him to do box "spying" as he would no doubt win over my kingdom with his own; so I began forthwith the tedious process of unscraping and extracting the contents of the section boxes. After they were all unscraped and tiered about 30 feet to the westward of my western property, I put them on the new bees, and worked them on for some time. I was attracted by the buzzing industry about that hive. Watching with watchful eye the opposite columns, as first one, then the other, gained the ascendency, now peering...
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You should, by all means, have this most modern catalogue of modern times. It is bound for ever in anything good in vegetables, fruits, flowers, plants, trees, shrubs, etc. It contains 55 novelties in vegetables and fruits never offered before, has 800 large pages, several hundred illustrations, and is the best and most complete of its kind. It is practical, up-to-date treatment of every subject and is one of the finest ever written. The first edition alone cost over $300,000, so that we will not reissue it until the demand for it is much greater. If you want it, we will send you a copy, but we request that you send us $2.50 for it, which amount is guaranteed to be refunded if you are not pleased with it.

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If you are interested in Sheep in any way you cannot afford to be without the Sheep Paper published in the United States.

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Have your interests, your husband's, his industry, fully guarded. Your first, foremost and all the time.

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WOOL MARKETS AND SHEEP, CHICAGO, I1. Please mention Bee Journal when writing.

not prohibit him from believing it, the others did.

That bee-keeper who has been asleep for 20 years (page 177, 1900) seems to be wide-awake enough now, and after Prof. Cook. Very good to show how the facts bring out facts. I wonder if he dreamed those things during his 20 years' nap. If so, he is to be congratulated, and is perhaps the only one in the world, for I do not think that the interpretation thereof is sure. My own observations compel me to agree with him in the main, and I have come to the conclusion that to make me think that in the majority of cases an issuing swarm does not know where its new home is, is a mistake, and that in the instances I think they do know where they intend to pitch their tent. Two instances of this, in the case of my notice last week, in which I left for parts unknown. One, after going about a half mile, clustered again, and re- turned. The second, as I have mentioned above, was the same manner, the one was found on a fence a mile or more from the nearest apiary, where it remained two or three days after it was discovered. I do not know how long it had been there before it was found.

On the other side of the argument: Two seasons ago a large swarm of hybrid Italians—the largest I ever saw—left for the woods, and I thought to take them. They started in a direction a little south of west. I threw several pails of water among them with a good sized pump, but they did not retard them from the direction in which they were going, and headed them northwest. I followed them for a mile and a half, but I saw no more of them, tho I was not at all tired! They were now working toward the south. They just a little bit longer, and I should have turned their course again. It seemed to me that they were making for a certain place. I have an idea, but I am not sure. It may be that a prime swarm is more likely to have a future home in view than an after-swarm.

I believe that for some time, the black or German bee is a better all-around bee than the Italian, especially if working for comb honey, in which cases I think our experience is surely more pronounced. It will hardly warrant my expressing views on the subject—that if the same amount of labor and time had been spent improving the black bee that has been spent in improving the Italian. It would be a much better bee for the localities where the season is short, and perhaps especially favorably where the season is longer. I have been trying the Italian bees and the cross for the past four seasons, and so far the black bees have proved superior. But, if there were a demand for bees I should want the Italians for profit every time.

In this county the bees can be put back on the winter stands about the middle of April. If the weather is fine there is usually enough brood to keep up the population. I have been advising that about the middle of June, when white clover begins to bloom; then the main flow is on which lasts about three weeks. Very little swarming occurs before the beginning of the flow. The black, if strong, will usually cast one or two swarms, and then devote their time to storing honey, while the Italians can be depended upon to swarm twice, three times, or even more. In 10 to 20 days the prime swarm can be expected to repeat the performance. I have had them swarm repeatedly before the frames were even filled. I have been unfortunate in the strains of Italians I have seen, but I have had queens from Ohio, Pennsylvania, and Illinois. The strain was swarming, better com-bidders, and work more readily in the sections. It is only to the extent of belief that I think the Italians could be handled so that they would produce as much—or possibly more—honey in this county, but it would require more labor and more satisfactory results in doing this I will tell of it later on.

A. R. BUCHER

Publications, A Mother's Love of Bees, etc.

Poor Season—Wintering Bees.

Last season was a poor one from beginning to end. There were plenty of flowers, plenty of rain, plenty of bees to gather the honey, and a good-sized crop, but there seemed to be no nectar secreted
Langstroth on... The Honey-Bee
Revised by Dadant—1900 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound handsomely in dark blue buckram and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son.

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Fine lot of Choice Tested Honeynest queens. Live daughters of select imported queens and native Welsh queens, reared 3/4 miles apart, and mated to select drones, $1.50 each; untested warrantied queens, from same breeds, either strain, 75c each. No bees owned nearer than 25 miles. None impure within 5, but few within 5 miles. 2 yr. experience. Discount on large contracts with dealers a specialty.

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Guntersville, Ala.

Please mention Bee Journal when writing.

The Belgian Hare Guide
This book is acknowledged to be the best of its kind in the market. It is complete and practical in all its parts. It is an absolute necessity for the bee-keeper. It follows and explains many other subjects pertaining to the industry: History and Origin, The Belgian for Utility, The Belgian for Fancy, The Basin and its Cultivation, Bees and Flowers, Bees and Hives, Horses and Hedges, Food and Feeding, Feeding Green Stuff, Mating, Rearing, Breeding, Mating, The Hare's Yard, Posture, Scoring Curves and Judging, Belgian Hare Colour, Breeding, Selecting, Inspecting, Divisions and Remedies, Preparing for Exhibitions, Owning and Showing, Capturing, Queries and Answers, Appendix, Register of Pedigrees, The Belgian in England, The Belgian in China, England, and Foreign Countries.

Gentlemen: I have been reared on a number of queens during the past season, which were introduced without a single failure. I think there is no excuse for losing queens this season, if the proper course is pursued, and precautions taken. Always be sure there are no queen-cells and no queen in the hive before releasing the new queen. Some of the caged queen in the hive have been killed or eaten by the bees. I believe in keeping the bees too. If you have a fair number of bees I will sell 1900 a Failure—A Wheat Country.

The past season was a poor one for honey in this locality, I did not get any, and about the only man that did was an old gentleman that took a large Ji nee. I have gathered about 200 pounds of nice white honey; he has a near neighbor that raised alfalfa, and the bees love to go for alfalfa in the summer. I have had a large number of bees this season, and I think it would have been the easier if I had allowed the bees to go for alfalfa. I have been a good many beekeepers this winter, and all report 1900 a poor year, and many of them are very dissatisfied with the bees. We had an abundant rain during the last season, and the weather being cool and damp, the beemakers are going to have a hard time. It would have been better to have a hard time. It would have been better if I had not get a crop of honey. I will sell a part of my bees in the spring, and run what I keep for comb honey.
lieve that the longer the wax is in cooling, and the longer it is in the liquid state, the clearer it is of dirt. Slow cooling might not make any difference in the quality of the wax after it has passed a certain temperature, but fast cooling will almost always cause it to crack, and this I wish to avoid. As a rule, when I extract wax I have quite a lot of it which I pour into large pans placed upon the floor, and cover with sacks and such available material, and it is generally satisfactory.

The honey crop was short in this locality the past season, and white clover was a failure. I have made a practice of stimulative feeding for several years, and I think it pays when properly done. I keep up the feeding and until after fruit-bloom was exceptionally good. After fruit-bloom I began feeding, using the Boardman feeder early in the morning. I continued to feed until within a week of bawsswood bloom when I discontinued, thinking the bees were getting enough from the stores to keep them up until the bawsswood bloom. But by that time nearly all were light in honey, the very strong in bees, and it took the first three days to fill up below. Then the weather became so cold that it threatened frost, and for about four days they stored but little honey. The colony on the scales stored 82% of that being but little fall honey, and October being such a warm month, bees flew nearly every day, using up their stores, so quite a number of colonies were a little light when the time came to put them into the cellar. But we hope for better years to come. I enjoy reading the report of the National convention, and I think all bee-keepers should be subscribers to the American Bee journal.

G. H. FREY.

Linn Co., Iowa, Jan. 10.

YELLOW OR WHITE
SWEET CLOVER SEED
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For sending us One New Subscriber for a Year.

There has been so much written about both the white and the yellow variety of sweet clover, that we will simply say here that if one of our present regular subscribers will send us St with a new name for this year, we will mail, postpaid, to the one sending the new name and the dollar, either one pound of yellow sweet clover seed, or two pounds of the white clover. This is a good chance to get a start of both kinds of these honey clovers. Better send two new subscribers (with $2.00) and get the three pounds of seed.

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CHICAGO, ILL.

HONEY AND BEEWAX
MARKET QUOTATIONS.

CHICAGO, Feb. 19.—Fancy white comb, $4.10; No. 1, white comb, 120$; No. 1 amber, 180$; No. 2 amber, 185$; No. 3 amber, 200$. Fancy comb and honey, $65$. White extracted, $75$; amber, $65$; dark, $65$. Beeswax, 25c.

R. A. BORNEIT & Co.

KANSAS CITY, Feb. 19.—Fancy white comb, $3.80 per lb. dark, 120 per lb. Light, 100 per lb. Demand fair; receipts light. Beeswax, 22 2/3c.

W. C. CLEMONS & CO.

Successors to C. C. Clemens & Co.

CINCINNATI, Feb. 9.—The market for comb honey is becoming very bare, alike the prices for combs and honey. Old dark selling for 60c no demand for darker grades. Extracted in fair demand; dark comb for better grades from 65c to 1. White clover brings from 95c to 1. Beeswax, 25c.

C. H. W. WEBER,

ALBANY, N. Y., Feb. 11.—Honey market is dull and prices nominal; light stock, but the cold weather is bad for it. Combs, in good condition, not candied, white, 150c; mix, 135c; dark, 125c; white, 105c; mix, 95c; dark, 85c.

H. R. WRIGHT.

BUFFALO, Feb. 8.—Some more active this week, and may close rather better than expected awhile ago. Fancy lapped comb, 150c; No. 1, 130c; No. 2, 115c; light, 75c; dark, 65c. Beeswax, 23c to 25c.

BOSTON, Feb. 8.—Fancy No. 1 white in cartons, 17c; No. 1, 150c; No. 2, 125c; No. 3, fancy. Will not statute on call for dark honey this year. Extracted, 95c; fancy, 125c; light amber, 75c. Beeswax, 2c. No. 1, 13c; No. 2, 11c.

H. B. BLAKE, SCOTT & LEE.

NEW YORK, Feb. 9.—Comb honey is being well cleaned up on our market. The demand has lessened to quite an extent, on account we present, of the high price which has been ruling. Fancy white still brings 150c in a small way; No. 1 white, 130c; buckwheat, 10c; extracted rather dull and not much doing. California white, 100c; white, 85c; dark amber, 70c. Beeswax steady at 25c.

DETROIT, Jan. 19.—Fancy white comb, 85c; No. 1, 110c; dark amber, 125c; extracted white, 75c; fancy, dark amber, 105c. Beeswax, 2c to 25c. No. 1, 12c; No. 2, 10c; No. 3, 8c.

M. H. HOWRY,

SAN FRANCISCO, Feb. 6.—White comb 13c; No. 1, 11c; No. 2, 9c; No. 3, 8c; extracted, 1c. Blackcomb, 3c. Buckwheat, 1c. Beeswax 10c. No. 1, 12c; No. 2, 10c; No. 3, 8c.

Consider the light output of honey last spring coming from California. The prices and over-2/3's are of tolerably liberal volume and are more or less of amber grades. The market is slow at the quotations. It is reported on good authority that a substantial portion of imitation honey is being dealt out in considerable quantities by which accounts in a great measure for the very limited business doing in the past year.

HONEY MARKET.—We may have a customer within a short distance of you who wants your honey, or beeswax, and you have to close with all the markets; therefore we want you to send your information, standing quantity, price, and any other item you want to supply, to the market. We will try to make the business for you at a low price. Reference 12c, $100, 10c for any business man in this city.

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ders are already being entered and will be filled in rotation. Do not neglect to
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(See page 148.)
The American Bee Journal

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OBJECTS:
To promote and protect the interests of its members.
To prevent the adulteration of honey.
To prosecute dishonest honey commission men.

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Send us TWO NEW SUBSCRIBERS to the Bee Journal, and we will mail you a copy of either the Basswood or Alfalfa Honey, as a gift. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both for $1.75. But surely anybody can get only TWO NEW SUBSCRIBERS to the Bee Journal for a year, and thus get the book as a premium. Let every body try for it. WILL YOU HAVE one?

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One Untested Italian Queen FREE as a Premium for sending us TWO new subscribers to the American Bee Journal for one year with $2.50, or, one Tested Queen free as a premium for sending us FOUR new subscribers with $4.00.

We have arranged with one of the oldest and best bee-keepers (having many years' experience) to rear queens for us this coming season. His bees average quite a good deal the longest tongues of any yet measured. The breeder he will use is direct from Italy, having imported her himself. Her worker-bees are large, somewhat feather-colored, very gentle, and scarcely requiring veil or smoke. They stored red clover honey last season.

Orders for these fine, "long-reach" queens will be filled in rotation—first come, first served"—beginning about June 10th. It is expected that orders can be filled quite promptly, as a large number of nuclei will be run. All queens will be guaranteed to arrive in good condition, and all will be clipped, unless otherwise ordered.

CASH PRICES of these fine queens will be as follows: Untested, $1.00 each; Tested, $2.00 each. Send all orders to

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20 cents Cash paid for Beeswax.

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Best White Alfalfa or Basswood Extracted Honey

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This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.

A sample of each, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—one 60-pound can, 9½ cents per pound; two cans, 9 cents per pound; four or more cans, 8½ cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. The cans are box.

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This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms in Wisconsin. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

Order the Above Honey and then Sell.

We would suggest that those bee-keepers who did not produce enough honey for home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

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GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.
The National Convention Report is omitted this week on account of more copy not being received in time from the secretary. We regret this second break in the long "continued story," as we desire to complete it as soon as possible.

A Glucose Test.—Editor E. R. Root said at the Wisconsin convention that adding an equal amount of wood-alcohol to honey, stirring well, and then letting it sit for ten minutes, is a good test for glucose in honey. If adulterated the compound would show a milky appearance, and remain clear if pure. This is a simple test, but we presume the wood-alcohol must be absolutely pure itself to start with.

Bee-Keeping at the Pan-American.—At the last Ontario County (N. Y.) Bee-Keepers' convention, Mr. O. L. Herschier, superintendent of the apiarian exhibit at the Pan-American Exposition, said that it was proposed to have a commodious building for the accommodation of beekeepers, that bees alive were to be exhibited in regular yards as kept in different lands; and also that there would be shown articles from bakeries in which honey is used as an ingredient. The New York beekeepers will be allowed to exhibit at least 5,000 pounds of honey, about equally divided between comb and extracted. The island of Cyprus is to be given the space to furnish the packages in which it is to be exhibited. The State will also furnish the cases for the comb honey. All beekeepers in New York, who have any honey suitable for exhibition, should address Mr. Herschier. He will buy the honey outright, which, however, he will not do until the crop is harvested.

Big Yields of Honey.—The Twentieth Century Farmer has been telling a whopper on the 19th century bee-keeping. Here is what it publish recently.

CYPRIAN HONEY. RECORD.

The next breed of bees imported came from the island of Cyprus. They are called Cyprians, a name not always used for bees. The Cyprians hold the world's record for the amount of honey gathered by one colony in a single season. On New Year's Day in 1901, a well-known apiarist, taken 1,000 pounds of extracted honey from one colony of Cyprian bees. This was probably due to a natural fault—they are very nervous, and will defend their store of honey to the death. They cannot be sold—the by-products. But if aroused the way, only to conquer them is with a mild dose of chloroform. On account of their disposition they have not become popular.

Upon receipt of the Farmer containing the above paragraph, we clipped it out and sent it to Mr. Doolittle, to show him what was being credited to him. And here is what Mr. D. says about it:

The above reminds me of the "man who poked up three black crows," of ancient time, while the truth was that "he threw up something as black as a crow," and told his neighbor so.

My greatest yield of extracted honey from a single colony of bees was in 1877, when one colony gave me the large yield of 550 pounds, besides producing enough to winter on—or about 350 pounds more. So that the total gathered by this colony was not far from 900 pounds, which, as before stated, was about what was consumed while gathering, or during the summer months. But this was before any Cyprian bees were imported. However, in 1901, the bee doings of this 900 pounds being those best of all bees, all things considered.

But this record of 550 pounds has been outdone several times. E. Gallup, while in Iowa, went considerably above 600, and F. H. Ellwood, of this State, produced 640 pounds from one colony, if I am correct; while a Texas bee-keeper obtained 1,000 pounds, or a little over, from a single colony in the spring and its increase. This latter I have spoken of in print several times, always crediting the matter to the State of Texas. It would now appear that it has grown, like the crow story, till I myself produced the 1,000-pound yield, and did it with Cyprian bees, but the Cyprian part is wholly "manufactured," for, if I am right, this 1,000-pound yield was produced before any Cyprian bees ever came to this country.

G. M. Doolittle.

Onondaga Co., N. Y., Feb. 29.

That "Uter-"ly Glorious Victory won down in New York State last December grows more glorious all the time. Editor E. Root, in Gleanings in Bee-Culture, has a paragraph editorial with this quoted heading, "But 'Twas a Glorious Victory." Then right under it he gives the following from Josh Billings:

"Sum people that go to law for damages sometimes get more than they want.

After that comes this paragraph referring to the final settlement of the Uter vs. Uter suit:

Just as this form is going to press I have received information that the plaintiff, or, as he is called, Fruitman Uter, has decided not to carry his case to a higher court, and he has settled by paying all the costs, which can hardly be less than $250 or $300. Thanks to the National Bee-Keepers' Association, the defense was so strong that the other side knew there was absolutely no show for them. They were afraid to let him have it, and they were afraid that he knew there would be nothing left of him if he attempted to put up another fight. At the same time it is a sobering reflection to every one of our subscribers who is not a member, Send in a dollar to General Manager Secor, Forest City, Iowa, and have a hand in this glorious work. There are more battles to fight, and you need your help, and you must needs ours.

Yes, Manager Secor ought to be kept busy now taking in the membership dollars. Surely, every bee-keeper should desire to belong to an organization that does such effective work. It is more convenient for the remittance of the American Bee Journal to send their membership dues to this office, we will be glad to receive them and forward to Mr. Secor. We would like to see every one of our subscribers get into the National Bee-Keepers' Association. You can't help in a better way for the uplifting and defense of bee-culture.

The Production of Comb Honey.—Mr. F. Greiner reports in the American Bee-keeper some notes from the Ontario County (N. Y.), Bee-Keepers' convention held last Dec. 13th and 14th. Referring to an address by W. Z. Hutchinson, he gives the following important point:

As soon as it is advisable to put on the honey-boxes or supers, give a super full of drawn comb. This will keep the honey out of the brood-chamber. The hive in general is divided into several empty sections, or such filled with foundation, do not fill the bill here. If the bees are not in the habit of storing their honey above, they are apt to continue thus through the season; when they form a habit of filling the brood-chamber with honey, in the beginning of the season, they then are slow to enter the sections any time after. Mr. Hutchinson said at one of the meetings of the bee-keepers that a rush of drawn comb a case of honey was gained above what other equally as good colonies had made supplies with empty sections.

The swarms are treated according to the Heddon plan. Mr. Heddon has gone a good deal of experimenting with swarms, hiving them alternately on combs, foundation, and starters. The combs always give the poorest results with him, and the foundation, aside from insuring perfect combs, proved a total loss. No young swarm is allowed more than five Langstroth frames or one section of the Heddon hive. Contraction is confined only on the swarm.

He has come to the conclusion that it is not always profitable to supply the bees with foundation. During a good flow he claims wax is produced professor anywhere, and if there is no opportunity to use it somewhere a large portion of it is lost. And, after all, he exprest his opinion that good, strong workers-combs were not too dear at the expense of the foundation.

A Looking Glass placed before the hive entrance is advised in the Leipziger Bienenschau, to scare away robber-bees. Perhaps it is thought that if the robbers could "see themselves as others see them," they'd quit their meanesses.
A Successful Roof-Apairy in Chicago.

BY G. E. PURPLE.

To relate 'my experience in keeping bees in the city, and how the idea occurred to me to keep them on the roof, I will have to be our friend, or a few.

Like a great many others, my boyhood days were spent on a farm. When a boy 16 years old my father took some bees to keep on shares. It was not long before an interest in the little creatures was aroused in me, and I became quite a student of their ways, studying them as best I could while using a box-hive. After keeping them about two years in box-hives, having the usual failures one has when he works with them blindly (one may say), I secured a copy of the "A B C of Bee-Culture." I began reading it and could not bear to drop it until I had read and reread it all thru, and from that day to the present time my enthusiasm has not abated. Not being blest with an over-abundance of time, I got thru with that number of hives and colonies, by the next season I had all the bees in movable-frame hives. I had six or eight colonies at the time. Let me say here that before this we had returned to the original owner his share of the bees, so all we had then were our own.

The next two seasons were very favorable ones, and by the end of the second we had 30 or more colonies and succeeded in getting over 2,000 pounds of honey from 20 colonies, an unheard of amount in that country (northwestern Missouri).

The next three or four years were either entire failures or on very little surplus. Having a very good position outside the city it was impossible for me to abandon the farm and beapos;fatherapos;s care. Father all this time had left the care of the bees entirely to me, and when the responsibility fell to him he was little prepared for it, and consequently the bees were more or less neglected, and gradually dwindled. During my stay in Minneapolis I made the acquaintance of persons who kept bees, and we spent many an hour talking over our experiences, and enjoying ourselves as only enthusiasts can.

Owing to the financial disturbances of 1893, I found it necessary to change my residence from Minneapolis to Chicago, and have lived here since. While riding home from work one evening I saw a man on a car reading the "old reliable" American Bee Journal. Of course I knew he was a bee-keeper, and knowing all bee-keepers are jolly good fellows, I ventured to speak to him, and he proved to be our friend Mr. Mead, I afterwards called on him, and we together examined his bees. I learned they did not disturb his neighbors, and that there were many nectar-yielding plants in the vicinity. That call revived in me the "bee-fever" again, and I determined to get one or two colonies as soon as I could I find a place to keep them.

Soon after that I moved farther out, and while on the roof one day I thought it a capital place to keep bees, and the next spring I sent down home for one colony, and tried it. The colony father sent was not a very good one, so I bought two frames of brood and a queen from Mr. Mead to build them up. They did far better than I expected, produced three frames of honey and shipped to the extractor that season. The bees wintered well on the roof, pack in planshavings, and the last spring I sent for all there were left on the farm—only four, and one was dead when it arrived. I started them out four good, strong colonies. That summer they increase to seven, and I got an average of 150 pounds per colony.

In the fall I moved to the present location, and the following winter (1898-99) was very severe on the bees. The location is an open one, surrounded on all sides to their stores, and one colony died with plenty of honey in the hive. Only two came thru strong, and four were very light. We had a very early spring, and I never before saw bees build up so rapidly, so by the time the honey flow came on, they were all good and strong. But it was the first season I ever had reason to complain of my luck: I lost queen after queen, both old and young, and only increase 50 colonies, these producing over 900 pounds of honey.

The next winter, not having them fix properly, I lost two, and doubled others up. I started with five of my own, and bought 10 more, increased to 21, and produced nearly 2,500 pounds of extracted honey. The engraving shows the very one Saturday in August, when Editor York called with his photographer, and took our pictures after we had (as an old friend says) "climbed Jacob's ladder to the bee-heaven." (See first page).

When one keeps only a few bees, more for the pleasure than the profit, and does not have the work connected with them at odd times, he can keep close watch of each individual colony, and get better results in proportion to the numbers than with a large apiary, and they will amply repay him for the little outlay in the start, and for the time spent in taking care of them.

The roof as a place to keep bees has its advantages as well as disadvantages. Things in its favor are that the bees are up out of the way, and there is no fear of their disturbing any one. (I have never heard any complaints against mine). The roof being nearly level, and covered with clean gravel, there is nothing to hinder the bees, and when they swarm it is easy to find the queen. (I clip all my queens). While the drawbacks are, getting every-thing up there, as well as getting the honey down to ex-tract and handle, and some days the wind blows so hard that the bees can scarcely get to the hive at all. Many think it quite a novelty, but the novelty has worn off with me, and I derive a great deal of pleasure as well as profit from my bees, tho' kept on the roof of a modern flat-building in a big city.

Feb. 1, 1901.

[We might add to the foregoing that Mr. Purple's honey source is principally sweet clover. His apiary is located about five miles west of the Lake, and is a very neat one. He reaches the roof thru an opening directly above one end of the porch at the rear of the third flat in which he lives.

Mr. Purple is a very pleasant gentleman to meet, and thoroughly understands bee-keeping. He would be successful almost anywhere with bees, provided there was plenty of nectar for them to gather.]

We spent a delightful hour at his roof-apairy, and were surprised to see how abundantly the bees had rewarded his efforts during the summer.—EDITOR].

A Review of "A B C of Bee-Culture."  

BY PROF. A. COOK.

I have been a pleasure to review "Dadant's Langstroth" and "Cowman's Honey-Bees," as there is so much to commend and so little to criticize in these volumes, each of which is a credit to our nineteenth century bee-culture. They are books which deserve to live and which will live. I come to the pleasant duty of reviewing "A B C of Bee-Culture" with no less of gratification. Without doubt this book has exerted a wider influence upon the bee-keeping world than any others ever written. Even its rivals can only be joyous in its extensive sale, as they know that wherever it goes it goes to help and to bless. I am the more pleased to do this, as I have received several letters thanking me for the reviews of the other books. These reviews certainly call attention to mooted questions and will be almost certain to incite criticism. I shall criticize no book except in such a manner as to give good reasons, I believe that there is an error, but it is quite possible that in some cases I may be in the wrong.

Page 2—Mr. Root says, "Candidly, I don't know any better way to prevent second swarms than to watch carefully when they are about to form, and act on them, climb tree, etc., until they are gotten safely into the hive." I believe that the experienced bee-keeper will rarely be troubled with second swarms. One is enough for the west results, and some of the many ways and, should be used to prevent the second swarms. I think the way first suggested by Mr. Heddon is certainly the best. The principle of this is in placing the new swarm close beside the parent colony, and the day before the second swarm would be expected remove the old hive to another part of the apiary. Of course, the older bees will go back to the old location, to join and strengthen the swarm, while the old colony will be so thinned out that very rarely a second swarm will
issue. I used this method for years and with no failure, so far as I knew.

Page 6—Is not Mr. Root a little too enthusiastic regarding alfalfa honey, when he says "the quality of alfalfa honey is probably superior to anything that the world has ever seen or produced," and his "claim to be something of a judge of honey, and I think alfalfa is no better than clover, linden, sage, and I think I might find even others quite equal to it."

Page 7—In California it does not take three years to get bees established. All Root says further that alfalfa, at any rate, the maximum yield the very first year in the later cuttings. Alfalfa is a wonderful crop. I often say that I think I would rather have a good alfalfa field than an orange-orchard, because I have known several cases where the oranges must have been made at a second hand, and it is not uncommon to secure two tons per acre from a cutting. In this same connection, Mr. Root hints that there is so much sweet in alfalfa that the bees even gather (see) from the dry hay. This is nothing at all. Even I do not think that too much can be said in favor of alfalfa for it is a marvelous crop.

Page 10—Mr. Root says that digestion is the separation of the nutrient part of the food from the non-nutrient, and the conversion of the nutrient into a liquid fit to mingle with the blood and thus nourish the body of the insect. This is given as a question but he was not happy in his selection of authority. Digestion is simply the process of feeding. It is the process of rendering the food osmotic. Many authors say that digestion is merely to dissolve the food. This is not a good definition. Some of the food that is already dissolved, like sugar, is absorbed by the bee, but must be digested before it can be absorbed from the stomach into the blood. That is before it is osmotic. Absorption, not digestion, does the work of separation. One other of our bee-books makes this mistake.

Page 11—In speaking of the urinary tubes appended to the stomach, Mr. Root calls them "the malphigian tubes." It should be "malpighian," as they were named from their discoverer, Malpighi, a distinguished Italian physiologist and microscopist. Mr. Root further says that "it is not certain what their office is, but it is thought that they are the uriniferous organs." This is no longer true as area, etc., have been found in these vessels, so we now know it to be a function of kidneys.

Page 12—In speaking of the advantage of black bees, from the fact that they can be shaken off the comb so easily, Mr. Root says, "For that reason alone some prefer them, or hybrids, to pure Italians, which can hardly be shaken off. One very fine method to shake every Italian bee from the comb if the latter fully fills the frame. This requires a peculiarly sharp jerk which every apiarist should learn to give. He should also learn to keep the frame perfectly vertical else the comb may fall over and the honey is a little lost. Moreover, my honey in the apiary. I should make this characteristic a count against the black bee and in favor of the Italian. As our best men love their homes so well that they always stick to them if possible, so I prefer the bees that endeavor to stick by their comb.

Page 35—Mr. Benton did not spend the best years of his life in the jungles of India, in search of new bees. Mr. Benton was in India only a few days. I think he was only a few days in Ceylon, when he first saw A. dorsata, which he adds was " angi nee.

Page 45—It is not uncommon that our authors use the term worm and grub as synonymous with larva. I know this is commonly done but it is wrong, and how shall we correct errors unless our authors avoid them? Entomologists confuse the term grub with other larval forms of insects. Worms are not insects at all. Worms, as instance in the angeworm, never have any legs at all, and look essentially the same from first to last except for size. All marine insects have legs and are very different from the larva, or insects, which we are after discussing. Why always speak of the immature bees as larvae and be correct?

Page 49—It is here stated that it is supposed that this larval food is pollen and honey, partially digested by the young or nursing bee. I wish others with positively proved that this food is a larval food and not digested pollen, without the addition of honey. Planta has shown that the drone-larvae have mixt with this food toward the last a little undigested pollen.

Page 50—The Premiums offered this week are well worth working for. Look at them.
Management for Producing Extracted Honey.

BY C. DAVENPORT.

For the last seven or eight years I have run from 30 to 40 colonies for extracted honey, and intend this season to have 50. I found, and I will prove, that there is no plan or method on which they will be run, and this method might not answer for some localities, it is the one that will work here, I believe, and secure the most surplus with the least work.

It is generally claimed and conceded that it requires less work and skill to produce extracted than comb honey. I have not found this to be altogether so. If I had for the last few years I should have been producing extracted in a much larger way, and would do so now. The first reason given for comb honey is that the bees mix the liquid form, it seemed to me that it required fully as much, if not more, work as to produce first—class article of extracted honey, as it did fancy comb honey. But I have learned enough about this branch of our pursuit since, so that I can now produce extracted with considerable less work than comb.

Now the question may occur to some, why I started and kept on producing extracted honey, if, with, me, it required and for what reasons I will still do it and produce comb honey. There were a number of reasons for this, and two of the principal ones I will explain. One was that there was a local demand for extracted honey, at a better price accordingly to the price of comb honey. I had, and have at present, a still larger number of customers for extracted than comb honey in the extracted form, many of them preferring it because it is cheaper—infact. I have a good many customers who use a large amount of extracted honey every year, pay a good price for the price of comb honey, who would buy very little if any comb honey, because they could not—or at least believe they could not—afford to. Others actually like it better in the extracted form, and again some who are very fond of comb, and of course these should be allowed extracted honey very little about comb honey. Personally, I much prefer it in this form to comb honey.

I used to extract a large amount of honey from the brood-chambers late in the fall, then feed sugar syrup for winter stores. At that time there was a good profit in doing this, and the bees seemed to winter fully as well on granulated sugar, as it was then made, as on natural stores, and the honey thus obtained, tho it might be somewhat mixed, was always thick and rich. But the price of our product dropped so low that there was no longer profit in producing extracted honey in this manner, tho I had a trade for it already worked up—a trade that, as I have explained, would not take comb honey in place of extracted.

Another, and more important reason, was that about that time, I had given up to the idea of extracting honey. My opinion I became convinced that more money could be made from a large yard by running part of the colonies for extracted honey, for here a range may be overstocked during the swarming season. I know that there is not enough bees to gather whatever nectar there is during clover and basswood bloom. This is not the case every season, but on an average it will hold true two seasons out of three, and a colony that is being run for extract are they can gather considerably more nectar than one being run for comb honey, for these reasons: A larger number of colonies can be profitably kept in one yard if part of them are run for extract, than could be done if they were all run for either comb or extract, for extract. After carefully repeated experiments, some of which I have described in these columns, I know, if I know anything about bees at all, that more extracted honey can be secured here if the question is put the same, one of the colonies is larger than the 10-frame. The reason for this is, that with a larger brood-nest an immense force of bees are reared out of season, to be producers, but are, instead, consumers. I know of no other reason why a colony could have been ridiculed by some, but here it is a more important matter—one that to ignore may mean the loss of a number of thousands pounds of surplus honey with a large yard, can be shown, because that is an amazing assertion to make, and that it is likely to be disputed by some of our readers. They might be, in our ranks, but it should be borne in mind that I make this claim only for my own locality, and for others where the flows are similar to what we have here, relatively to the season.

It may be of interest to the newer readers of this journal, for me very briefly to go over the experiments I made to find out whether it was more profitable to allow more than one story for a brood-nest. These experiments extended over a number of seasons, with slightly varying results, owing to the varying conditions of the seasons, as well as that of the bees. But without any exception they all showed that a two-nest here can be so large that it would reduce the amount of surplus extracted honey that could be obtained; besides, these large brood-nests, especially the unlimited ones, entailed much more work to get what surplus there was, and to reduce or get the bees into one story again for winter.

My method was, each spring, to select 30 or 40 colonies as nearly equal in strength as possible, and divide them into lots of 10 each. The queen in one lot would be confined by one story, and the second season, I would allow two stories for a brood-nest; while the queens in the third lot were allowed their will in 3 or 4 stories. Some lots were in 10-frame hives and some in 8-frame, and, so far as I remember the last five years, I have always found that queen reared, then made but little difference either way. But with the plan I now practice, there is considerably more swarming where the queens are allowed 10 frames than there is when they have only 8 for a brood-nest. When the queens are allowed two brood-chambers there will be here, in a good season, about half of them that will swarm, and some seasons as large a percent of swarming will take place when the queens are confined to 10 frames; but with only 8 frames for a brood-nest there was no swarming. As a result, it has been less with me the past two seasons. It is true that both seasons were poor ones, still there was enough honey gathered so that nearly 30 percent of the colonies that had 10 and 16 frames for a brood-nest swarmed, or tried to do so, for another winter. (Southern Minnesota.)

To be continued.)

Longer Tongues and Larger Bees, Etc.

BY ADRIAN GETY.

Bees with longer tongues is the topic of the day. Measure the length of the tongues of the different colonies of bees and select for breeding those with the longest-tongued bees, if I can use that expression.

To begin with, the exactness of the measurements given by Mr. Ernest Root and a few other experimenters. It seems to me that the difference between the tongues measured is too great. There is hardly any difference in the size of the bees and in the different organs and parts of them; and I don’t see how the tongues could make such striking exceptions, the measurements varying between 13-100 and 23-100 of an inch. The tongue of a bee is very near as elastic as a man’s tongue. How could a tongue exactly 30 or 32, or 59, or 86 to the inch—can change its length, width and shape in all sorts of different ways? And it is nearly so with bee-tongues.

The method employed to measure them, is to chloriform the “subjects,” which makes them extend their tongues, and measure them with calipers. But what proof have we that they all extend their tongues to the same extent? None at all.

Again, there is a considerable difference between the length of tongues of the different bees of a colony when measured by the above-described process, and even admitting that the measurements are correct we can measure only a few bees—say 20 or even 50 out of at least four or five thousand bees of a colony. We may have measured not only the shortest or the longest, but we may have measured in another, and failed to reach the proper average length, or rather maximum length, for this would be the important item to obtain.

I do not say that this method of measurement should be discarded, but I think necessary to have some indirect way to check it, and ascertain to what degree the bees of each colony can reach for the honey in the flowers. For we know that there is no greater bee than the one which can reach the furthest; it is the one which can reach the furthest, and the one which can reach the furthest is the best. It is simply a trough 4 or 5 inches long and not more than 1/4-inch wide inside. The top is made of wire-cloth thru which the bees can suck the syrup. The depth is from 1/4 of an inch at one end to nothing at the other, forming an incline. A scale on one side shows the transverse marks in 25 parts graduated from 0 to 25, commencing at the end where the depth is nothing. To use the instrument, fill it with syrup or thin honey thru the wire-cloth. Place it in an empty super on the top of the brood-nest or the super that may already be there, being sure that it is level. This can be easily done by placing it so that the syrup comes even with the wire-cloth over the
whole surface. When the bees have taken all that they can, not even without disturbing the instrument—to which division the syrup reaches. If it reaches, for instance, to the 17th mark, it shows that the height of the bees, or rather the distance from the wire-cloth to the level of the syrup, is 1/100 of an inch, and since the division corresponds to a depth of 1/4 of an inch that is 25-100.

This instrument will give a depth or length of tongue rather too long, as a portion of the bee's head above the tongue may go through the wire-cloth, but from a practical standpoint, it is immaterial whether we get the exact length or not—what we need to know is the comparative length, or in other words, which bees can reach the deepest. If several instruments are used, and the results to be compared, it will be necessary to use the same kind of wire-cloth on all, for the reason that a greater part of the bees' heads could go thru a larger wire mesh and enable them to reach deeper. The instrument should be constructed accurately, waxed up, and kept all polished to prevent the wood and possible distortion. Care should be taken that the wire-cloth should lie evenly all over, and for that reason the instrument should not be wider than 1/4 of an inch, otherwise it would be difficult to prevent the cloth from bulging in the places. When coming from a depth to a precision of 1/100 of an inch, the instruments used must be accurately and carefully made.

LARGER BEES FOR LONGER TONGUES.

All other things being equal the largest bees should have the longest tongues. And to have the longest tongues possible, it will be necessary to have the largest bees possible. In fact, the main argument presented in favor of larger race of bees is their presumed ability, thru a longer tongue, to reach the nectar of flowers too deep for our present race of bees, especially the red clover.

There would be another advantage in having larger bees. That is, less lost space thru the wood and coming from the fields. Suppose you had a pile of materials to remove—say 2,000 pounds—and want it carried to a distance of 500 yards. If you employ a man able to carry only 50 pounds at a time he will have to make 40 trips—that is, walk a total distance of 20,000 yards. If you take a man able to carry 100 pounds at a time, he will have to make only 20 trips, therefore to walk only 10,000 yards. It may take him as much time to load and unload his 20 loads as it takes the smaller man to load and unload his 40 loads, and he may not walk any faster, but even then, he would be ahead of the time necessary to walk thru 10,000 yards. So it would be with larger bees—they certainly would lose less time in going and coming.

EFFECT OF COMB FOUNDATION.

A few years ago the question was asked, "Has the size of the foundation any influence on the size of the bees reared in them?" To my surprise nearly all the "wise men" answered, "No, none at all." And yet it is self-evident that no bee can be larger than the cell in which she has been reared, for the simple reason that all her growth is done when she emerges, and her skeleton already formed and too hard to expand any. The abdomen and other soft parts can and do expand some after the emergence.

All the above-mentioned "wise men" knew good and well, that the bees reared in worker-cells are much smaller than those reared in larger cells.

Before foundation was used there was quite a difference between the different races of bees in regard to size. There was a race of black bees in Holland much smaller than the common German bees. The Carniolans were distinguish by their large size. Among other figures we have some of Cheshire giving the weight of 20 Cyprian bees at 28 grams and of 29 Carniolans at 40 grams. We don't hear any more about a difference of size, now.

Why so? Just because foundation of a universal size is universally used—5 cells to the inch—and with a uniform size of cells has come a universal size of bees.

The first step will be to use a larger size of cells. But that is not sufficient. The size of bees will not increase at once, simply by giving larger cells. It will be necessary to select the queens giving the largest bees, and keep on breeding for the largest all the time. One drawback will be that with a larger size of cells there may be an over-production of drones. The only way to prevent it would be to increase the size of cells, at first of only a small fraction, and later, when the new race is established, make another increase.

Several years ago, a distinguished French apiculturist, Mr. Droy, gave a number of queens only drone foundation. A number of them reared worker bees in those sheets, but some others only drones. I have not the details of the experiment. Judging by what has been done with horses, dogs, fowls, etc., we might think it possible (and perhaps it is) to create a race of bees even larger than the Apis Dorsata. We shall name it (if it comes) "Apis Americana." "

Knox Co., Tenn.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[TThe Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—Enron.]

Plan for Comb Honey and Increase.

1. What do you think of the following proposed plan for comb honey and increase?

The staple honey-plants for this locality are the wild red-raspberry, and buckwheat. Build colonies up as strong as possible even to the point of swarming, for the raspberry bloom, then divide by taking the queen, and put three frames of sealed brood, from the parent hive, place them in the new hive with a couple of frames of foundation, and place the new hive on the stand of the old one, removing it to a new stand and in the course of 24 hours introduce a Carniolan queen. We have here forage for bees at all seasons; basswood is not sure for surplus. The present bees are Italians, which we mean to keep up, the only object in putting in the Carniolan being the repelled proliferness.

MICHIGAN.

ANSWER.—Your plan and your surroundings are so much out of the line of my experience that I do not feel very competent to answer. However, I am not very much afraid of doing harm, for sharp eyes are ever on the watch to correct such devices, and I am thankful, for I well know that eyes may be very sharp and at the same time very kindly.

Your plan is evidently intended to obviate swarming, and if you do it well it might not be successful in general. A more severe depletion might be needed, and I should advise trying at least some colonies by leaving with the queen on the old stand not more than one frame of brood, filling up with frames of foundation and brushing the rest of frames removed. Then two or three days later take away their remaining old frame of brood.

If you have never tried Carniolans, it might be well for you to holy giving them to that part, so as to compare their work with that of your other bees.

A Beginner's Questions.

1. Where can I find the queen-cells? Also tell me other things which I, as a beginner, do not know.

2. Is buckwheat a good honey-plant?

I hope soon to purchase "A B C of Bee-Culture, or "Langstroth on the Honey-Bee." Which is the better for me?

MISSOURI.

ANSWERS.—1. From the way in which you ask the question, it is possible that you think there is a cell in the hive that the queen keeps for her own, perhaps retiring to that cell every night to go to sleep. So far from this being the case, it is true that after the young queen emerges from her
cell she never enters it again, and it is not a great while after she leaves it until the workers tear it down all but the base or enough to make a concave hemisphere. If you look into a hive at this time of the year, it is not likely that you will find a queen-cell in it, but you will be likely to find quite a number of cell-cups, some of them the remains of queen-cells from which queens have issued, and some of them cups that the workers have started and never finish, and most of them they never will finish. If you look into a hive at the time a first swarm issues you will find 5, 10, 20, or perhaps more queen-cells with young queens in them, and they may be in any part of the hive. Generally they will be found near an edge of a comb, possibly right among the worker-brood near the center of a comb where there happens to be a hole or an irregularity. Sometimes you may find a queen-cell not on the comb at all, but built directly on the wood of the end-bar, but this is very rare.

You must excuse me from attempting to tell you all the other things that you as a beginner do not know, that is, if the list of unknown things is as long as my list was when I was a beginner. I could tell you of this journal to contain the answers to all the questions I had, but most of the desired information can be obtained from the excellent text-books we now have.

2. Buckwheat is one of the best honey-plants. It does not yield the best honey, for the honey is very dark, and most persons do not like it so well as honey of milder flavor, and yet some prefer buckwheat honey to any other. It is, however, a somewhat fickle yielder, one year yielding an abundant harvest and the next yielding nothing.

3. If you get either you will have a treasure, and will find in it so many good things that you will wish you had the other also, with Prof. Cook's excellent work added.

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Introducing a Queen to a Colony that has Just Swarmed.

I would like to know, just after a swarm issues, how to give the old or mother colony a laying queen.

**Wisconsin.**

**Answer.**—Give the queen in an introducing-cage, and there may be no trouble without any further attention. It will be safer, however, to destroy all queen-cells in the hive.

---

Putting Bees Out of the Cellar at Night.

Is there any objection to putting bees out of the cellar at night?

**Wisconsin.**

**Answer.**—There is probably no difference between putting bees out at night and putting them out the following day. That is, if you are sure you will put them out to-morrow, you may put them out to-night. But you cannot always be entirely sure at night that you will want to put them out in the morning. For the weather is sometimes so changeable that between night and morning the temperature may sink so many degrees that it will not be safe to have the bees out. When you have been in the cellar all winter and are put out-doors, they are not as prudent as they might be, and will fly out in weather when large numbers of them will be chilled and be lost. If you could be sure of good weather the next day, it would be all right to take out bees at night, but on the whole it is more prudent to take them out when you know they can fly with safety within ten minutes of being taken out.

---

Uniting Colonies and Introducing Queens.

1. I have some colonies which I wish to unite. When do you consider the best time in the spring for doing it?

2. Which plan is the best?

3. Would it be advisable to introduce a new queen at the same time?

**British Columbia.**

**Answer.**—1. If you intend to unite colonies in the spring, it may be safely concluded that it is because the colonies are too small to supply all your wants. If you can unite two colonies, each having bees enough to cover two frames of brood, they ought when united to be able to cover at least a little more than four frames of brood. At all events, when the two are united you will have six frames of brood sooner than you would have done if you had kept the two separate. So you can easily see that you will gain nothing by wait-

ing, and the sooner the uniting is done the better. Unite before the bees begin to fly, and there will be less danger of the bees of the removed colony going back to the old place.

2. There is little danger of fighting if you alternate the hives with their adhering bees, first a frame from one hive then a frame from the other, and so on. If you unite before the spring flight, there is little danger of trouble if you simply put one set of combs in the hive beside the other. In any case if you see any bees doubled up in the death struggle on the bottom-board after having been stung, or any other sign of fighting, give them smoke till they promise to be good, as Mr. Root says. If they get bad again, smoke them again.

3. Yes, you can introduce a queen at the time of uniting if you kill the other queens, although on account of the greater difficulty of getting queens in spring, and the greater cost, very few queens are introduced in early spring.

---

**Excellent Alfalfa Honey.**

I have mailed you a sample of honey that I think to be first quality, and would like to have your opinion.

**Utah.**

**Answer.**—I have no quarrel with you for calling it first-class. It is very white indeed, and almost very mild in flavor, like all alfalfa honey, what flavor there is excellent.

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**Convention Proceedings.**

**Report of the South Dakota Convention.**

**By E. F. Atwater.**

The annual convention of the South Dakota State Beekeepers' Association met at Yankton, Jan. 25, 1901. More than half the members were present, and all were very enthusiastic, considering the past poor honey season.

Many interesting points were brought out in the discussions; a short talk by Daniel Danielson, was especially interesting, his subject being "Migrant Bee-keeping." Some years there was a good profit in moving bees from one locality to another; in other years it would be a loss, as the honey-crop can not be foretold. In moving bees they should have an abundance of ventilation, and the haling should be done at night, when possible. Cold water should not be thrown on the hives to facilitate their movement. They should be moved in perfect condition, without loss of energy or numbers.

President Thos. Chantry called attention to the real necessity of maintaining our organization. Our association protects its members, as we have joined the National Beekeepers' Association in a body. If all the State beekeepers' societies would join the National in a body it would be a great help to the National in its great work of fighting adulteration, and protecting the beekeepers of this country. All the beekeepers of the State should get in touch with the State association, as by doing so they get full protection from the National also. Many of our members have saved several times their membership fee, in buying their supplies thru the association.

A paper on foul brood—that most destructive of bee diseases—was read by E. F. Atwater. By special request, the Rev. Dr. Matson, formerly of Ohio, spoke briefly on the "Home of the Honey-Bees," and of the members of the Root family. His address was very enjoyable.

E. F. Atwater was made Association foul-brood inspector for South Dakota.

At the evening session J. J. Duffack gave a report of the great National Beekeepers' Convention, at Chicago, bringing out very prominently the great need of a suitable National pure-food law.

The paper by Mr. R. A. Morgan, formerly an extensive Wisconsin bee-keeper, touched on the value of honey as a food, its wonderful keeping qualities as compared with butter and other foods, the causes and processes of swarming, and queen-rearing.

Mrs. John M. Downer spoke of the convention of the Horticultural Society, at Sioux Falls, S. D., and of the grow-
The Vermont Bee-keepers' Convention.

By M. F. Cram.

The 26th annual meeting of the Vermont Bee-keepers’ Association was held in connection with the Vermont Horticultural Society, Dec. 6, 1900, at Brandon, under the auspices of the Brandon Grange, which furnishes hall, lights and music.

The meeting was opened by Pres. R. H. Holmes, and praying was done by Rev. H. L. Leonard. The minutes of last meeting were read and approved. The Secretary’s and Treasurer’s reports were read and approved.

Pres. Holmes’ address was delivered without notes, and as the secretary is a shorthand reporter, he caught only some of the more important points. Mr. Holmes said that Vermont produced 1/27 as much honey as California, wherever the honey is mostly extracted, but Vermont honey is mostly comb.

What Vermont lacks in quantity she makes up in quality. Vermont leads the country in quality of horses, butter, apples, maple sugar, and raspberry. Vermont had 87% of all the honey in Vermont, but he thought honey could be produced in other places at a profit. The public were not informed in regard to the method of producing honey, but were learning. People have to learn to keep bees, just as any other business, in order to make a success of it. There is no luxury that people like more than honey. Honey is something that would keep—need not be sold until the producer is ready. Altoh the last two seasons have been poor, bee-keepers are not discouraged. We should have better seasons soon. Eternal vigilance is the price of success. We are met to tell each other of our success and failure, and the points of interest in our pursuit.

A discussion followed on the peculiarities of the past two seasons. Mr. Leonard said Rutland County had had better seasons than Orleans, but the past two seasons had been very poor, 1899 being the poorest season without any exception for 50 years.

The past seven years have been poor for honey-production. Mr. Cranche of Lamoille County said that the poorest season he ever knew—about every colony in Addison did well. Mr. Leonard had had seasons when his colonies averaged 100 pounds each, but they had not done so for the past seven years. We have made great strides in the management of bees, the last 10 years.

Mr. Larabee spoke about the bees building comb when the season is dry; also that the bees catch the comb more readily in dry seasons than in wet ones.

Mr. Cranche said that the class of flowers would produce honey one year, and the next year they would not, but some other would take their place. The past season was the best for 40 years, then fruit or apple bloom.

Mr. Terrill, from Lamoille County, said that bees did better last season than in 1899. He got no basewax honey tho it bloomed full.

M. F. Cram then gave his method of getting a crop of honey in a poor season, which was in reality the same as in good ones. The first thing he did was in the month of July the year before, and that was to see that each colony was put, and he advised in such cases to have a hive well stocked with bees in September or the first of October. He could not let his bees swarm later than June and get good results from them the next season. There was generally a honey-flow some time in the season, and in his locality it was usually in June. He had his colonies strong early, or he got left.
The Afterthought.

The "Old Reliable" seen thru New and Unreliable Glasses.

By E. E. HASTY, Sta. B Rural, Toledo, O.

THREE "WIVES" IN ONE HOUSE.

Of course we are Schmidtens with diet to know how
three queens to one colony are secured, page 71. Was the
information withheld on purpose to make us cry for it? We
may see that there are three stories and three entrances. I'll
guess that the mid-story has zinc both above and below, and a
partition across the middle. But then, but then: it's one
thing to show us how to have three wives in one house without
any quarrel, and quite another thing to prove that such an
establishment is wise or profitable. I can see that a queen-
breeder might like to have an excess of tested queens to draw
upon.

WANTED--A NONBUSTABLE HONEY CAN.

But, Mr. Atkin, I don't want to speak well of a honey-can
that will burst unless we wait for the honey to candy before we
ship it. I wish that list is in an item that will come between
liquid honey to market. First you know, we shall learn the art
of keeping our honey liquid pretty much all the time. A
nonbustable can will not offend at all your lovers of the granu-
lated articles--not your Mr. Boon. You know what it tel-
lem in a box. Mr. A. is right on the main point, however.
Make your plan and your price according to your situation,
and don't be bullied out of it by the brother who has a fancy
trade, and who wants you to try the impossible task of bring-
ing non-fancy goods up to its lines. If you want your honey
cleaned daily on the poor man's table, you must compete (to
some extent) with home-made sugar syrup. If you can see
your way clear to do without the poor man's custom, why,
that is your privilege. Page 71.

BROOD-COMB 25 YEARS OLD.

Editor Root's account of the 25-year-old comb is reassuring,
and also just what we might expect. Presumably the ex-
tra thickness at the bottom is more or less mixed with dried
food. I strongly suspect that bees in winter supply themselves
with a small amount of nitrogenous food by chewing these
dried masses—one reason why old comb winters better
than new combs—and also the origin of the little heaps of fine
stuff we see on the hive-bottoms. Possibly in a land where
there was no winter the bottoms would continue to thicken.
Even with us an occasional colony does better in cells
with black-looking waxes in place of the comb in place of the
a solid mass. That may be much more common in Europe
than here. Page 74.

ENTRANCE-FANNING AND QUEEN-FINDING.

And so it is not at the side where fanning bees are, but at
the other side that we are to expect the queen. I made
and propagated a very natural mistake: so now let us get
our heads level on the subject. By the way, Mr. Neal's
work on queen-finding was misunderstood by a beginner-
ly colony does. In their cells with black-looking waxes in the
bees do not force air into a hive: they fan it out, and other
air follows in the easiest route. May it not be that it is not
the bees but the queen that determines this whole little mat-
time. With a current of air, doesn't like it, and directly
goes elsewhere. Page 76.

HOW MANY BEES DIE IN WINTER.

On page 88 a beginner asks how many bees die in winter:
and Dr. Miller sagely answers, "A whole lot." This suggests,
for more than the thousandth time, that we greatly need some
common agreement as to what we mean by "the winter."
Most of our chunks of wisdom are more or less reduced to
fog by the indefiniteness of that term. If we mean a season
A colony of 16,000 bees might get thru December, January
and February with a loss of only 1,000—and yet "every
man of them" die before May 10th. In this case one man
would say, "Only a small proportion of my bees died in the
winter:" and another would say, "The winter killed 'em, all
dead as nails:" and both these men would be telling the truth.
Can't we fix things, brethren, so a man can tell a lie when he
tries? We seem to have farre winters. The greater one be
when daily flight ceases, say Oct. 10, and ends when they
begin to build up in numbers, say May 1st. (One bad winter
I noted that May 6th was the lowest point with my bees.)
The lesser winter is of course the three months usually design-
ated three-winter months. Then there is another intermediate
sort of winter which has its beginning Dec. 1st, and its end any
where the season and the speaker may happen to put it—usu-
ally at the warm spell which brings in the first pollen—some-
times in March, and sometimes in April. Somebody tell us
what we would better do about it.

Northern Seed Grain.

Lincoln & Michigan Wonder oats at 45c, 60c, lots, big
Pony & Early Champion oats. All 45c and 60c, lots,
barley, oats, and silver King barley at 25c, 35c, lots,
hard, white Hallow barley, spelt at 25c, 35c, one-
and one-half million dollar coarse at 8c, 9c per
bushel. Orders filled for all kinds of field and fodder
needs.

L. L. 0LBS. BRANNER D. CLINTON, WIS.

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2. Send for our large free catalog of
vehicles and harness.
3. 2nd. Select the rig you want and order it on our
10 Days Free Trial.
3rd. After trying it, if perfectly satisfied you will be
bargain you ever saw for the money, draw $75 out of
the bank, give your wife $75 spot-money and send us the
$75 and you will have the best $75 rig you ever saw.
Your wife's $75 is just two parts--dealer's and job-
ber's saving buying by the factory. Write for our
latest catalogue and full directions carefully.

Halmazano Carriage & Harness Co.,
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45c 40 lbs. and up.

The cleanest, brightest, best yielding oats are
Michigan Grannaries, Keen, Bright, and
 smooth. Order early; supply limited. In
 ever. One wheelbarrow of Keen, Bright,
-straw, have yielded 150 lbs. per acre. Catalog describing
theses and other seed is free.

Harry M. Ham mond Seed Co.,
Famity of 8eds.
Box 2, Bay City, Mich.

Please mention Bee Journal when writing.

Good Report--Bee-Hive Incubator.

I started in the bee-business last spring with
11 colonies of bees, and put 26 into winter
quarters, and 13 of these are wintering all right.
I sold three colonies during
the summer to an old bee-keeper, and got
about 300 pounds of honey all in one-pound sections, which I sold in the home market at
15 cents per pound.

My bees are all well-behaved. I bought
some queens last summer from some of our
noted queen-breeders, and I don't see much difference between them and my own.

I am going to try using the bee-hives as incu-
ators the coming season. My father used to
tell me not to try to raise kings, and in the end they were hatchet," so I will not say how
many I will have.

We have had nice weather up to yesterday, when we had a big storm. I cannot get along
with the American Bee Journal.

And the story goes on by W. KREMER.

Adrian Co., Iowa, Feb. 4.

Queen-Rearing.

Mr. Priggen's article on queen-rearing
(page 201, 1900) is very interesting and im-
portant to every bee-keeper even if not in the
queen-rearing business, but unfortunately I
can say with "Apsi Mellifica" (page 476, 1900),
that I have read it and reveal it 50 times, per-
haps, hoping to make it stick, it still
Greekin to me. "Apsi Mellifica" complain

Poultry Book Free, 64 pages, illustrated
with colored plates, etc. Free with our paper, for
INLAND Poultry Journal, Indianapolis, Ind.
only of one passage, but the whole last page is almost a dark cloud to me.

What a splendid gift Mr. Doolittle has in being able to explain his ideas so clearly and logically. It would seem that he has a clear understanding of the subject and is able to communicate it effectively. I wonder if the author has considered organizing his ideas in a more coherent manner, perhaps by grouping related points together. It might make the text easier to follow and understand.

J. NORTING

March 7, 1901.

AMERICAN BEE JOURNAL

155

BEE'S EYES

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SEED CORN

It is a 2 b. or up.

This is a new and improved variety of corn which is especially well adapted to the conditions in the hardy and productive district. Hammond's Dwarf Field, American Pride, Early Yellow Dent and Thornbush White Dent are the 3 favorite varieties. Among the many others are: Thoroughbred Corn, Calhoun's Corn, and Ten crows. Obtainable from your local seedsmen.

Price: $1.00 per bushel. For retail, the combined cost is $0.75 per bushel.

HARRY N. HAMMOND SEED CO.

Fort Worth, Tex.

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THE CRY OF HARD LUCK IN CUBA

It seems very strange to me that although we had previously written about Cuba being full of fruit and birds and all sorts of fine things, yet the writers of these articles have not taken the trouble to settle the theories with the practice. One of my friends who had seen Cuba firsthand has to say it is a very hard to reconcile the theory with the practice. Another who has recently published the following article is in Cuba: it is hard to believe the writer is not exaggerating.

CUBA, V. IN. E. B. CRANE

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friends not to come here, yet I have just received news from some 'trimmings.'

Some time ago it was stated in the Bee Journal that a subscriber had made a successful smelt of 300 colonies from the States, but in a more recent number he hints darkly at "disseased bees"—yet he has 352 more healthy than the way here. And so it goes.

The representative of one of the big bee-supply houses spent a vacation here, and sold thousands of hives, tho we are all out crying that we cannot make bee-keeping pay at the present prices—25 cents for each bee. The only reason I see for this is that we feel the profit to the colony is so small that we must have a great many of them to make it pay.

As a result he just returned from a trip over the north coast. We went for 30 miles thru almost virgin forests, looking for good locusts, and found them. We are very pleased at the picking.

The scarcity of good locations is another reason why we have 300 bee-hives in Cuba, Febr. 4.

HARRY HOWE.

A Fair Report for 1900.

Last fall I put 65 colonies of bees into the cellar in good condition, and secured 1,500 pounds of combs, honey and all. It all went to the home market at 15 cents per pound. I got no increase.

The weather was very dry the forepart of the season, as much of the honey was gathered from fall flowers.

I keep the queen's wings clipped, so I do not lose any swarms, and know just how old the queen are. I make $100 to $800 out of 100 bees every year, and I get 150 colonies.

I recommend the American Bee Journal to all who keep bees.

GEO. H. ABRINE.

Bee's Will Die of Starvation.

The past season, in this locality, was a total failure, and I had to feed nearly all of mine for winter. I know of no one else in this locality who fed the bees, and the report is that about five colonies out of every six will die of starvation.

HARRY BROWN.
Richland Co., Ohio, Feb. 15.

Cleanliness Among Bee-Keepers.

I notice what Mr. Abbott has to say on page 55 in regard to cleanliness on the part of the honey-producers. I can verify his statement so far as some of the California bee-keepers are concerned. I think if we would all be more particular in preserving our homes for market we would receive a much better price.

We have just had the best rain in 10 years.


Feeding Bees Grapes—Introducing Queens.

I have been asked how to feed grapes to bees, so will here give my method.

I crush the grapes, best I can, then put them in a large pan, tipping one end a little higher than the other, and having the pulp on the highest end; in the lower end, I put some grass, or something of that kind, so that the bees will not dwell. After they have taken all the juice, they will gradually work the pulp "down hill."

Having a few more queen-cells than I want, I crushed them and added cut out, put them in a pasteboard box, making a few holes in it for air, put it over a strong colony, with a queen-withdrawing board beneath it, and soon disposed of all about it. When I finally thought of it I found that the queens had hatch, and the bees were tearing away the pasteboard. Since then I have many times used pasteboard for introducing queens.

I once put pulp containing even or eight
The Rural Californian

Tell all about Bees in California. The yields of honey and their price of honey, the number and value of the honey-producing plants; the Bee-Ranches and how they are conducted. In fact, the entire field is fully covered. This the paper also tells you all about California Agriculture and Beekeeping. 1000 copies, 6 months, 50 cents. Sample copies, 10 cents.

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50 cents a year. Yearly subscription is $1.00. Please mention Bee Journal when writing.

BARNES' FOOTPOWER MACHINERY

Read what J. L. Parent, of Chichesten, N. Y., says: "We cut with one of your Combined Machines, last winter, 25,000 sq. ft. of clover, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of beehives, etc., to make, and we expect to do all the work with the cutting team you say you will, no catalogue and price-list free.

Address, W. B. Barnes, 956 Ruby St., Rockford, Ill.

Please mention Bee Journal when writing.

THE MODERN FARMER & BEE JOURNAL

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A live up-to-date Farm Journal, with special department of Horticulture, Livestock, Poultry, Bees, Veterinary, Home and General News. Edited by one who has had practical experience in all the departments of farm work. To introduce the new ideas to new readers, it will be sent for a short time to New Subscribers, one year for 25 cents. Sample copies free. Best advice and information in the Central West. Address,

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901 ST. JOSEPH, MO.

Please mention Bee Journal when writing.

Vegetable Gardening Free—No book ever published has been more popular nor of more practical value than "Vegetable Gardening," written by Prof. S. B. Green, of the University of Minnesota. It is now used as a textbook in the Minnesota School of Agriculture, in Northwestern Dakota, Iowa, Virginia, Massachusetts, and in the Illinois and Ohio Agricultural Colleges. We have received a copy of the special edition of this book, issued for the Ames Plow Company, which comprises 492 pages, more than 120 illustrations, and treats of "the cultivation of vegetables and their diseases" most ably in America. While the regular price of the book is 75 cents, the Ames Plow Company is offering it free to every prospective farmer. A copy of a Matthews New Universal Seeder in any of its various models, is sent by post at the request of any reader who will use the seeder, together with an ample supply of the best seed, most suitable for the locality. A free illustrated catalogue will be sent on request.

The Modern Farmer, July, 1898.

Do Bees Select their Future Home Before Swarming?

While wrestling with "la grippe," I have had plenty of time to read the Bee Journal, and I was wondering to what extent a bee, or for that matter not bees select their future home before swarming. I believe that first swarms always do—second swarms not only select their home, but if it is a tree they clean it out before taking possession. In 1871, while hunting in the woods near Utica, N. Y., I discovered bee going in and out of a hole in a hemlock tree, and supposed I had found a location for future use with others. The next morning to cut down the tree; it was a sultry morning in June, and before cutting down the bee box they were up and when we arrived there it was quite cloudy. We could not see any bees about the tree, but it was decided to cut it down. As soon as it fell we rushed to the hole to stop it up so that the bees would not get out and sting us. (We commenced using our rods and smokers in those days.) To our surprise we did not see a single bee. We sat down on the log and rested under the sun and got the sun out bright and hot, and while eating and discussing, and wondering what had become of the bees, we heard a report sound overhead, and on looking up discovered a swarm circling where the tree formerly stood. After awhile they settled down on a limb near our box and we put them in a box and took them home with us. We always went then, as now, prepared to carry away the bees. We cut down 13 bee trees the past season, and left seven which we did not have time to cut.

In 1855, near this place, I found a swarm in a red oak tree about 25 feet high. We went the next day to cut it, and found the bees working in and out. As soon as the tree fell we rushed forward to stop the hole, as was usual, but only a few were coming out, and these soon disappeared. We cut the tree open and found the bees were cleaning out the place, and getting ready for

The Pacific Rural Press

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BEE-SUPPLIES!

Send for Free Catalogue from Walter S. Pouder, 512 Mass. Ave., Indianapolis, Ind.

Three Great Potatoes. Among the catalogs we have recently received, that of Mr. Olds of Iowa, is a very substantial volume, the well-known potato specialist of Clinton, Wis., Mr. Olds has catalogued and grown potatoes for 14 years, and makes a specialty this year of three great potatoes; the "Dutchman," a splendid variety introduced for the first time last year; "Potato Pintree"—introduced in 1899, one of the very earliest to be marketed; and "Giganteus"—the best of all early potatoes. This variety is marked by its large size, the best for sowing, and the lowest prices on potatoes, seed corn, oats and other grains, beans, potatoes, turnips, clover plants, clover seeds, and other seeds. Do not fail to send for the catalog. It is free. Mention the American Bee Journal when writing.
Bees Needing a Flight—Propolis on Sections.

Bees have been confined to the hive for quite a long time. They had some small flights over their own hives, two or three days, and then, I think they are needing a general flight pretty badly. The weather is cool again today, and think they may be basking in the sun on the ground. I would like it if I could find some way to prevent the bees from depositing too much pollen near the section-holders. Who can tell? — Edwin Bevis.

Decatur Co., Iowa, Feb. 20.

Bees Wintering Nicely.

I put the bees into the cellar the latter part of November, and did not see them again until the last of January, when I found them to be as active and well fed as could be, and the hives were clean and all right. I took the bottoms off, and found the bees clustered below the frames—by W. C. Le Ferre.


Mild Winter—Overstocking.

Up to this time the winter has been so mild that most colonies have consumed about all the stores and the hives are in good condition. For the first time I have been able to maintain the bees in the case with hybrids and crosses, especially.

The question of overstocking will be settled around this time. If there are a large enough number of frames, prohibiting the keeping of bees within, or one-half mile from, the city limits, went into effect Jan. 1st. Several bee-keepers have moved out, and I have about 350 colonies in all.

We have only a light flow from fruit-bloom in February and the prospects for white clover are not very bright. I believe in scattering 10 cents worth of honey-secreting clovers or clover seeds over every colony, we have a splendid show, when started, will spread with amazing rapidity.

J. C. Wallenmeyer.

Vanderburgh Co., Ind., Feb. 7.

Paper-Bag Feeders.

In reply to Mrs. Sarah J. Griffith (page 621, 1900), as to using paper-bag feeders, I will have to admit that I have never tried the scheme myself. I can sympathize about a little. My first trial was a failure. I poured 5 or 6 pounds of syrup into a large paper-bag, tied the top and placed it on top of the frames in the evening. During the night the bag burst, but there was very little loss, as the hive was raised. I have experimented with a silk paper three or four small bags that would hold about two pounds of syrup. I then oiled them and placed them on the frames. I tried puncturing them on the sides, near the bottom, and when I looked at them I found that the bees were empty, the hives had the holes, and were running around inside of the bags. That’s all I know about it. They might be all right for feeding a colony that was light in stores during the summer or fall, if very heavy weather conditions. —J. H. Metcalfe.


Dittmar's Foundation!

Retail Wholesale Jobbing.

I use a PROCESS that produces EVERY ESSENTIAL necessary to make it THE BEST and MOST desirable foundation. My PROCESS and AUTOMATIC MACHINES are my own inventions, which enable me to sell FOUNDATION at

Work Wax Into Foundation For Cash at prices that are the lowest. Catalog giving Full Line of Supplies, with prices and samples, free on application.

BEE SAX WANTED.

GUS. DITTMER, Augusta, Wis.

Please mention Bee Journal when writing.

Good Instruments.

Dont' confuse these instruments with the trash of the market. They are of high grade, highly guaranteed, made in the United States.

VIOLIN—Amati model, choice of 3 strings. Made in America.

GUITAR—SOLID Rosewood, standard size, double bound, vesuvius top, spruce soundboard, mahogany back, mahogany sides, silver tuning levers, solid wood head, engraved brass end, full eighteen lines engraved name plate. Width 19.75. Price $10.00. Made in America.

MANDOLIN—Solid Rosewood, made from full piece, hand finished, hand-finished neck, celluloid fingerboard, ebony finger rest, hand finished sound box, full leather lacing canvas case. Price $8.00. Made in America.

Wool Market and Sheep

Wool Markets and Sheep

Wool Markets and Sheep have a hobby which is the sheep-breeder and his industry, firsts and foremost and all the time. Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.

Queen-Clipping Device Free.

The Monette Queen-Clipping Device is a fine thing for use in catching and clipping Queen wings. We'll mail it for 25 cents; or will send it FREE, as a premium for sending us ONE NEW subscriber to the Bee Journal for one year (132 pages, 41 cents per year), or 25 cents.

BEE HIVES, SECTIONS AND ALL BEE-KEEPERS SUPPLIES.

Queen-Clipping Device Free.

Big Catalog Free. Write now. Leary Mfg. Co., 2415 Atina St., St. Louis, Ill.

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Wives, sections, and all bee-keepers supplies.

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641 A. Mention the American Bee Journal.
The Swate Fields av Ny York.

There's many a field in Ny York that don't have F.L. Field's, an' many a thim do have swate-honey fields, and do be likin' swate things and altho' ye are a poor American Ba Jurnal jist, an' have not enuf to spate kingli' an' swatly when they have anything to say. The best thing Ould Doolittle end do (as he's on the turf) wad be to tuckle on Dooboombin, an' go at wanst, froze or no frozen. I'm tellin' ye, this is a swate clover, an' let the hawen swate it up a bit wid flyin' over an' blawin' their swate breath. Be a poor swate bruth, an' want the Daddys av Watters we do be glad to have Ould York shok the Ba Jurnal every wavy, and when we do it, we'll fetch the piper, and whin good we do be glad to have the Ba Jurnale come an' chur' swate up the tolme culm, when we enuf swatness enuf from it to pay, we'll pay shawt's doo, an' wid a good by an' God-speed, quikly, quikly. Wil good wishes—e a Ould Ny Yorker.

Carroll Co., Iowa, Feb., C. E. Morris.

Report for 1900 Rendering Bees Wax.

The past season was a very good one in this locality. I secured about 200 pounds of comb honey from 16 colonies, spring count, and interest only. They all have plenty of stores for winter, the hives averaging over 50 pounds each when put into the cellar. What honey I had to spare I sold in the home market at 25 cents per pound.

I will give my experience in rendering wax from old combs. I pounded and rubbed the wax out until it was quite soft, but when it became pine sawdust, then I weighed the crumbly combs, and found that I had 14 pounds; this I dumped into the boiler, put into large and small, hours, the water being changed twice, and some of the dirt was taken off by skimming. I then added 20 pounds of water, and boiled it for some time, then I took it from the stove and squeezed it. I repeated this operation three different times, until the wax was extracted. The 7 pounds of comb made 40 ounces of clean wax, or 57% wax.

The 7 pounds put into the solar wax-extractor, and left in the hot sun at a temperature of from 90 to 100 degrees for about 19 days in making 15 ounce, or 18% wax.

The slumgum was taken out of the extractor and put into a thin cloth bag in the hogshead, and left in the sun for a week. The slumgum gave 28 ounces of wax, or 22% percent. This shows that a great deal of wax is lost from the extractor, and that the white clover from winter-killing.

Arthur L. White.

Dodge Co., Wis., Feb. 14th.

Care of Plants in Spring.

In the springtime when plants are making strong and rapid growth, particular attention must be given to training them. If neglected in this respect they soon get beyond control, and the only way to bring them into subjection then is by sacrificing a good deal of the growth and making the tree use his time and energy to doing if the training is begun in the right way, and at the right time. If a branch is al-

The convention will be held in the Bell Hotel, 19th and Market streets, and will close on Saturday morning, April 17. The American Bee Journal will be the official organ of the convention. The program will include a number of interesting papers and discussions, and a large number of beekeepers will be present. The convention will be open to all beekeepers, and is expected to be a great success. Please plan to attend.

The American Bee Journal.

The Emerson Binder.

This Emerson stiff-board Binder with cloth back for the 10°x10° beehive, $1.40. It is possible to get at least 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to have a binder for the Journ-

Some mention Bee Journal when writing Advertisers.

Easy to Answer.—The popularity of the Low-

Down Farmers’ Handy Wagon is not difficult to understand. The Wagon is a very conve-

The Electric Handy Wagon, Electric steel wheels, and, for that matter, all electric wheels, are now becoming popular. It is based on its superiority, which is main-

The Electric Wheel Company, at their fac-

Careful construction is the keynote of the Wagon. Its wheels are made of the best bronze, steel, and iron. Each wheel is balanced perfectly, and the radius of the axle is exactly the same as that of the wheel. The Wagon is made of the best steel, and is constructed to last a long time.

The Electric Wheel Company, at their fac-

For Sale

Supply Dealers’ Stock and Apairy.

Locate in Malvern, Mass.

S. A. FISHER,
12 Pearl St., Ashtown, Conn., Tass., 10A2
Please mention the Bee Journal.
INCUBATOR ON TRIAL

The Perfected Von Gulin.

PRICES $7.00 AND UP.
SATISFACTION GUARANTEED OR NO PAY.
We mail Brochures, Bee Hives & Supplies.
25th Catalog and Price List sent Free.
The W. T. Falconer Mfg. Co.,
Jamestown, N. Y.

Please mention Bee Journal when writing.

SWEET CLOVER
And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Coves by freight or express, at the following prices, cash with the order:

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Prices subject to market changes.
Add 25 cents to your order, for cartage, if wanted by freight, or 50 cents per pound if wanted by mail.

GEORGE W. YORK & CO.,
144 & 146 Erie Street, CHICAGO, ILL.

If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other publication, send $1.25.

Prof. A. J. Cook, Claremont, Cal.,
For his "Bee-Kepper's Guide."

Liberal Discounts to the Trade.

$2,000 in Cash Premiums.—This is one of the striking propositions presented to the reader of the seed catalog issued by T. B. Mills, of Rose Hill, N. Y., who has been advertising in our columns for some time past. We have just received one of these catalogs, but space will not permit of a brief review of it. Without hundreds of our readers already know Mr. Mills thru their dealings with him in the past, and to such we do not need to change his acquaintance in a business way; we can only say—send at once for one of his catalogues and see for yourself. It embraces everything in the way of standard field, garden and flower seeds, as well as many novelties in each of these lines. The cash-premium proposition relates particularly to the new variety of clover, the Pan-American, which is being introduced by Mr. Mills this season. It appears he is sending free to a certain number of farmers 2-bushel lots of the seed, the only condition being that a certain portion of the crop is returned to him, and all receiving seed under the above conditions are allowed to compete for the cash premiums, which are many and very liberal. In connection with this same offer, is a free pass to the Pan-American Exposition, which will open at Buffalo, N. Y., this year. We feel sure the remarkable generosity of these offers will interest a large number of our readers. The catalog is free. Send for it today, and in writing please mention the American Bee Journal. Ask Mr. Mills also for his new lettuce proposition by which another pass to the Exposition is to be awarded.

The 24th Year Dadant's Foundation. Year

We guarantee satisfaction. Why does it sell so well?

What more can anybody do? BEAUTY, PURITY, FIRMNESS, NO SAGGING, NO LOSS. PATENT WEED-PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Very fine pure-bred BARRLED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

LANGSTROTH on the HONEY-BEE—Revised

The classic in Bee-Culture—Price, $1.25, by mail.

Beeswax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

Gleanings in Bee-Culture...

Is an illustrated semi-monthly, 32 pages and cover, at $1.00 a year.

If you keep only a few bees you can't afford to get along without GLEANINGS IN BEE-CULTURE, as it will save many times its cost the first season. Better get along without almost anything else than a good bee-paper. There is no use in our telling how good GLEANINGS is, as it will speak for itself. If you will only let us send you a sample copy for your name and address on a postal if you once see it we know you will want it.

Look at Our Offers:

Offer No. 21. For 25 cents we will send GLEANINGS 6 months' trial subscription to new subscribers.

Offer No. 22. For $1.00 we will send GLEANINGS for one year and an untested Italian queen valued at 75 cents; but at this low price we reserve the right to send queen some time in July when we have a choice supply.

Offer No. 23. For 50 cents we will send GLEANINGS from the time your subscription is received till Jan. 1, 1902, so that the sooner you send in your order the more numbers you will get.

Offer No. 25. Gleanings one year and one untested red clover queen, $2.00. Gleanings one year and a tested red clover queen, $4.00. A select tested red clover queen and Gleanings one year for $6.00. We will begin mailing these queens in January. Orders are already being entered and will be filled in rotation. Do not neglect to improve this opportunity and get some choice stock. Send your order early so you may get the queen correspondingly early in the season.

Offer No. 26. For $1.00 we will send GLEANINGS one year and a Clark smoker, postage 20 cents extra. Or, for $1.25 we will send the Cornell smoker, postage 25 cents extra.

Offer No. 27. For $1.50 we will send the A. B. C. of Bee Culture, of 675 pages.

Odd as well as new subscribers may take advantage of these several offers, but all arrears or back subscriptions must first be paid at $1.00 a year. Refer to these offers by number to avoid mistakes.

THE A. I. ROOT CO., Medina, Ohio.

GEORGE W. YORK & CO., 144 & 146 Erie Street, are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES. Send to them for their free Catalog.
MR. O. L. HERSHISER,
Superintendent of the Apiarian Exhibit at the Pan-American Exposition.
Long-Tongued Bees ARE DEMANDED NOW.

We have arranged with one of the oldest and best queen-breeders (having many years' experience) to rear queens for us the coming season. His bees average quite a good deal the longest tongues of any yet measured. The breeder he will use is direct from Italy, having imported herself. Her worker-bees are large, somewhat leather-colored, very gentle, and scarcely requiring veil or smoke. They stored red clover honey last season.

Orders for these fine, "long-reach" queens will be filled in rotation—"first come, first served"—beginning about June 10th. It is expected that orders can be filled quite promptly, as a large number of nuclei will be run. All queens will be guaranteed to arrive in good condition, and all will be clipped, unless otherwise ordered.

CASH PRICES of these fine queens will be as follows: Untested, $1.00 each; Tested, $2.00 each. Send all orders to

GEORGE W. YORK & CO.
144 & 146 Erie St., CHICAGO, ILL.

28 cents Cash paid for Beeswax. ** This is a good time to send in your Beeswax. We are paying 28 cents a pound—CASH—for best yellow wax, low, upon its receipt, or 30 cents in trade. Impure wax not taken at any price.

Address as follows, very plainly,

GEORGE W. YORK & CO., 144 & 146 Erie St., CHICAGO.

Best White Alfalfa or Basswood Extracted Honey ALL IN 60-POUND TIN CANS.

ALFALFA HONEY

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa's extracted.

A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—one 60-pound can, 95 cents per pound; two cans, 9 cents per pound; four or more cans, 5½ cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. The cans are boxt.

Order the Above Honey and then Sell It.

We would suggest that those beekeepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

Address,

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.
The Home Circle.—We begin this week a new department of the American Bee Journal, called The Home Circle. As will be noticed, it is in charge of Prof. A. J. Cook—a man of excellent ability, wide experience, and a most helpful writer. We trust that this feature of the old Bee Journal every member of the family may be greatly benefited.

It will be a nice practice to gather all the family around the fireside, and have some member read aloud the whole of this new department each week. As each paragraph is read it could be discussed or commented upon very helpfully by father or mother, or the older members of the family, and thus pass a most entertaining hour or evening.

We hope, also, that many will avail themselves of the invitation which Prof. Cook extends to all who can do so, to aid by sending to him contributions of general interest and helpfulness as may be thought suitable. Of course, all such may not be deemed available, but doubtless a goodly proportion would be approved.

It is not our intention to allow "The Home Circle" to trespass upon the space usually devoted to bee-keeping, but we shall likely run a few of our own advertisements, and devote the space thus occupied to matter that shall be of real value to every member of the family, whether interested in bees or not. We feel that in so doing we will be advancing the good of all, and thus be extending the influence of the "Old Reliable" in a way that will be commended by every one who desires to see it fulfill its highest mission.

We bespeak for both Prof. Cook and "The Home Circle" a cordial reception by every family into which the old American Bee Journal has already won its way.

Home-Apairy of Mr. E. J. Baxter.—On page 121 will be found a picture of the home-apairy of Mr. E. J. Baxter, of Hanceoce Co., Ill. Mr. Baxter is a native of Newark, N. J., but he has lived nearly all his life in Hanceoce Co., Ill. He is a son-in-law of Mr. Chas. Dadant, and for the past 23 or 24 years has kept bees on a large scale, having from two to four apiaries most of the time. He uses large hives, and extracts the greater part of his honey. In reply to enquiries as to how he has increased the production of his honey, he says:

"The book containing my honey-crop statistics previous to 1896 is misplaced, but I can give you my exact returns for honey sold since that time, and some approximation of previous crops. The past five years have yielded me as follows: 1896, $825.40; 1897, $482.42; 1898, $607.50; 1899, $354.69; 1900, $482.30. The average number of colonies I have kept during this time has been 225. The past five years have been about the poorest, the last being the worst of all.

"My best years were 1888, 1889, and 1899. In 1886 the bees averaged me over $10 per colony nett, but I don’t remember the exact amount.

"In 1891 an apiary that I established at Powelton, of 41 colonies, yielded 25 less than 23 barrels of honey, one colony yielding 660 pounds. I believe that the total for that year was in the neighborhood of 25,000 pounds from 125 colonies, spring counting.

"In 1890 I harvested something over 35,000 pounds for my own share, besides the one-fifth that I gave to the persons on whose grounds the out-apiaries were located. All but five barrels was clover honey, and netted me over $2,500."

"Our crop is clover, heartsake, and Spanish-nipple. As to the strain of bees, I have blacks, Cyripus and Italians. The Italians have always done the best, in poor seasons usually having plenty of stores to winter on if no surplus, while the blacks are on the verge of starvation.

"I have used Langetroth, Simplicity, and Dadant-Quiny hives, and the latter having given me the best results, I have now no other kind. Until the past year I have done nearly all the work in the several apiaries kept during extracting time, when I have the usual crew of 12."

Mr. Baxter is also a large fruit-grower. He is one of the firm of Baxter Bros., who own several large vineyards and extensive strawberry beds. Their shipments of strawberries, raspberries, grapes, etc., amount each year to over a hundred car-loads; but E. J. Baxter says that his bees have brought him more profit, for the time involved in their care and the capital engaged, than any other enterprise in which he has ever been.

Making an Observatory Hive.—One of our subscribers in the State of Washington asks us to give plans or directions for building an observatory hive. Also the best location to place it for observation; and he wishes to know whether such can be purchased from bee-supply manufacturers.

Of course, anything in the bee-line can be gotten from the bee-supply manufacturers, if they are told just what is wanted.

Almost any one who is handy with ordinary carpenter’s tools can make an observatory hive, something after the style of an ordinary hive. Both classes of hives, for complete observatory, would be made for only two brood-frames, tho they are often made for one frame. Then the frame or frames can be lifted from the hive with the bees, queen, etc., and put into the observatory hive.

If we were going to keep bees in an observatory hive we think we would have it at the window of one of the living-rooms of our house, having it so placed that the bees could work in and out just the same as if they were outdoors, but have it so arranged that they could not get out of their hive in the living-room.

Apiculture at the Pan-American.—As we have announced before, Mr. O. L. Hershiser is the live superintendent of the apiarian exhibits at the Pan-American Exposition, which opens in Buffalo, May 1, 1901, to continue six months thereafter. Here is what he has to say in gleanings in Bee-Culture regarding the proposed exhibit in the interest and representative of bee-keeping:

Judging from present indications the apiarian exhibit will not be least among the many novel and instructive attractions. It promises to establish and every thing to the utmost, notwithstanding the general shortage in honey-production in many localities within the United States and Canada during the past two years.

This exhibit will be a veritable wonderland, not only for apiarists, but for that larger class of users and consumers of honey. It is designed to make this exhibition educational as well as entertaining, to the end that the fallacies affecting the pursuit of apiculture may be, as far as possible, rectified.

A model apiary will be in operation to show, in a practical way, just how both comb and extracted honey are produced. Exhibits, showing the relation of bees to horticulture, will be a prominent feature, and the mistake of spraying fruit-trees when in bloom will be demonstrated, as well as the absolute necessity of the presence of bees during the season of bloom in order to make horticulture, in any sense, a paying pursuit.

Vast quantities of both comb and extracted honey, prepared in the most attractive and appropriate forms for market, will be shown. It is safe to say that this most interesting feature of the exhibit will include the numerous products of all valuable honey-plants to be found within the Americas and the island possessions of the United States.

There will be a complete and exhaustive display of manufacturers therefrom.

A distinctive exhibit of honey-plants, as a part of the general outdoor-growing horticultural and floral exhibits, is contemplated.

There will be several larger apiary exhibits of apiarian supplies, comprising specimens of all approved hives and every tool, device, and preparation needed in the pursuit of apiculture.

Several State and Provincial exhibits are already assured, and others are under advisement. It may also be stated that individuals, no matter where situated within the Americas, have an opportunity to
exhibit their apiarian manufactures and products. One person in this class proposes to install an exhibit comprising a carload of 30,000 pounds of comb honey, and it is expected that there will be others of great magnitude, especially from localities noted for large productions of honey, as is the case with the alfalfa of Colorado, the sage of California, and the basswood of Wisconsin. Many of these, as well as some State exhibits, will be of the present season's honey harvest, and will not be installed before the middle of July to the middle of August; but application for space should be made early, in order that it may be provided.

It begins to appear that Mr. Hershiser is going to try to oudo the combined apiarian exhibits at the World's Fair in 1893, and the Omaha Exposition in 1898. We hope he will succeed. He is a hard worker, and deserves every encouragement in his huge undertaking. Surely, his objects, as stated above, are highly creditable, and, if carried out, ought to help to elevate bee-keeping and the products of the apiary to a higher plane than they have occupied before in the estimation of the public.

The American Bee-Journal is ready to do all in its power to aid in making the apiarian feature of the Pan-American the most entertaining and educative of any to be shown.

"Watch the Bees"—Robbers.—A subscriber at Ackley Station, Pa., wrote us as follows Feb. 18th:

I enclose a clipping from the Farm and Home. It is a good thing we don't depend on farm papers for our bee-information.

The clipping referred to reads as follows:

W A T C H  T H E  B E E S.—Be sure they have food enough. This can easily be determined in the spring by weighing them. The stand should weigh at least 75 pounds. If they are not supplied dissolve white sugar in water, enough to make a thick syrup, place in shallow pans and put immediately in front of stand on warm sunny days. Watch for robbers if this is done. Your own swarms will not rob one another, M. H. A. E., Coos Co., N. H.

When it comes true that "Your own swarms will not rob one another," it will no doubt be true that two roosters will not fight if they belong to the same owner, and there will be no possible chance that one dog will catch a bone from another unless they belong to different owners. There is, however, a serious side to this matter. In some cases a man will be punished who pretends to practice medicine without proper qualification. He must know enough about the laws of health to be able to instruct his patients as to their health, or he is guilty of crime. Altoho less in degree, is it not of the same kind when a journal ostensibly gives instruction upon agriculture, and knows nothing about the matters it treats of? If a physician is subject to punishment when guilty of mal-practice, why should not an agricultural paper be punished for the want of mal-practice in its instruction? Farm journals should give reliable instruction as to bees, or let bees alone. It says in the clipping that the "stands" should be lifted, and should weigh 75 pounds! If a "stand" weighs 75 pounds, how much should the hive, with bees and combs, weigh?

Mr. A. L. E. DIBENE, of the A. L. Root Co., has recently been in Cuba, and gives a report of his operations in the cuban bee culture. It seems he visited some box-hive apiaries owned and managed by natives. At one of these he desired to take some photographs, but the Cuban bee-keeper didn't quite understand the kodak act. Mr. Dibene continues:

When I went to the lower end of the yard to snap my kodak he came bounding up, gesturating wildly and talking vociferously. The bees were getting roused up at this point; and as I did not understand his Spanish, I concluded that he was afraid I would get stung. Being a Bee-man myself, I knew his motives and with my chances, and so held my ground until I had made two exposures (both failures, however), and then went back to the upper end of the yard, where the rest of the company were. When I got there I found I had offended this man very much indeed, for he thought I had come with some sort of music-box to entice his bees away. It is reported that he lost a large number of bees a year or two ago in this way; and he is very suspicious of anything which he does not understand. We tried to explain the matter to him, but did not succeed in pacifying him.

Editor E. R. Root has the following paragraph in Gleanings in Bee-Culture, with this heading. "York's Patent Double-Acting Bee:" 

While we were on the cars en route to the Wisconsin convention, Mr. Root poked fun at Mr. Hutchinson and myself on this matter of measuring bees' tongues. Mr. Rankin, you are aware, measures the whole and gives a report of his operations in the cuban co. Bee culture.

When Mr. Hutchinson and I were discussing which was the right way, Mr. Root facetiously remarked that he had a plan that was better than either; and that was to measure from both ends of the bee's tongue to the end of the sting. There could be no confusion if we measured thus. And he proposed, further, that Hutchinson and I go into the business of building a double-acting "both ends" at one time, something like a patent double-acting double-plunger pump.

When these two editors have queens for sale of the double-acting kind of bees, we will give them a free advertisement. Only we hope they won't develop long stings at both ends, also.

Mr. H. T. GIFFORD, of Brevard Co., Fla., we learn from Mrs. F. F. PRANGE, "was shot Feb. 16th by C. D. Reed, a renter. There had been some dissatisfaction about the crops, it seems, but no heated words for over three weeks. Reed used a shot-gun loaded with No. 4 shot, fired without warning, at a distance of 10 feet. Mr. Gifford was wounded, and was pumping water for his horse. He saw Reed when he aimed, and threw his head and body behind the pump and platform. This saved his life, but he was badly wounded." Mr. Gifford is one of our subscribers, being 62 years old, and most highly respected by the residents of Indian River district in Florida, as well as in his native State, Vermont. We regret very much to learn of this very unfortunate occurrence, and trust that Mr. Gifford will fully recover.

Not a Bee-Hive.—The following is told at the expense of an American gentleman who was recently staying with his wife at Hotel Cecil. On their first evening there he happened to retire somewhat later than her spouse. Arriving at the door of what he imagined to be his room, and finding it locked, he tapped and called, "Honey." No answer came, and he called again more loudly, "Honey." Still he got no reply, and becoming somewhat uneasy he shouted the endearing term with his full lung power. This time a reply came, and in a male voice: "Go away, you blithering idiot! This is a bath-room, not a blooming bee-hive!"—London Express.

Yellowzones is the name of a valuable tablet remedy gotten up by Dr. W. R. House, of Detour, Mich. They are intended for the alleviation of all fevers, headaches, coughs, colds, grip, rheumatism, neuralgia, colic, dyspepsia, heart diseases, etc. We have tried this remedy for some of the troubles mentioned, and find it all right. We would advise our readers to send to Dr. House for circular and further information, if interested. In seeing this notice in the Bee Journal, should you write to him.

Mr. R. W. LEARY, of the Leary Mfg. Co., called on us Friday, March 1st, when on his way to visit Wisconsin bee-supply dealers. We didn't think he seemed the same man from home years ago, for he said he felt better than for some time past. He is taking things easier than formerly, saying he doubted if he would ever again work as hard as he did for some years. Nice thing to be able to 'low' up, we presume, and let others worry over business, etc.
Convention Proceedings.


BY DR. A. B. MASON, Sec.

(Continued from page 133.)

THE SECRETARY'S REPORT.

During the past year no complaints have been made to me by any of our members of any trouble in obtaining payment for consignments of honey, but the case to which reference was made at the Philadelphia convention last year has not yet been adjusted.

In 1899, Mr. W. C. Gathright, one of our members in New Mexico, made a small shipment of comb honey to Mr. H. P. Robie, of Sioux Falls, S. Dak., and failed to get his pay. Mr. Robie wrote the ice cream, and I got a reply. He promised to pay, but waited a little time. After waiting a long time I wrote to him twice, but as yet have no reply, and, thinking it advisable to collect the amount if possible, I obtained his commercial rating, which in part is: "He is running a small newspaper called the Successful Farmer. Is of small financial means, and not known to have anything in excess of exemptions...and can not be reached in any way." I informed Mr. Robie of the objects of our Association, and told him that unless settlement was made beekeepers would be informed as to his method of doing business, and cautioned regarding their dealings with him.

This is the only one in which during the past five years, I have failed to make a settlement in the name of the Association. A. B. MASON, Sec.

Pres. Root—Are there any other matters to come up before we adjourn? Mr. Abbott—The Legislative Committee.

Pres. Root—I will name on that committee Messrs. R. L. Taylor, O. L. Hershimer and Herman F. Moore.

Mr. Abbott—Let me say briefly that the purpose of that committee is to look up the laws in the various States relating to bee-keeping, and to draft such laws as are thought proper in the interests of beekeepers. Those laws will then be submitted to the General Manager, and when you want a law past in your legislature you send to the General Manager to get a copy of that law, then each State will have a number of them, and as laws are passed on, drafted ready to go through.

I have a man now in Missouri who says he will put one thru our legislature this winter.

Pres. Root—Is there anything further that should come before this convention before we finally adjourn? Dr. Mason—Nothing is yet known as to the time or place of our next meeting; we have been following the Grand Army Encampment; they have not decided where they will meet; as soon as we have decided you will learn of it in the bee-papers.

Mr. Root—If there is nothing more, I think we may consider ourselves adjourned. sine die.

Owing to some misunderstanding no report has been sent to me of the Wednesday evening session by the stenographer, and altho I have twice written about it, and it was promised, it has not been received, and as Mr. J. M. Rankin's paper on "Breeding for Longer-Tongued Bees" was read at that session, I have been waiting the arrival of the stenographer's report before inserting his paper in the report, but as it seems probable no report will be made, Mr. Rankin's paper will be inserted here.

Breeding for longer-tongued bees.

The subject which was assigned to me to discuss is one which has but recently been considered by the public as an important one. There are a few men who have been working along this line themselves, but for some reason or other they have neglected to inform the public as to their results. It may be that they were afraid of being laughed at for working on such a crazy hobby, or it may be any one of a dozen other reasons; but the facts of the case are, that no attention has been given it by the bee-keepers until the last three months.

The beginning work of this kind it is always well to stop and consider the probable advantages that would be gained if we were successful in accomplishing it. And also count the cost of bringing about the desired change. Then, by a mathematical calculation, as it were, we can determine whether or not it is worth our while for our Associations to make use of the great advantage in having bees with a tongue 8 or 9 mm. long, would be that they would be able to gather nectar from the flowers whose corolla-tubes are now too deep for them to work on. There would be myriads of gold of honey deposits would be of easy access to our bees, which at present are entirely useless except to the bumble-bee. The principal one of these would be red clover. It is a known fact that as the flowers open it becomes more and more desirable for the wild vegetation with the forests give way to the farmer's corn, potatoes, and hay, that the bee-keeper realizes that it is time to move to better pastures. His crop has become too uncertain because of the bee.

If the honey-bee could reach the nectar in the clover-heads, the bee-keeper would not find it necessary to move. When there is only one ordinary amount of honey in the corolla-tubes, it is of no value to the honey-bee, because it is out of her reach. She is compelled to wait until a moist or a very little while has passed, before she can pierce the 8 mm. of the top of the tubes. What a difference it would make in the honey-crop, in these old sections of the country, where clover comprises half of the hay crop, if a bee could work on it on it.

When beginning this work I sought the advice of several scientific men. I received no help, and no encouragement. One of the most prominent entomologists in the country said that it hardly seemed possible, for the next hundred years, it would be a pleasant way to spend any time in trying to accomplish something which was an impossibility. Had I been wise I should probably have taken his advice, but I did not. I went to work to contrive some way of measuring the tongues of the bees. After much experimenting I settled on a compound microscope with an m. c. scale, and a camera lucida attachment. The bee was killed by chloroform, the tongue removed, placed on a slide, and its position by the compound microscope, and the m. c. scale, as well as that of the tongue, was then thrown on the desk beside the instrument. This, however, proved to be a very unsatisfactory method, as it is a difficult matter, and requires the best of the day to make the adjustments of the microscope.

The method finally adopted was to place the tongue on a slide which contained the m. c. scale, then to hold the tongue in place by a cover-glass, and place the whole on the stage of a simple microscope. By this method it is impossible to get the measurements down finer than .1 mm.; but this is close enough for all practical purposes. Many devices have been made to measure the tongue, while the bee is living, but all these have failed, none of these have been practical. The only fact that is of value that I have obtained from them is that during life the tongue can be stretched to a certain extent, at the pleasure of the bee. Just how much it can be stretched I am not now prepared to say. When I had found a way of measuring I was glad to know that the tongues of a certain colony were comparatively uniform, that is, that each strain had a particular length of its own.

After securing the first stock it was possible to find, queens were procured from this stock, and the selections began. The idea that presented itself to me was to cross and recess two good strains, thinking that we would in time produce something superior to the original strain. It is by this method that all the improvements have been made in live stock.

It was right here that the difficulty presented itself, namely: How should I control the mating of the queens? Every method I tried was tried, with little success. I have clipped the tips of the queen's wings, with the intention of impairing their flight; have taken off all the way from a hair-breadth to half the wing, but out of 15 queens thus treated only one was mated.

I then tried the plan of cellaring the nucleus containing the virgin queen, and also a full colony of bees containing drones. Then I releast them towards evening, after the drones had gone to the yard. The results were little better than those of the first method.

The only plan which has given me satisfaction is to keep a colony with drones queenless until toward the close of the season, and after the other drones in the yard are killed off. The virgin queens would generally be success-
fully mated. This plan, however, prevents more than one cross taking place. It has been proven that inibeing used by live stock, where breeding from nature toward a certain type, that the selections must be from both the male and the female, and of the two the male is the more important. It is necessary, therefore, to control both sides if we wish to develop a longer tongue, because it is not a natural tendency.

After three years of failure and success from these and other methods, from stock which measured 5, 8, and 6 mm., I have made two direct crosses, and the result is stock which measured 6.4 mm.

There is as yet a question as to what will be the outcome of this idea. The problem which confronts us at present is to determine how far the result is the general tendency in this, as we may experience the difficulty of having our stock suffer from in-and-in breeding, but this can doubtless be overcome.

To Sum One will take the contract of mating the queens as I want them mated, I would agree to develop the strain of bees with a tongue as long as desirable.

There are three methods, it seems to me, of accomplishing the desired results. One would be to sow a large barren tract on some island in the sea with our June clover. The corolla-tubes of this would be short because the soil would be too poor to grow the clover thrifty. An apiary located in this clover would reap a fine harvest from it because of its corolla. Then we would gradually lengthen the corolla-tubes by adding fertilizers to the soil, and in a few hundred years we would have bees that would successfully obtain a harvest from June clover. We all know that it is the tendency of animal life to adapt itself to its surroundings. So the bees would gradually stretch their tongues to reach the nectar in the clover. This method can hardly be considered practical.

The next best thing will be to increase the length of the tongue by direct crossing. This method will at the best require many years of careful work. Why not add to this another method which will work in with this one perfectly, namely, to breed a race of clover with a shorter corolla-tube? Plants are more variable than animals, and therefore more easily changed from their original type.

There are examples of this all around us. From a small yellow variety of corn, with an ear less than 6 inches long, and a stalk not 3 feet high, we have the large varieties of Dent, which stand 10 feet, or even more, in height, and two or three ears. Cabbage and lettuce have been selected with a view to the value of their leaves. Phlox drummondi has within the last 50 years been changed from a small pinkish flower to the beautiful double white flower of the present time. All these have been selected with a view to a certain type. Closers have been develop with a view to a forage crop, and nowhere is there any record of work being done on the flowers themselves — one of our best authorities on botany, and especially grasses — said while talking with me on this subject: “A field of clover represents as many and as varied types of the same species as would a field of corn planted from a mixture of all clover varieties.”

I see that, then, that there is a chance to do some good work on the clover. There would be little danger of its going back to its original type, for only the short corolla-tubes would be fertilized by the honey-bees, and the first crop of this clover would yield the seed.

Let me impress upon you that in all probability there are few present here tonight who will live to see bees work from June clover. Do not misunderstand me: I honestly believe that it is possible to breed a strain of honey-bees with tongues long enough to work clear to the bottom of a June clover-blossom, but the process will be a slow one, and probably not practical for the ordinary bee-keeper to undertake. What I do think will be practical, and should be done by every bee-keeper, is to keep the longest-tongued stock that it is possible for him to find.

I dare say that next season there will be cataloged by the prominent supply-dealers a piece of clover stock of various scales, tense, and a half-dozen cover-glass throns in. They will offer the whole outfit for about $2.00, and every up-to-date bee-keeper will know the length of the tongues of the queens of the strain of bees in his yard, and will rear his queens accordingly.

I think that in the past the ordinary bee-keeper has been too likely to rear his queens “just as it happened,” or possibly with paid special attention to the three or five yellow bands. This is all wrong. When selecting a work-horse do not pick out a sharp-back, slat-sided horse just because he works willingly. We find a square-built, blocky

horse that has the ability as well as the willingness to work. Why not apply the same horse-sense when selecting our breeding stock in the apiary?

If this method of selection is followed for a few years there will be no more short-tongued bees in your apiary. Then, too, you will not see one colony working on some vile weed, and storing strong, black honey while the colony beside it is storing beautiful white honey from second-crop clover, or from some other plant with a deep corolla.

J. M. RANKIN.

REPORT OF THE COMMITTEE ON A MODEL SCORE-CARD.

The committee appointed at the National convention in Chicago, to draft a model score-card to be used in judging bees, honey, etc., at fairs, was appointed so late in the meeting that they could not get time to decide on various points, and after much corresponding they have decided to offer the enclosed score-card—not as a perfect score-card, but as a help, and with the hope that it may be tried in various parts of the United States, and then be so modified by another committee at the next meeting as to fill all demands:

<table>
<thead>
<tr>
<th>Item</th>
<th>Maximum Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>5</td>
</tr>
<tr>
<td>Body</td>
<td>5</td>
</tr>
<tr>
<td>Style of comb</td>
<td>5</td>
</tr>
<tr>
<td>Style of hive</td>
<td>5</td>
</tr>
<tr>
<td>Attractiveness</td>
<td>5</td>
</tr>
<tr>
<td>Points of judging</td>
<td>5</td>
</tr>
<tr>
<td>Package</td>
<td>5</td>
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<td>Variety</td>
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<td>Size of bees</td>
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<td>Queen</td>
<td>5</td>
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<td>Brood</td>
<td>5</td>
</tr>
<tr>
<td>Quietness of bees</td>
<td>10</td>
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<tr>
<td>Goodness of honey</td>
<td>25</td>
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<tr>
<td>As per nucleus of bees</td>
<td>25</td>
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<tr>
<td>Color and markings</td>
<td>20</td>
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<tr>
<td>Nectar of bees</td>
<td>20</td>
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<tr>
<td>Variety of bees</td>
<td>25</td>
</tr>
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<td>Style of cage</td>
<td>25</td>
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<td>Color</td>
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<td>Display</td>
<td>20</td>
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<tr>
<td>Number of kinds</td>
<td>50</td>
</tr>
<tr>
<td>Appearance or attractiveness</td>
<td>50</td>
</tr>
<tr>
<td>Baking</td>
<td>1st Prize</td>
</tr>
<tr>
<td>Candies and confections</td>
<td>Greatest number, sweetest</td>
</tr>
</tbody>
</table>
In several places in this report Mr. and Mrs. R. C. Aikin's little daughter has been credited with having entertained the convention with songs and music on the piano, but Mr. Aikin writes me that Mr. and Mrs. Acklin's little daughter has been doing the same with a very much larger apparatus in order to make such a mistake when two such bright and winsome Misses of so nearly the same age were constant attendants on our sessions.

[A. B. Mason, Sec.]

**Contributed Articles.**

**No. 5. Extracted Honey Production.**

**Machinery Needed—Freeing of Impurities—Why Some is More Watery Than Other.**

**BY R. C. AIKIN.**

I have added to the extractor there are knives, knife-pan, and all-stove to heat same, capping box or can, strainer, and one or more tanks. The larger the tank the less trouble and the better the honey. Some use a tank of about a barrel capacity, a real barrel sometimes serving the purpose; such will do for an extremely high flow and a high temperature. I will not specify a definite size of tank, but rather tell you what you ought to do, and then you can judge for yourself of the size best suited to your needs.

It is rarely that any foreign substances get in the honey but bits of wax and propolis. Wax weighs, I think, about 7 pounds to the gallon, being lighter than water, which is in round numbers 8, honey about 12, and propolis between water and honey. I will say, parenthetically, that if you are melting wax that has propolis in it, be careful not to let it get too hot, for the propolis settles to the bottom of the boiler and will burn there and stick fast to the boiler-bottom. I have just been melting a lot of top-bar shavings composed of propolis and burr-combs, and altho I thought I was not letting it get too hot, yet it burned on the boiler-bottom.

Suppose you wish to extract one or two thousand pounds in a day, and have but a 500-pound capacity settling-tank to receive it—you can neither strain nor settle it properly in that time unless heated to considerably over 100 degrees—I should say not less than 125. The most practical way is a tank of a capacity to hold the honey so you can let it settle for at least a week, and even then it ought to be in a quite warm place. If you want to do good work, and put out a well-rinnen and a clean and nice liquid, use both time and heat liberally.

For several years I used a tank of 1100 pounds capacity, but when extracting 1,000 or 2,000 a day—even 600 or 800 a day—several days in succession. I found my tank altogether too small. A 12 feet across and 4 feet high will hold about 1,000 pounds. I now have one 5 feet across and 6 feet high, which holds 5 tons, is made of galvanized steel, and never overflows with a day's extracting. The outlet is in the bottom; the pipe is elbowed out beyond the tank, and also on the stone foundation built from the cellar floor to about two feet above the ground floor. A brick casing is built around the tank to two or three inches space between tank and brick, until the top is reached, when the brick is drawn in against the tank and mortared airtight to retain the heat.

In the circular chamber beneath the tank is a range stove, and on this is where I melt honey, wax, and such work, and little fire there helps to keep the tank warm. The chamber being of stone, and nearly the whole structure of stone, brick or metal, I can leave a roaring fire and no fear of a burn-out.

Speaking of heating honey, it does not absorb heat as freely as water. Set a chamber or hive of combs of honey in a warm room, and it will be many hours in getting warmed thru, at as high a temperature surrounding as 100 degrees. Look in the list of extracting chambers and store them, and before extracting I keep the room at well nigh 100 degrees for about two days, then extract. I have so treated several tons, warming for extracting after the honey season was over—as late as November and December.

The consistency of honey varies quite materially, much depending on conditions while being gathered. If the flow be very slow, it is extremely delayed and the cells remain open, and the honey is exposed to the evaporating process for such long that it becomes very thick; but with a rapid flow the cells fill rapidly, and the free honey and constantly full honey is evaporated, sometimes even before the honey is sufficiently ripened. When honey comes freely it is dropped into any available open cell, among the brood, near the entrance, in fact anywhere where there is found an open cell, big or little. When the flow lets up, or stops, then this scattered honey is gathered from here and there and stored regularly.

Even a rainy day serves as a chance to put things to rights in a much disordered house caused by the previous rush to get all that was to be had while it was available. This unevenness will be observed at times by thick and thin streaks in the same combs, and some parts of a comb will extract much more freely than another.

All honey intended for table use should be put thru a settling-tank, and some were feasible to get the honey heated to about 130 or 140 degrees before straining, then it would be possible with large but fine and close strainers to properly strain out the impurities; but the easiest way is large settling-tanks. The large tank, as I have said, is a much more effective way of removing what can otherwise be obtained except by freely using heat. I am an advocate of applying some heat to the honey, but too much would be worse than none at all. The best thing in an honey house is an available, well-equipped honey-room, which is handy water and washing arrangements. Where it is possible there ought to be water on tap as in waterworks and towns. The water may be kept in a tank so that it can be drawn at will. A washtub full of water allows for dirty water, and a barrel with a cloth over it for all honey-washings, such as of cans that have had honey in them, honey-strainers, etc. This sweetened water can be poured into the barrel thru the cloth tied over the top, thus straining it as it goes into the barrel. Such savings will make first-class vinegar, and help out in the revenues.

Larimer Co., Colo.

**Do Bees Injure Fruit by Taking the Nectar from the Flowers?**

**BY G. M. DOOLITTLE.**

A Correspondent writes that a neighbor of his thinks he ought to give him several pounds of honey for the injury which was done his fruit from bees taking the sweet out of the fruit-blossoms, this hindering the fruit from perfecting as fully as it would have done, had the bees not taken the sweet, ending his letter in this way, "Will you please tell us in the American Bee Journal whether there is anything in this claim? I do not wish to give out any honey as pay for damages, as it would be establishing a bad precedent, altho I generally give honey to several pounds of honey to my bees, for I like to see them enjoy it; and it also helps to smooth over any rough feelings which the bees may cause in any way."

I like the spirit of the last words from our correspondent very much, and know from experience that the giving of a few pounds of honey to all the bees will smooth over all bee-spots on drying clothes, an occasional sting gotten by a bare-footed child stepping on any bruised or partly decayed fruit which may happen to have a bee in or on it, etc., and we feel that it is much more valuable than the giving of some of the "first fruits" of my honey to those who may have a chance at some time or other to be annoyed by my bees. But while I so believe, I would never give out a pound of honey as pay for damages, nor should I give any, no matter how much working on them, for no damage is ever done. In fact, it is always the other way. The bees always help in perfecting any fruit which is visited by them while the fruit is in the blossom or flower.
form. It is only from jealousy, coming from that innate weakness common to all, causing a restlessness to come over others by seeing the bee-keeper prosperous, that such discontent and such ungovernable jealousy and to show any con-
cession on our part at this point would be to "let down the bars" for a still greater call upon us.

No sooner did it go out by a gossip of our neighborhood, that the Stolly was putting money out of his bees, than a few about me began looking for their nuts and showed no signs of wanting to give over their hard work. The bee-keepers who saw the bees at work on the bloom in their orchards, meadows and buckwheat fields, they began to reason that Doolittle was getting rich from that which belonged to them, and from that day till next fall that the honey stored in the flowers was placed there for the development of the fruit; and as the bees took away this sweet as fast as it was secreted by the flowers, an injury must result to the product coming from these flowers and the fields, which injury did much to enhance Doolittle's gains.

Since being in the queen-business more largely than in the honey-business, I have heard less of this than formerly; but from my own experience I doubt not that every pros-
perous bee-keeper has either heard something to this, or, if he has not heard it, his neighbors have talked it when not heard by him. I have even been asked for ten pounds of nice basswood comb honey as pay for what honey the bees gathered from a particular field of Canada buckwheat, which the owner of the land had allowed to grow up thru his shiftlessness, he arguing that a pound of honey from an acre was a very light toll, indeed. When thus approach, I have always given my fair share. Even of the one I was grieved one, and demanded a cash return for the service render-
dered the crop by the bees causing greater frugal use than the properly pollinating the flowers work upon, and have always been satisfied with the results. Every party so approaching me has gone away convinced that I was in the right in claiming that better results always attended any crop which was visited by the bees in the blossom form.

A little different view of these matters than do most other people going back to the creation of all things and telling how all fruit or grain of any kind was an entire failure till insects were created to visit the flowers which secreted nectar, while those that did not secrete nectar were always plentiful and fruitful. Bees, then, like the birds far, all is a matter of conjecture, but it serves the purpose of getting the thoughts of the one talk with from what he considers a grievance, over to a line of thinking where he is at least a little pliable toward the bee's side of the matter. From this I go on to explain how that the first object of nectar in the flowers was not for the perfecting of fruit, or to be used as a food or luxury for man, nor even to sustain the life of the bees, but as a means to an end, and that this end was that the flowers bring the bees forth for the purpose of pollinating the flowers so secretting, that the fruit, or female blossoms of plants which could not possibly be fertilized in any other way, might be fertilized thru the agency of insects which would pollinate them. The bees bring and attractive morsels of sweet they spread out before them as a sumptuous feast, while honey as food for the bee and for the use of man came in as a secondary matter or item.

I then proceed to dwell on insects other than the bee, and show that these out-number the bees by scores, as all close observers well know, showing that to claim damage of any one from these would be something not to be har-
bored for one moment.

Having gotten the thought now fully on my side of the matter, I next proceed to quote from Gregory's treatise on squashes, where he says, "The primary reason why a squash grows, is to protect and afford nutriment to the squash-fruit, and therefor must be supplied with a sufficient body and food; and, thus line of reasoning prove that the primary object of the nectar placed in the blossoms of the squash was to draw insects to the blossoms, as the female blossom is of such shape, and being hid down in the leaves, that pollina-
tion could not be effected in any other way, and thus neither seed, nutriment, nor anything of the kind could be obtained, were it not for the insects which were attracted by the nectar placed in the squash-fruit which was placed in these for the sole and only purpose that the squash might grow.

I then go on to give Gregory's experiments of covering the female blossoms so no insects could visit them, and without a single exception, every such covered squash-blos-
som was unfruitful. I also tell how bees were once banished from the town of Wenham, Mass., and it was found that no
perfect fruit was found in the interior of that township until the bees were requested back again; winding up by asking, "Why, then, is nectar placed in the flowers?" This nearly always brings an answer more or less favorable to the bee, which I make more impressive with, "To attract insects that the blossoms may be properly fertilized, pri-
marily; and, secondly, for food for these insects, which food for insects, in the case of the bee, is utilized by man. Anec-
dotes by this time have swarmed up here, one with a griev-
ance, as he or she thought, is won over to the insect side, if not to the bee side, and I hear no more of paying for dam-
ges done to flowers by the bees.

There remains the line of reasoning, rather than giving any honey or anything else to pay for dam-
ges claimed to be done thru his bees to the flowers in his neighbors' fields or orchards."

What About the Hare?—Will It Become a Pest?

BY FRIEDMANN GREYER.

T
HE reports on the Belgian hare in this and other papers are somewhat conflicting, and people's opinions go widely apart. Mr. Martin says in Gleanings in Bee-
Culture that after an absence of nine months from Los Angeles he finds the hare-business—which had been in a flourishing condition before he left—dead and gone; and,

further, that the hare-meat can not compete with other meats.

Mr. Morrison in the same number of Gleanings says the hare firm in Melbourne sent 5,000 cans of fresh rabbits to England; further, that he can buy in Bermuda a whole imported canned rabbit for 24 cents.

Mr. Martin's and Mr. Morrison's statements do not exactly harmonize, and yet are not so very far apart. Mr. Martin does not say the hare is not the hare-grower's stand-
cier's standpoint. Mr. Martin evidently does. The conser-
ervative observer has been quite sure from the very beginning that the life of a $50 hare-boost would be short. There may be few, but in the future will be willing to pay $5.00 or $10 for a pedigree hare, but the majority of hare-grow-
ers must grow the animal for meat-stock and so can not afford to pay exorbitant prices for breeding-stoc-

k, particularly as the difference between the 50-cent hare and the $5.00 or $10 hare is not there at all, but merely in the slight difference of his color, which disappears when the pelt is pulled off. The 50-cent hare has more white hairs on the legs and undersides than the other, but is just as good for the table. That is what we raise the hare for, and therefore can not see good business sense in it, to pay these fabulous prices.

Why the meat of this hare could not be made to com-
mensurate with other meats is easy to see, it certainly does in our own home, and others that I know of. We like variety. A few years ago we got tired even of capon meat. My bet-
ter half said she did not like those great 10-pound car-
casses, they lasted too long. A hare is a smaller animal and attractive morsels of sweet they spread out before them as a sumptuous feast, while honey as food for the bee and for the use of man came in as a secondary matter or item.
would probably be better if the society would petition the legislature to enact a law to prohibit the growing of the hares within the State. A comparison was even drawn between the hare and the English sparrow.

These good people are unduly scared. I will admit it might be unwise to turn a large lot of hares loose into a young orchard in the winter-time. I very frequently turn off 12 of the animals at any time with 600 young fruit-trees growing near by, which I would not have injured for all my hares. Yet I have not the slightest fear that any of the trees will be damaged. The fact is, I have never had a tree killed or blighted by the wild rabbit, which I had taken the first three years was very plentiful here, nor by my hares, except when the fruit-trees had been planted in the hare enclosure. The woodchuck is the destroying foe among our fruit-trees—not the hare; and the States could well afford a bounty for every specimen killed; the hunters would take care of the hares. In some localities nurserymen sustain heavy losses by the work of wild rabbits, it is true; but a few hunters with dogs and ferrets will—just glad to do it, an infected district in a short time. I do wish we had more wild rabbits.

The hare—because less cunning—could be subdued and cleaned out much more easily and quickly than the wild rabbit. However, nobody need be afraid that any hare-grower would be afraid of the hare, and give up his occupation, as I believe California has a law against liberating hares.

Sometimes when I wish to dispose of surplus stock, to make room, I kill a number of them at a time, stove out the meat and can it in our regular one or two quart glass-cans. Thus prepared it is ready any time for lunches or other culinary uses.

I am not sure that the hare industry is the coming industry, as Mr. E. T. Abbott puts it, or that it ever will assume gigantic proportions as to become a leading industry, but I am sure that it will always be and remain a pleasant auxiliary for the production of choice meat, for one can put at least, and at a very low figure. In my individual case, if I had several hundred grown animals now on hand I could very easily dispose of them at 15 cents per pound.

**A Brother's Testimony.**

I will add that my brother Friedemann, is hardly enthusiastic enough about the value of the Belgian for meat stock. In quality, the meat is unsurpassed—I believe even unequalled—by the meat of any other domestic animal, the capon excepted. A well-roasted young Belgian hare is a treat, indeed.

In a general way, Friedemann has given the facts in the case.

T. GREINER.

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**Questions and Answers.**

**Conducted by Dr. C. C. Miller.**

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail—Editor.]

**Death-Rate of Bees in Cellar-Wintering—a Foul-Brood Deal.**

1. I put 72 colonies of bees into the cellar Nov. 22d to the 20th, just after a good flight, but found many dead bees on the bottom-boards, which were all cleaned out. About one-third of the colonies were wintered in the snow, and nearly all of the latter were raised ½ inch blocks put under the front end. As there seemed to be more dead bees than usual on the cellar floor, I made a note of all, swept up since Jan. 16th, which was as follows: Very early twenty quarts spotted; Jan. 24th, nearly two quarts, and four hives spotted; Feb. 1st, § quarts, and eight hives spotted; Feb. 7th, § quarts, and 12 hives spotted; Feb. 14th, two full quarts, and 15 hives spotted.

Is the above an average death-rate, or is it above the average? Would it be best to put the bees out for a flight on a good day, and then return them to the cellar? The cellars are rather damp; it was tiled Nov. 1st. The temperature has been from 40 to 48 degrees.

2. I bought bees of B—7 colonies at $3.00 each, in April, to be used for honey produced by the bees, (but not to be confined entirely to 7 colonies). Six of the seven were affected with foul brood. One colony the buyer (and supposedly unknown to the seller). The bees being black, part of them were used for rearing queens to requeen the rest, and divided into nuclei. (Don't say A was foolish—he did not know B was any foul brood in Iowa.) Result: 11 colonies have been treated for foul brood, 2 of them absconded, one full colony and one 3-frame nucleus were sulphured, and three of the treated ones died during winter, probably of foul brood, and 2 are kept in low, without any thought of the legal points in the case, what would be right and just to both parties? Ought A to pay the full amount to B, or has he paid enough? Only one of the seven colonies stored any surplus honey.

**Iowa.**

Answers.—1. There is nothing very unusual about the mortality, but so many hives being spotted so early in the winter gives occasion for some uneasiness. When a cell or damp it needs a higher temperature than when dry, and it is possible that a higher temperature would have prevented all spotting of the hives. The temperature was rather low in any case if it ranged evenly from 40 to 48 degrees, for that would be an average of 44; and if most of the time it kept below the lower limit the case was still worse. Unless they are very bad, it is hardly advisable to put them out of the cellar until they can stay out. Experience has shown that when put out and returned to the cellar they are not likely to do very well. But it is advisable to put them out earlier than you would do if they were perfectly healthy.

2. The probability is that the moral and the legal view of the case would closely coincide. If a merchant were to pay for foul brood, it might make the price of sand instead of sugar, he ought not to be paid more than the value of the sand, and the fact that he was ignorant of the character of the material sold would not in the least degree enhance the value of the sand. The cases are not exactly parallel, for while one might be tempted to accept sand at a price sufficiently low, he would hardly want to accept foul brood without being paid for taking it.

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**A Beginner's Questions.**

1. I had one colony of bees last spring, and they worked well at first, but after the first swarm they stopt work. What made them do that?

2. Four years ago I had a colony that swarmed three times. They work all the time till all the brood is out of the cell, and then all the bees leave the cell and in the spring they all died. Do you think the cell was too damp for them?

3. How long does a worker-bee live—40 or 60 days?

4. How many days does the queen have with her during the working season?

**New York.**

Answers.—1. The probability is that there was no work to be done, that is, no honey in the flowers. Sometimes the flow ceases when there is no apparent reason for it. Then it may start again without any difference that may be. It may be, however, that you mean that this one colony stopt work while others continued to work. The fact that it swarmed was enough to account for at least a very great decrease in the amount of work, and it may only be done where there are workers, and when that colony swarmed most of its workers went with the swarm. You will find it invariably the case that when a colony swarms there is a great falling off in the work of the mother colony.

2. It is impossible to say without knowing more about the case. If the cell was very damp, that would of course be something against their chance of wintering well. But no man there is known to winter well when a colony swarms three times. Under ordinary circumstances two or three of the colonies would be weak for good wintering. The mother colony would be greatly weakened by so much swarming, and it would hardy be strong. But that does not account for the death of the first swarm, and one can only guess that a cell or too damp or too cold, or too little ventilation of hive or cell or both, or some other thing was the cause of the loss.

3. The life of a worker-bee depends upon the amount of work done, and so to a great extent on the time of year.
A worker that enters its career just after half of the work in the field is over has little chance to wear itself out with work, so it lives to be six months or longer. If it starts in time there is work for all hands, say the last of May, it will live about six weeks.

4. There is no rule as to the number of drones to be found in a colony during the working season. Other things being equal, the number of drones will be older than with a young queen. The harvest has something to do with it. If the harvest is fitful or poor, the chances are not so good for a lot of drones to be allowed in the hive. The combined bees will be less difficult and drones will be found in a hive with little or no drone-comb.

Building Up Weak Colonies—Stimulating Brood-Rearing by Feeding.

1. I read that sometimes even very weak colonies—say covering only one comb—build up in very good seasons so fast that they make not only strong colonies, but even store some surplus honey. Now, do you think it would be advisable to-day to divide a colony covering eight frames into eight nuclei, giving each a young and fertilized Italian queen? As we expect a very good season, if the strong colony could get two or three times as much extra honey, would not the eight colonies (or nuclei) build up so well that I could get from 60 to 80 pounds from each?

2. Is it of any use to feed for stimulating brood-rearing in the spring? We have plenty of hives. What can I do to stimulate them?

CALIFORNIA.

ANSWERS—California.

I. It is true that a nucleus with bees enough to cover only one comb may build up into a strong colony and give surplus. It is also true that a strong colony may go thru a good season and yield no surplus with anything left in the foundation, but do better in the fall than in the spring. Both are exceptional cases, and it will not do for a beginner, nor indeed for any one to take either extreme as a basis. There is of course a possibility that an experienced bee-keeper might divide a colony covering eight frames into eight nuclei and obtain from each a surplus of 60 to 80 pounds in your wonderful California. The probability is that he would obtain no surplus whatever, if indeed no feeding was necessary. It is hardly advisable to start a nucleus with bees covering only one frame with adhering bees, and even then you should not expect wonders.

II. It is a little hard to say. If there is an abundance of stores in the hive, stimulative feeding may do little or no good, and if unwisely administered it may do harm by starting the bees flying when they have no work to do and when there is plenty of honey in the hive. A beginner may do as well to see that a colony has abundance of stores, and then let it alone.

Mice Trying to Reach the Bees.

My bees have had no flights for over a month. I find that mice have tunneled thru the snow to get at the dead bees as they fall at the entrance. They have gnawed some trying to get inside. Do they do any harm? If so, how can I avoid it?

PENN.

ANSWER—Of course the mice do no harm by eating the dead bees thrown out at the entrance; but they may do harm, and a whole lot of it, if they make their way into the hive. Mice in a hive will eat the honey and the bees, and they will destroy the combs. If they did neither of these things they should still be outlawed because of the harm they do by making holes in the foundation. Little gnawing is desirable. Of course the entrance should be large enough so that a very little gnawing would be necessary for a mouse to gain admittance. But there is no need to admit the mice were the entrance ten times as large. Close the hive with wire-cloth having about three meshes to the inch. That will allow free passage for the bees but exclude the mice. If not convenient to get such wirecloth, you may make a fence of wire-nails at the entrance, setting the nails about a quarter of an inch apart.
Mr. E. J. Baxter and his Home Apiary, of Hancock Co., III.—See page 163.

Journal. It will be my earnest hope and determined effort to bring into it something each week that may happily quicken joy and lessen grief. May I not hope to have the aid of all our readers in making this department something that will be looked forward to, week by week, as precious to those who even may not longer have interest in the apiary? A. J. Cook.

MAXIMS FOR THE HOME CIRCLE.

I copy the following from the “Intelligencer.” I know nothing of this paper, its editor, or whereabouts, but I do know that if it has much like the following it is certainly rightly named. As I read over the following, “How to Make Happy Homes,” the methodist in me (and I claim to have not a little) gave forth a most hearty “Amen.” As I read it later about the “home circle,” I found the “Amen’s” came twice-repeated.

1st. — “Learn to govern yourselves and to be gentle and patient.”

What could we covet more wisely for our children than that they follow this maxim? The best way to secure this is to follow it ourselves. A man who kicks or strikes his cow is bequeathing to his children a very questionable heritage. I know a man who once moved, I think, as many as twenty times during a milking, and every time with a gentle “So, boss,” and a more gentle press of the teat. The poor cow had a deep sore in the nipple. To have whipt and scolded would have been rank cruelty. Such an exhibition before a child would have been a grievous blunder. I know of a father who lived to be 83 years old. He was a fine example of physical energy and had an impetuous spirit, and yet tho I knew him very intimately, I never heard him utter a word that favored in the least harshness to the dear, loving companion who was indeed a true helpmeet. I know a boy, tho hardly now a boy, for he is on the 30th side of the 20’s, who tho he has the same spirit and temperament of the man just mentioned, yet I never knew him to lose his temper or show impatience. His parents told him as soon as he could understand that it was mainly to govern one’s self. They acted their teachings as far as possible. Need I say that the result has made glad hearts?

2d. — “Guard your tempers, especially in seasons of ill health, irritation, and trouble, and soften them by prayer and a sense of your own shortcomings and errors. Remember that valuable as is the gift of speech, silence is often more valuable.”

That is good advice. A home where such counsel prevails is a glad presence in any neighborhood. Who of us has not regretted with anguish of heart the angry word, or the irritated demeanor? How gladsome in the home is the temper that is ever controlled. How fortunate the one who canightly hold of silence when to speak is to wound. Even the bees resent the nervous, irritating mein.

3d. — “Do not expect too much from others, but remember that all have an evil nature whose development we must expect, and that we should forbear and forgive, as we often desire forbearance and forgiveness ourselves.” I will only add to this Christ’s incomparable words — “Father, forgive them for they know not what they do.”

4th.— “Never retract a sharp or angry word. It is the second word that makes the quarrels.” This is hardly more than the 1st and 2d. Government of self and temper controlled, will always stay the angry word. The quarrel is never manly, and we do well to remember that it always takes two to make one.

5th. — “Beware of the first disagreement.”

What better advice than this could be given the twain who are just forming the home circle?

6th.— “Learn to speak in a gentle tone of voice.” We can hardly understand how much seeming trifles like the voice-tone have to do with character. The description of Cordelia in Lear — “Her voice was gentle, soft, and low — an excellent thing in woman,” is suggestive. A low tone, even in times of excitement, will generally effect more than bluster. Nervous and excitable children, especially, should be urged to gentle speech for it will surely bear fruit in character.

7th.— “Learn to say kind and pleasant things whenever opportunity offers.” In other words, “Blessed are the peacemakers, for they shall be called the children of God.”

8th. — Stedy the character of each and sympathize with all in their troubles, however small. We may couple with this, “Inasmuch as ye have done it to one of the least of these, ye have done it unto me.”

9th. — “Do not neglect little things if they can affect the comfort of others in the smallest degree.”

Who has not seen homes that were constantly all awig with little, thoughtful acts?

10th. — “Avoid moods and pets and fits of sulkiness.” If anything would convert us to the theory of the brute ancestry of man, it would be to see him in the sulks.

11th. — “Learn to deny yourself and prefer others.”

This was the very essence of Christ’s whole life and teachings.

12th. — “Beware of meddlers and tale-bearers.”

I would add, Let us be very careful that we do not join their gruesome company.

13th. — “Never conceive a bad motive if a good one is conceivable.”

Could we do otherwise if we obey the Golden Rule?

14th. — “Be gentle and firm with children.”

I will add that if anything will keep a child in the right way it is that sacred thing—the mother-love. God pity the child who is bereft of it.

15th. — “Do not allow your children to be away from home at night without knowing where they are.”

Is it not wise, also, to be with them ourselves? Their fullest confidence will prevent much mischief.

16th. — “Do not allow the children to go where they please on Sunday.”

I know from a blessed experience that a home that is made to hold the children on Sunday will ever have their reverent gratitude. The home circle ought to keep the children at home, and on Sunday.

17th. — “Don’t furnish them with much spending money.”

I have known many college boys ruined by a plentith of greenbacks. I have known many to be made magnificent men by the stringency of hard fortune. To the man who hands out money in fullest measure to his son, I would simply say, “Don’t.”

HELPFUL SUGGESTIONS REQUESTED.

I shall welcome hints for the home, recipes for table articles, and any other helpful suggestions.
**Prospects Bright—Losses by Fire**

The prospects for our bee-keepers appear to be much brighter than they were last season. We have had a pleasant winter so far—not very warm and not very cold, and reports are that as a rule when we went into winter quarters in fairly good condition they seem to be doing very well. The snowfall is heavy, and it is but natural for the hives to be gathering in a panic, ande the snow storms; this will assure a bountiful supply of irrigation water. The chances for a druth in the remainder of the season are growing beautifully less each day.

I read the notice of your loss by fire with mingled regret. Some of our best hives have been badly scorched, so that they know how to sympathize with you.

On May 1, 1866, I was awakened by a roar of fire, and got out just in time to see 50 colonies burned up in less than half that number of minutes. The fire was in a two-story lumber barn belonging to a neighbor.

I live on a lot 530 rods, with a street in front, and four close neighbors, and only five blocks from the business center of the city. Yet after 17 years I have never had a complaint, and judging from the thickness of our line of our bee-keepers, would indicate a difference in management. I have kept from 10 to 50 colonies each year.

**Salt Lake Co., Utah, Feb. 20.**

Jesse M. Donaldson,

**Prospects Good for Southern Indiana.**

The thermometer has been at 10 degrees above zero for the past three days, after three weeks of mild spring weather, which started heavy brood-rearing in all colonies having plenty of stores. This will cause great losses to southern Indiana bee-keepers. The winter so far has been so soft that hives have consumed nearly all of their stores.

There has been very little snow to protect the clovers, and sweet clover honey can stand the most exposure. I am experimenting with a large number of honey-producing plants. In the river bottoms I had an acre of sunflowers, and have a lot of seed from which I intend the bees work on them continually last season.

J. C. Wallenmeyer,
Vanderburgh Co., Ind., Feb. 22.

**Rendering Wax from Old Combs.**

In rendering wax out of old combs I use the following method:

Take the ball off of a 2-gallon tin pail with florining sides, nail a stick about three feet long to the pail, so that it will project upward, then with a hammer and a 4-inch spike begin with the bottom of the comb that covers the pail all the way around, and to within 3 inches of the bottom. Fill a big iron kettle about half full of water. Place small third or fourths full (a little better soak them, some, or break or chop them up). Hang the kettle in the yard, and start a good fire under it about sundown, if the bees are flying. After the mixture has boiled a little while take the perforated lid and begin pushing it down into the melted
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HOME-SEEKERS' EXCURSIONS

On the first and third Tuesdays of each month the Chicago, Milwaukee & St. Paul Railway will sell round-trip excursion tickets from Chicago to Milwaukwe and other points on its line to a great many points in South Dakota, North Dakota, and other Western and Northwestern States at about one fare. Take a trip West and see the wonderful crops and what an amount of good land can be purchased for a little money. Further information as to rates, routes, prices of farm lands, etc., may be obtained by addressing F. A. Miller, General Passenger Agent, Chicago, Ill.
one colony queenless with queenless-celled started. I thought it very doubtful if any queen would become fertilized at that time. (Dec. 17,) as I had only two other colonies at home, and no drones to be found in any of them. (My apiary is 5 miles away), the course of time brood was sealed, but every one aigo, so concluded that the next thing to do was to find a virgin queen, then the progress of Nature might go unhindered. In looking over another colony for eggs I found a frame with a queenless cell nearly ready to be capped, which gave I the queenless colony after removing the drone-layer, and putting all frames containing eggs and brood into another hive. In two days other queenless cells were started, then I put the drone-brood back and let them work out their own family affairs. Twenty-seven days from the time of putting in the frame of eggs given the mice and robbers put them with eggs in two frames, and plenty of drones. I expected to have a case of supersEDURE in the hive of which, I thought the queenless, but yesterday I found plenty of eggs and brood, and concluded that her majesty had a greater reserve of vitality than her subjects gave her credit for.

F.C. Woolls.

Using Chaff Cushions in Summer.
I have practiced leaving the chaff cushions on my hives all summer as well as winter, the last 6 or 7 years. I have tried both ways, and I find I gain at least 30 percent from the chaff-covered hives. I have noticed in very hot weather the bees did not cover that part of the hive which would be nearly empty from 10:30 a.m. to 2:30 p.m., while those protected with chaff cushions never came to that extent, this is why I make them appear as full of bees as they could be.

My wife often says that I do too much experimenting, but I find it brings me the knowledge I am seeking for. There is no branch of beekeeping in which I have not experimented. This is a progressive age, and I feel that we can not do too much to further the work of our ladery.
D. A. Wood,

Last Season a Failure.
My bees did very poorly last season, getting no surplus whatever. I hope for better things this year.
C. H. DAVIDSON.
Delaware Co., N. Y., Feb. 18.

Poor Report for 1900.
The year 1900 was a poor one for bees in this part of Missouri. We got no honey at all, and I am afraid that two-thirds of the bees will die during this winter.
John N. Michael.

Bees Wintering Poorly.
I fear my bees are wintering badly. The weather has been very cold and rainy for about four weeks. We have had no rain since last November, and but little snow.
Hendy Alley.

Dispersing Robber Bees with Gun-Powder.
I have been a keeper of bees since the early 1860's, and it goes without saying that I have experienced the usual ups and downs common to the craft: also many of the pleasant (I) experiences, as, for instance, a bad case of robbing—in short, I have been "up against it" many times.

During all these years I have read many ways of stopping this trouble, in the current bee-literature of the times, but I have never seen mentioned a plan that I have often used with remarkable success. I learned it years before I kept bees, from my grandfather who often quelled disturbances with old-time and well-tried remedies. His plan was to "blow up" the robber-bees with gunpowder. About a teaspoonful of powder is pushed into the entrance and then "fooled" off. I am quite sure he knew this to fail but once, when I had an extremely bad case that had to be treated 3 times—the
HONEY AND BEESWAX

MARKET QUOTATIONS.

Chicago, March 8.—Fancy white comb sells regularly at Chicago in the neighborhood of 15 cents per pound, and fair white comb is weak at the following range of prices: No. 1, white comb, $1.00 per pound; No. 2, white comb, 80 cents per pound; No. 3, white comb, 65 cents per pound; No. 4, white comb, 50 cents per pound; No. 6, white comb, 25 cents per pound. The season for the sale of honey is strong, and the prices are firm, ranging as high as 80 cents per pound.

KANSAS CITY, Feb. 18.—Fancy white comb, 1.20 per pound; amber, 1.60 per pound; dark, 1.30 per pound. Extracted white comb is weak, and the prices are falling, ranging as low as 75 cents per pound.

CINCINNATI, Feb. 9.—The market for comb honey is becoming very bare, although the prices are holding firm. Fancy white comb is still selling for 1.60 per pound; no demand for darker grades. Extracted is in fair demand; darks for 55 cents; and browns for 40 cents per pound.

BUFFALO, Mar. 7.—Fancy, 1.50c per lb; No. 1, 1.40c per lb; No. 2, 1.10c per lb; No. 3, 1.00c per lb; No. 4, 1.00c per lb. Extracted, 89c per lb. Beeswax, 27c per lb.

New York, Feb. 26.—Honeycomb is being well cleaned up on our market. The demand has lessened quite an extent, on account, we presume, of the high prices which have been ruling. Fancy white still brings 15c in small quantities, 10c in larger quantities, and 7c to 5c per pound in fair-sized lots. Dark and buckwheat, 10c. Extracted rather dull and not much ruling. California white honey, 75c to 60c per pound; dark honey from 60c to 40c per pound; buckwheat, 50c to 35c. Beeswax steady at 2c per lb.

HONEY TARIFF.—We may have a customer with a short supply of white comb honey or beeswax. We are in close touch with all the markets, therefore write us regarding your crop, stating the quantity and the lowest cash price. References—Either Bank here for any business man in this line.

THOS. C. STANLEY & SON, Fairfield, Ill.

DO YOU WANT A HIGH Grade of ITALIAN QUEENS OR A CHOICE STRAWBERRY?

Send for descriptive list.

DEPARTMENT B

THE AMERICAN BEE JOURNAL

March 14, 1901

SPECIAL OFFERS.

For $1.10 we will send the “Belgian Hare Guide” and the American Bee Journal for one year; or for $2.00 we will send the Bee Journal for two years and the “Belgian Hare Guide.”

Address, GEORGE W. YORK & CO., 118 Michigan St., CHICAGO, ILL.

CONTINUATION NOTICE.

[Continued from page 176.]

SWEEF CLOVER SWEETENED COBBER.

FREE AS A PREMIUM.

For sending us One New Subscriber for a year.

There has been so much written about both the white and the yellow variety of sweet clover, that we will simply say here that if one of our present regular subscribers will send us $1 with a new name for this year, we will mail, postpaid, to the one sending that name, either one pound of yellow sweet clover seed, or two pounds of the white sweet clover. This is a good chance to get a stock of the best of these honey covers.

We have been to market lately, but feel that the time has come to advertise these two new subscribers.

Address, GEORGE W. YORK & CO., 144 & 146 Erie Street, CHICAGO, ILL.

HONEY AND BEESWAX

MARKET QUOTATIONS.

Chicago, March 8.—Fancy white comb sells regularly at Chicago in the neighborhood of 15 cents per pound, and fair white comb is weak at the following range of prices: No. 1, white comb, $1.00 per pound; No. 2, white comb, 80 cents per pound; No. 3, white comb, 65 cents per pound; No. 4, white comb, 50 cents per pound; No. 6, white comb, 25 cents per pound. The season for the sale of honey is strong, and the prices are firm, ranging as high as 80 cents per pound.

KANSAS CITY, Feb. 18.—Fancy white comb, 1.20 per pound; amber, 1.60 per pound; dark, 1.30 per pound. Extracted white comb is weak, and the prices are falling, ranging as low as 75 cents per pound.

CINCINNATI, Feb. 9.—The market for comb honey is becoming very bare, although the prices are holding firm. Fancy white comb is still selling for 1.60 per pound; no demand for darker grades. Extracted is in fair demand; darks for 55 cents; and browns for 40 cents per pound.

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THOS. C. STANLEY & SON, Fairfield, Ill.

SPECIAL OFFERS.

For $1.10 we will send the “Belgian Hare Guide” and the American Bee Journal for one year; or for $2.00 we will send the Bee Journal for two years and the “Belgian Hare Guide.”

Address, GEORGE W. YORK & CO., 118 Michigan St., CHICAGO, ILL.
We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR Hives, Extractors
OR ANYTHING YOU WANT IN THE BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundations are ahead of everything, and cost no more than other makes. New Catalog and copy of THE AMERICAN BEE-KEEPER free. Address,

THE W. T. FALGONER MFG. CO.,
JAMESTOWN, N. Y.

W. M. GERRISH, East Nolimouth, N. H., carries a full line of our goods at catalog prices. Order of him and save freight.

200-Egg Incubator for $12.00
Perfect for hatching and setting. Hatches every fertile egg. Write for catalog and ask for CHICAGO.

GEORGE H. STAHL, Quincy, Ill.

SWEET CLOVER
And Several Other Clover Seeds.

We have made arrangements so that we can furnishSeed of several of the Clovers by freight or express, at the following prices, cash with the order:

<table>
<thead>
<tr>
<th>Clove Variety</th>
<th>1 lb</th>
<th>10 lb</th>
<th>25 lb</th>
<th>50 lb</th>
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<tbody>
<tr>
<td>Sweet Clover (white)</td>
<td>$1.00</td>
<td>$10.00</td>
<td>$25.00</td>
<td>$50.00</td>
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<tr>
<td>Sweet Clover (yellow)</td>
<td>$1.25</td>
<td>$12.50</td>
<td>$31.25</td>
<td>$62.50</td>
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<tr>
<td>Crimson Clover</td>
<td>$1.50</td>
<td>$15.00</td>
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<tr>
<td>Alsike Clover</td>
<td>$1.75</td>
<td>$17.50</td>
<td>$43.75</td>
<td>$87.50</td>
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<tr>
<td>White Clover</td>
<td>$1.50</td>
<td>$15.00</td>
<td>$37.50</td>
<td>$75.00</td>
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<tr>
<td>Alfalfa Clover</td>
<td>$1.50</td>
<td>$15.00</td>
<td>$37.50</td>
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<tr>
<td>Japanese Buckwheat</td>
<td>$1.25</td>
<td>$12.50</td>
<td>$31.25</td>
<td>$62.50</td>
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</tbody>
</table>

Prices subject to market changes.
Add 25 cents to your order, for cartage if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street, CHICAGO, ILL.

WANTED

A MAN OF PRACTICAL EXPERIENCE and ABILITY to care for 150 to 200 colonies of bees. Address,

S. J. DUNNE,
165 S. Forest Ave., GAIT RIVER FOREST, COOK CO., ILL.

I ARISE

To say to the readers of the Bee Journal that

DOOLITTLE...

has concluded to sell QUEENS in their season during 1901, at the following prices:

<table>
<thead>
<tr>
<th>Quality</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untested Queen</td>
<td>$1.00</td>
</tr>
<tr>
<td>Untested Queens</td>
<td>$2.50</td>
</tr>
<tr>
<td>Tested Queen</td>
<td>$1.25</td>
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<tr>
<td>Tested Queens</td>
<td>$2.00</td>
</tr>
<tr>
<td>Select Tested Queen</td>
<td>$3.00</td>
</tr>
<tr>
<td>Extra selected breeding,</td>
<td>$1.50</td>
</tr>
<tr>
<td>almost anything</td>
<td>$2.00</td>
</tr>
</tbody>
</table>

Circular free, giving particulars regarding each class of Queens, conditions, etc. Address,

G. M. DOOLITTLE,
11240, Boroine, Grandons Co., N. Y.

Please mention Bee Journal when writing.

24th Year Dadant’s Foundation. 24th Year

We guarantee satisfaction. **

Why does it sell so well? **

What more can anybody do? BEAUTY PURITY, FIRNESS, NO SAGGING, NO LOSS.
PATENT WEED-PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

BEE-KEEPERS’ SUPPLIES OF ALL KINDS.

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

LANGSTROTH on the HONEY-BEE—Revised

The classic in Bee-Culture—Price, $1.25, by mail.

Beeswax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

$200 Red-Clover Queen

Offer No. 35.

On September 1st last we announced that we finally had a red-clover queen fully equal to the one we had years ago. The colony of this queen has given one of the most remarkable showings on red clover of any bees we have ever had. The queen in question is an imported one, and therefore of the genuine pure leather-colored Italian stock. We sent out daughters from her all the season. But we did not discover her value until the clover season, second growth, came on, and then her colony out-distanced all the other 480 that she attracted attention to one.

It must be understood that these queens are not golden yellow, neither are their bees of the five-banded stock. They are simply leather-colored Italians whose mother came direct from Italy.

Since the notice appeared regarding this queen we have hardly been able to supply all of the queens that were wanted from this stock. Many daughters of this queen we sent out before we knew her value, and it now transpires that some of the finest bees in the land are from Queens we sent out early. We are now booking orders for the coming season, and make the following offer, but no queens will be furnished except those that subscribe for gleaning, and only one with each year's subscription. All arraignees must be paid to the end of this year. Gleaning for 1901 and one untested red-clover queen, $2.00; gleaning one year and a tested red-clover queen, $4.00; a select tested red-clover queen and gleaning one year for $6.00. We will begin mailing these Queens in June, 1901. Orders are already entered, and the same will be filled in rotation. Do not neglect to improve this opportunity and get some choice stock, and send your order early so you may get the queen correspondingly early in the season. We are using every precaution to winter this queen safely, but reserve the right in case of loss this winter to substitute from other select tested stock of this strain which we are holding in reserve, or to give the subscriber the benefit of any of our other clubbing offers if desired.

THE A. I. ROOT CO., Medina, Ohio.

GEORGE W. YORK & CO.,
144 & 146 Erie Street, CHICAGO, ILL.

We are headquarters for ROOT’$ BEE-KEEPERS’ SUPPLIES IN CHICAGO.
Send them for their free catalog.
Tent for Controlling the Mating of Queens.
(See page 181.)
—Courtesy Bee Keepers' Review.
Long-Tongued Bees
ARE DEMANDED NOW.

ONE Untested Italian Queen FREE as a Premium for sending us TWO new subscribers to the American Bee Journal for one year (with $2); or, one Tested Queen free as a premium for sending us FOUR new subscribers (with $4.00.)

We have arranged with one of the oldest and best queen-breeders (having many years' experience) to rear queens for us this coming season. His bees average quite a good deal the longest tongues of any yet measured. The breeder he will use is direct from Italy, having imported her himself. Her worker-bees are large, somewhat leather-colored, very gentle, and scarcely requiring veil or smoke. They stored red clover honey last season.

Orders for "long-reach" queens will be filled in rotation—"first come, first served"—beginning about June 10th. It is expected that orders can be filled quite promptly, as a large number of nuclei will be run. All queens will be guaranteed to arrive in good condition, and all will be clipped, unless otherwise ordered.

CASH PRICES of these fine queens will be as follows: Untested, $1.00 each; Tested, $2.00 each. Send all orders to

GEORGE W. YORK & CO.
144 & 146 Erie St., CHICAGO, ILL.

28 cents Cash
paid for Beeswax. *** This is a good time
to send in your Bees- wax. We are paying
28 cents a pound—
CASH—for best yel-
low, upon its receipt, or 30 cents in trade. Impure wax not taken at any price.

Address as follows, very plainly, GEORGE W. YORK & CO., 144 & 146 Erie St., CHICAGO.

Best White Alfalfa or Basswood Extracted Honey
ALL IN 60-POUND TIN CANS.

ALFALFA HONEY........
This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and surely everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.

A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—one 60-pound can, 9½ cents per pound; two cans, 9 cents per pound; four or more cans, 8½ cents per pound. Cash must accompany each order. If ordering two or more cans, everyone has half of each kind of honey, if you so desire. The cans are box.

Order the Above Honey and then Sell It.

We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

Address, GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.
Large Yields of Honey.—Mr. Frank Benton says: "Mr. Doolittle is mistaken regarding what he says in the last four or five lines over his name, on page 147. Cyprian bees were sent to America in 1860. The yield of 1,000 pounds, in 1881 or 1882, in Texas, was by B. F. Carroll, from Cyprians I sent over."

Honey Prospects in Southern California.—Prof. A. J. Cook, of Los Angeles Co., Calif., writing us March 8th, had this to say regarding the prospects for a honey crop:

"The bee keepers all thru southern California are pleased with the prospects for the coming season. We have had a generous rainfall, and may assuredly expect a bountiful honey crop. The State and three county associations have held meetings within a few days. All are rejoicingly expectant."

Bee-Flue or Propolis in Paint.—Dr. J. M. Ross, of Clearfield Co., Pa., wrote us as follows recently:

Editor York—Enclosed find two samples of painting from bee-flue colored with dry paint—bee-flue dissolved in wood alcohol. I believe it will stand the weather better than oil paints.

This is decided interesting, and perhaps well worth following up. The paint seems to have a fair body, and is with difficulty scraped off the wood. It is possible, and indeed probable, that for some purposes, at least, this paint may be ahead of other paints. If so, there is a possibility of a boom for Tunisian bees. At any rate, if propolis should become a merchantable article, the scraping it off will not be considered the same drudgery that it now is.

Bee-Keeping Within City Limits.—Last week we received the following from Mr. J. C. Wallemeyer, of Vanderburgh Co., Ind.:

Editor American Bee Journal.—A bee-keeper of Evansville—Mr. Bulmer—was fined $5 and costs, March 6th, for violating a city ordinance, which forbids the keeping of bees in the city, or one mile from the city limits. The ordinance went into effect Jan. 1st, and many bee keepers delayed moving their bees until they saw whether the city authorities intended to enforce the ordinance. The passing of the ordinance was a result of Mr. J. J. Cosby’s bees killing his neighbor’s wasps, when taking cleansing flights, and also stinging a horse, altho he made good all the damage done. The above suit was brought about by a relative, who got the worst of a will, and so took advantage of the bee-ordinance to retaliate. More suits to follow.

J. C. WALLEMEYER.

Upon receipt of the above communication we wondered how many bee keepers in and about Evansville are members of the National Bee-Keepers’ Association. If they are not already members they should join at once, before getting into any further trouble.

We would like to suggest that the Board of Directors of the Association look into this matter, and see what they can do to have the city ordinance declared null and void. We see no reason why such should not be done, and done immediately. There is no reason why bees should not be kept within the limits of any city on the globe. Of course, there may be special cases where they might possibly become troublesome, but any reasonable bee-keeper would not continue to keep bees where they were a source of real annoyance to his neighbors.

There are many small apdlaries in quite thickly settled portions of Chicago, and there are also a number of quite large apdlaries further out, but yet within the city limits. So far as we know, they cause no real trouble to any one, while they are a source of considerable revenue and enjoyment to those who own them.

We hope Mr. Wallemeyer will take up this subject with General Manager Secor, with a view to seeing what can be done to put an end to the "more suits to follow."

The "Cotton" Controllable Bee-Hive Fraud.—Mr. C. S. Blake, of Middlesex Co., Mass., has sent us the annual circular for 1911 of "The Controllable Bee-Hive and New System of Bee-Keeping, invented by Mrs. Lizzie E. Cotton, about 1874, now owned by E. C. Cotton." Referring to it, Mr. Blake says:

"It must be all fraud. Would it not be well to expose it in the American Bee Journal? Some 30 years ago a lot of us were bitten by this same Lizzie E. Cotton, now under the name of C. B. Cotton."

Yes, it may be well once more to occupy a little of our space in warning bee-keepers against this old fraud. In 1887, one of our subscribers sent us a similar circular dated 1896. In it we found a testimonial which reads as follows:

Hon. Robert W. Furnas, Governor of Nebraska, says:

Having used the "New System of Bee-Keeping" I found it a success, I recommend it cheerfully to others.

ROBERT W. FURNAS.

Upon receipt of the circular we immediately wrote to the Hon. Mr. Furnas, under date of April 6th, 1897, saying that we had noticed his testimonial in a circular sent out by Cotton, and asked him to let us know the extent of his experience with the Cotton hive and system; also, whether he still recommended it. The following is his reply:

BROOKS, NEBR., April 21, 1897.

GEORGE W. YORK & CO.

Sir,—I have no remembrance of giving the testimonial referred to. Nor do I recall to mind "The New System of Bee-Keeping" named. Very truly,

ROBERT W. FURNAS.

There you have pretty good proof of the fraudulent character of the Cotton outfit, and all bee-keepers will do well to beware of it. With the Cotton circular of 1896 there was offered a full colony of Italian bees in the "Controllable Hive" (6 movable frames), with full set of 50 one-pound boxes with starters of foundation, feeders ready for feeding, and also a book giving full instructions how to manage bees by the wonderful new Cotton system of bee-keeping!—this whole outfit was offered for only $30, $5, & 10, the express office in the State of Maine! In the 1901 circular we find the entire outfit is offered for 80, and 95 boxes instead of 80 are included with each hive. This is getting down more nearly to business in price, but the inducements held out to prospective bee-keepers to invest are somewhat remarkable. For instance, read the following paragraph:

"Two of the largest yields of box-honey I ever obtained, and which I think hard to equal, were as follows, viz.: I selected one of my best swarms in early spring; I fed them and treated them with the object of obtaining the greatest possible yield of box-honey. I arranged to have no increase in number of swarms but to employ all the bees storing honey in boxes. They gave me a little over 800 pounds of nice honey in boxes. Another, a young swarm hived in the Controllable Hive July 1st, yielded in 30 days one hundred and four pounds of nice honey in boxes."

Our Cotton friend also has the following paragraph in his circular, referring to "bee-journals and other publications," which is quite interesting:

Beware of counterfeits.

Please remember, if you want the Controllable Hive with book, giving full instructions for the management of bees, send your order direct to me. Beware of that class who are slanderers and lying against me and the Controllable Hive. They do this thru the bee-journals and other publications that they can control; believe them not. They are
interested in some patent or non-patent or worthless hive or fixtures, and are broiling over with wrath against me, because the Controllable Hive is steadily gaining in the estimation of all honest bee-keepers, and the demand for the thousand patent and non-patent worthless hives is steadily on the decrease. I a word to the wise is sufficient.

We think further comment is hardly necessary, as no reader of any of the present-day bee-papers would be caught by the successor of the fraudulent "Lizzie." It is pretty safe to put it down as a rule that when too much is claimed for a particular hive—especially if the beautiful word "controllable" is emphasized rather strongly—the whole outfit is a pretty good thing to let alone.

The Weekly Budget.

JON. EUGENE SECOR helps to enter the Upper Des Moines Editorial Association, Feb. 15th, of Forest City, Iowa—his home town. From the local newspaper reports they had a jolly time. Mr. Secor gave a reply to a toast, and of course did it in rhyme, something after the Will Carleton style. If it weren't so long we would reprint it, and to make extracts from it would spoil it. Mr. Secor knows how to entertain, and also how to "jollify" himself with his poetical pen.

Mr. D. H. METCALF, of Calhoun Co., Mich., writes us that in his article on page 183 he made us say that the flowers of winter and winter berries are plentiful. This must be the impression which he says that every pound of honey he gets out of a bee-tree costs him $1.00! The fact is, he puts in his leisure time and vacations in hunting bees. He says, however, that we may possibly be correct, after all, as to his hunting bees for a living, as he believes it has prolonged his life, every bee-hunt giving him renewed health and strength.

Anniversaries and Birthdays.—Recently we received the following from a reader who signs himself "Old Fogy."

Mr. Editor:—I've become used to your new-fangled way of spelling, and rather like it, but I don't know about your reform in the meaning of words. Do Rev. A. B. Mettler and you (page 183) mean we shall pay no attention whatever to the dictionary, and just go by your say so? He was born Feb. 1st, 1841, and you say each Feb. 1st since then was an anniversary. The dictionary says such an anniversary is a birth day, and according to what he has had of birthdays, and the first day of next February will also be his birthday whether he is then alive or not. Now, what do you say? Shall we go by the dictionary or the New-York Daily Tribune?—Ohio Flyer.

Seeing this is mostly Mr. Mettler's "funeral" or birthday—we'll let him wiggle out first.

Mr. W. A. PRYAL, of Alameda Co., Calif., wrote us as follows, March 10th:

My Dear Mr. York:—You have no doubt been fully informed about the splendid rain falls we have had in this [central] part of the state. They have been abundant. For about two weeks up to last night, the weather was nice. At the latter time, without any warning to mention, rain set in again and fell copiously through the night and a portion of the day. The prospects are good for still more.

There is already an abundant supply of flowers. In some places the hills and the fields in the lowlands are yellow with honey-producing flowers. This says not that there are not other kinds of flowers that are in bloom, which includes the Australian blue-gum, acacias, willows, aliburne, etc.

By the side of the Pacific Ocean, when I go when I have the time (an electric car line a step from in front of our office runs direct to Old Pacific in about 40 minutes), and on the very edge of the ocean I find an abundance of honey-producing flowers. Over home, where it was a week ago, I found my bees working with a will. Some colonies were on the point of swarming. As the apiary had not the attention of the famer as the colonies were in the same floor of the house, I found that some of the colonies had gone the way that bees are apt to go when not properly looked after. It may be possible that I may someday be able to give them some attention again. I like to look after them.

Please send us Names of Bee-Keeper who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

No. 1.—Drone-Bees and Their Utility.

Can We, and Shall We, Control Their Production?

BY C. P. DADANT.

The discussion on the utility of the drones in the hive under domestication, which was considered at length at the Paris Congress, has led to the expression of opinions from several bee-keepers in different publications on this subject, and I have concluded to bring the matter before the readers of the American Bee Journal with the hope that it may lead to further investigations and experiments. It is my intention, if permitted, to explain the subject at length, so that even beginners may see and understand the importance of the proposition set forth. So I will expect to develop the matter in two or more articles.

That the drone is an idler we all know, even those who have but a very faint knowledge of his physiology, for the name "drone" is proverbial as designating a useless being. And so, as the beginning of two or three thousand years, Mr. Aitho Butler, [a writer on agriculture and bees], described the male bee as "a gross, stingless bee, that spendeth his time in gluttony and idleness....worketh not at all, either at home or abroad, and yet spendeth as much as two laborers." We all know that the drone flies out only when the weather is high and the weather warm; that he does not go out in search of honey, never goes into a blossom, but only roams about for pleasure, and always comes home to eat. We also know that he occupies a great deal more room in the hive than his sister, the worker-bee, for the cells in which the drones hatch measure four to the inch, while the worker-bees measure five to the inch. Thus one square inch of worker-bee comb can hatch 25 worker-bees, while a square inch of drone-comb can contain only some 36 drones. Aitho Butler said that they eat as much as two of the workers, it is not likely that they spend so much, but it is probable that it costs as much food to rear and hatch the drones in a square foot of comb as it costs to hatch the workers that occupy the same space. This looks to me quite a reasonable presumption, and, in the absence of actual evidence we can take it for granted that 5,000 drones cost as much food to become perfect insects as 7,500 workers would cost.

In his physiology the drone shows the purpose for which he is made, by the differences existing between him and the other inhabitants of the hive. Aside from the difference in the sexual organs, the drone shows a much greater power of vision by the extraordinary number of facets in his compound eyes, numbering, according to Cheshire, as many as 13,000 on each side of the head, while the facets of the compound eyes of the worker-bee number only about 6,300. It is evident that the purpose of this extraordinary vision is for the finding of the young queen while on the wing, since it is of great importance that she should be enabled to meet with a drone at her first flight, for the life of the colony usually depends upon her successful mating and prompt return. It is certainly also for this reason that so many drones are reared in the hives during the swarming season. If only half a dozen or so of drones were reared, it would be very difficult for one of them, and several repeated flights for this purpose would endanger her life the more. But the drone plainly shows that he was not born for work, by the shape of his legs, which have none of the pollen-baskets that serve the worker-bee in bringing in a load home, and by the shortness of his tongue. His proboscis is not made to lap honey out of the blossoms, but only to suck it out of the store-cell, so the poor fellow is surely not to blame if he is lazy and idle. He only follows his destiny. But his faculty for flight is remarkable, since altho his bulk is only one half more than that of the worker, his wing-area is to that of the worker as nine is to five. This is another instance of his adaptability to the purpose of his existence. The mating with the queen taking place only in full flight, it is necessary that he should be able to overtake her, and the natural law of intermixture between different families.
makes it imperative that the mating should be between queen and drones of different colonies.

A short flight on the part of both queen and drone would lead to the possible mixing of inhabitants of the same hive—brother and sister—and Nature carefully avoids this in all beings.

The natural, instinctive knowledge of the necessity of having drones in the hive, is a strong market in the worker-bee. Drones are rarely kept longer than in normal conditions—they are usually killed, or driven away at the end of the harvest, yet we all know that if a colony remains queenless, its bees will not only fail to kill the drones, but they will even accept drones which have been driven out of other hives. This I know from personal experience, for I have seen Italian drones, late in the fall in a queenless hive which contained only black bees. These drones could not have been reared there, but had evidently come to it when driven from their home, and the bees, altho having no possible use for them, had accepted them. It is plain, that realizing the part the drones play, and, in hope of securing them, they keep the drones with them in the expectation that they may be needed. It is in part also for this same reason that a queenless colony builds only drone-comb.

Unless a queen is old, or unhealthy, or unfertilized, she will not lay drone-eggs until the colony is already well supplied with drones. She will keep over drone-comb, and carefully select only such cells as are suitable for worker-bees. This shows conclusively that she does not like to lay eggs in drone-cells. As her eggs are fertilized only black bees. These drones could not have been reared there, but had evidently come to it when driven from their home, and the bees, altho having no possible use for them, had accepted them. It is plain, that realizing the part the drones play, and, in hope of securing them, they keep the drones with them in the expectation that they may be needed. It is in part also for this same reason that a queenless colony builds only drone-comb.

This ability on the part of a female insect to lay eggs that will hatch altho unpregnated, was discovered in the honey-bee by the famous Dzierzon, and has long been disputed as incorrect. It is called "parthenogenesis."

But when she has been laying a great number of worker-eggs, the queen very probably becomes tired of this function, and as the eggs keep coming she seeks rest by hunting for larger cells and laying drone-eggs. This would explain why, at certain times, she will hunt for drone-cells. As a matter of course these likes and dislikes of the queen are all presumptions, but the evidence is very favorable to the views we take, and even slight circumstantial evidences lead to the same conclusion. For instance, a young queen that is healthy and vigorous, will lay a much larger number of worker-eggs than a queen that evidently feels well and enjoys it. That a queen can not usually lay worker-eggs in drone-combs was evidenced by an experiment made by a Mr. Drory, of Bordeaux, France, some 20 years ago. A swarm was supplied with nothing but drone-combs. For quite a number of days no eggs were laid except a few drone-eggs, and finally the worker-bees reduced the outer opening of a number of drone-cells so as to narrow them down to the size of worker-cells, and the queen laid a few eggs in them.

In my next I will consider the reasons which cause worker-bees to build a greater or lesser proportion of drone-comb in the hive.

Hancock Co., Ill. [To be continued.]

The Matting of Queens in Confinement.

BY J. S. DAVITTE.

REPLYING to an inquiry as to how I got queens mated in confinement, I will say that I built a large tent, 30 feet in diameter and 30 feet high, the covering being of muslin. The colonies of bees were suspended with wires. The drones were placed close up against the wall of the tent, on the outside, each colony being allowed two entrances. One entrance opened outside of the tent, and was contracted so the bees could pass in and out, but not the workers to pass out and in, and work in the fields in the usual manner. The other entrance opened into the tent, and was large enough for the passage of a queen or drone, but kept very close by a large piece of glass. The queen was placed in position. This was done for the purpose of educating the workers to use the outside entrance. The drones were not allowed to use the outer entrance at any time, nor to enter the tent except from 11:00 a.m. until 1:30 p.m. After the drones had learned the bounds of the tent, they seemed contented, and made a pretty "flying school" flying in the top of the tent.

I wish to say that drones are the main feature of this problem. Once you get them quiet and reconciled to fly in the top of the tent, the problem is solved. Nine times out of ten the queen will not reach the top of the tent before receiving the most prompt and gushing attentions.

After I got the drones under control I had no difficulty. I simply turned the queens from the hives they were in, just the same as I turned in the drones. I one year reared over 100 queens and drones. A tent was kept close to where the queen would leave the mouth of the hive, and return in about five minutes, apparently mated; and in three or four days would be laying; and the progeny of all queens thus mated showed the same markings as the workers of the colonies from which the drones were taken.

The workers seem to be more annoyed than the drones when they find themselves confined in the tent; and I aim to keep them out of the tent as much as possible by not opening the tent-entrance until nearly noon, when most of the workers are in the field. As a further precaution, the tent-entrance is kept shaded or darkened.

The queens are not turned in until the drones appear to be well satisfied to be in the tent. As soon as they are in, in this condition I believe that 500 queens a day might be mated in such a tent. Where queen-rearing is carried on upon a larger scale, I believe that this plan would be preferable to the open air; as I have seen a young queen who have opened the hive and placed under the bees, and the drones around the queen three times, and be gone 15 minutes each trip, returning at last unmated.

My plan for queen-rearing is as follows: I choose a colony from one of the colonies from this colony I remove the queen, and allow the bees to build queen-cells. At the same time I make queenless such colonies as I wish to break up into nuclei. Two days before the queens will hatch, I form my nuclei, cutting out and destroying all cells, and arranging the nuclei on the bottom of the mating tent. The queen-cells from the choice stock are then cut out and given to the nuclei, the outer entrances contracted so that no queen can pass, and the inner entrances closed entirely. After the young queens are two or three days old, I open the tent entrances at 11:00 a.m., and leave them open until 1:30 p.m., each day, for several days, or until the queens are mated.

Now for the drones: At the same time that I remove the queen from the choice stock for the purpose of securing queen-cells, I place several hives that are strong with select drones around the wails of my tent, with the outer entrances contracted, as already explained, so that no queens or drones can pass, and the tent is opened and left open until 130. With this daily exercise in the tent for 16 days, I have my drones tamed, or accustomed to their surroundings, or under control, so to speak; and it would interest a bee-keeper to take his place at one of these tents and see the drills, the workers, who, Bird-like, are "willin." I have seen the mating take place before the queen could reach the top of the tent. Before they separate, the queen and drone fall head over to the ground, and the queen goes directly to her home that she left not three minutes before.

If I were to build another mating-tent, I should build it about as follows: I would secure 12 tall poles. I would have them at least 30 feet long—40 would be better. These poles I would fasten firmly in the ground, each at a center; From pole to pole, at the top, I would stretch No. 10 wire to keep the poles true and in place. I would also brace the poles from the inside; and the braces would be allowed to go up 20 feet on the inside, as the drones use only the upper part of the tent. At the top of the poles I would also stretch No. 10 wire from each pole to its opposite neighbor, thus strengthening the structure and furnishing support for the covering that goes over the top. I strengthen every part of my netting, giving it an extra turn about an inch in width. This allows me to stretch the covering very even and tight without tearing it. Common boards can be used around the bottom to the height of five or six feet. At noon the tent should have the appearance of a "Keck's" review.

Polk Co., Ga., Jan. 22, 1901.

[Editor Hutchinson has this comment on the subject of mating queens in confinement.—Ed.]
ignis-fatuus. If you wish to see a bee-keeper draw up the corners of his mouth, mention this subject. When this subject was first brought up it was looked upon in all seriousness late. It is mentioned only with ridicule. The man who will properly propose, within the limits of this line would be clast with the man who is trying to invent perpetual motion.

Seriously, is it wise to discourage attempts in this direction? There is no doubt that there is as much difference in bees as there is in other domestic animals; and the one thing needful to enable us to develop strains of bees superior to those that we now possess, is control of the mating of the queens. Where would our short-horns, Jersey, and Jersey rocks be now if the mating of these animals had been no more under our control than is the mating or our queen-bees? The next great step that we ought to take in all efforts to secure control of the mating of the queens. It is of sufficient importance to deserve much careful experimentation.

A Mr. LaVake, of Florida, wrote me that he thought queen-breeders might do away with the sending out of so many misnamed queens if they would have them mated in confinement. I replied in the usual strain that it had been tried and abandoned as a hopeless task. I asked him to let me know who had ever tried it, and made a practical success of it. He gave me the name of Mr. J. S. Davitte, of Georgia. I wrote him as soon as I received your letter, and in this correspondence I have gathered, arranged and condensed his article. The reading of the letters from Mr. Davitte aroused my interest to the highest point. He writes in such a graceful manner so thoryly, that he has convinced me of his success.

I have spent considerable time in looking up and reading everything that I could find upon this subject. As I looked into the problem, the principal trouble has been that the drones have not been brought under control. When a drone has been accustomed to soar away thru the blue ether for miles and miles, he is not going to be shut up in a little 30-foot tent and be contented. For a long time, at least, while the queen is sending winged offspring all over the land, he is in no mood to pay his addresses to a queen. Catch two wild birds matting-season, and shut them in a cage. Do you suppose they would mate? Canaries have been caught inside and kept for months, and no mating occurred in a cage. Mr. Davitte had his drones flying for days in his tent before any queens were released in the tent. Perhaps many of those drones had never flown in the outside world—new thing of it. Having flown for several days in the tent, they had almost returned to the condition, normal and ready to mate with a queen should one appear.

Suppose we could make a cage two miles wide and had a mile of flight before a queen was to be mated inside such a tent? Suppose it were reduced to one mile in width, and one-fourth of a mile high. Don't you suppose it would be a success? The question then is: How could it be done? Mr. Davitte tells me that he thinks that the size is not so very material as it is to get the drones to fly and feel at home. One large enough for that is, in my opinion, large enough. Mr. Davitte, who has had experience, puts it at about 50 feet in width and 30 to 40 feet in height.

There is still one more point: Not all drones, at all ages, are capable of fertilizing a queen. Many have failed from not understanding this point. They have put nuclei, with a mating-queen, into a tent, and then caught drones at half-hazard and put them into the tent. Some of them may have been youngsters, just out of their cradles, so to speak. Others may have been "old greybeards." All of them would be inclined to think that they had been caught and shut up in a tent away from their home. I think that Mr. Davitte has found the key that will unlock the problem, viz.: That of getting drones from a normal colony, that is, working undisturbed in the open air, to fly away from it. If you knew that they were going to be used, you would make it of small value. The queen-breeder who will build such a tent, and succeed with it, will certainly have one of the biggest advertisements that could possibly be secured for a queen-breeder. I wish that some one who is in position to make the experiment would build such a tent and give the matter a fair trial. Even if it should not prove to be the brilliant success that is reported by Mr. Davitte, it might be a start, or a beginning of something that would eventually lead to success.

Don't let us lose our heads with enthusiasm, nor toss the matter aside with contempt and ridicule. With the new school of bee-keepers there are numerous who will go through a thorough trial, standing ready to meet either failure or success.

**Can Almost Any One Keep Bees?**

**BY A. C. SANFORD.**

W**#**O may keep bees? The professional certainly may because he has the skill and the money. The amateur, who turns and turns, the successes and losses, and knows how to make the best of them. But the many who would like to keep a few colonies in order to get a family supply of the delicious and wholesome God-given sweet, lack the experience often to make a success. Of course, almost any one can learn how to manage the swarming, and how and when to put on supers; and, last but not least comes the wintering problem. Most Northern bee-keepers prefer to winter their bees in the cellar or a cave, as it takes far less honey and is generally the most successful plan—at least in Wisconsin. In these days we have text-books on bee-culture and all the science and mysteries of the honey-bee can be learned, but the actual practice and experience is another thing.

I well remember my experience with the first colony of bees I ever had. It swarmed only once, then the parent colony became destitute of a queen. I told a neighbor that I thought something was wrong, but he thought not because the bees were carrying in pollen. Later I found that the queen had an imperfect wing, had never met a drone, and produced only drone-eggs, so I lost the colony. The following spring I purchased two colonies in box-hives, and transferred them into movable-frame hives. It was then I first attempted to make a swarm by dividing, and the bees swarmed out; but I soon learned a great many things and managed my bees successfully.

Many people would keep bees if they were not afraid of the stings. Of course there are some to whom the sting of a bee is poisonous, and they will do well to let bees alone. But such people are few, and if one intends to keep bees he must make up his mind that he is going to endure the stings, and in due time his system will get used to them. The pain may be relieved with wet salt, hortshorn, mud, etc., or by quickly pulling out the sting. If one is careful he will be likely to think that the danger is over, and thinks that he never will be stung he is very much mistaken.

Two very essential things in handling bees are a bee-veil and a class-smoker, with an ample supply of smoke-making material. If you will be induced to try bee-keeping and if you will go along experimentally and not angrily give them a generous dose.

Women-folks can learn to care for bees as easily as they do for chickens, if they only have the courage and the pluck. It is much easier to learn to keep bees than it is to learn to play the piano. And then think of the delicious honey you will have to sell and to eat.

—Pierce Co., Wis.

**A South Dakota Bee-keeper and His Little Aiplty.**

M**R. EDITOR:** Being a reader of The American Bee Journal, I presume you would like to hear something about how one of its pupils is getting along. I was just on the meridian line (in age) when the bee-fever struck me, having spent most of my life in Chicago, and other cities. I am sorry now that I did not start keeping bees 25 years earlier. When I came out here I told my neighbor (an old bee-master) that I intended to keep bees, and he told me that they might live all right providing I would feed them all summer and give them enough in the fall to last them all winter. Happy the man who thus expects but little, for he will never be disappointed.

I found out that this is a very poor country in which to keep bees, for we have the little Aiplty. It makes me as hopeless as that amount to anything. We have dwarf sunflowers in abundance, and they furnish a little honey of an inferior grade. Sweet clover grows tall if irrigated, but on waste land or on the roadsides it doesn't thrive. I tried buckwheat, but the bees did not work on it, and, besides all this, the wind blows here sometimes so furiously that if the hive-entrances were the size of a stovepipe the bees would hardly be able to reach them.
Mr. L. H. Cremers and his Apiary, of Davison Co., South Dakota.
A Fair Italian After "Black Beauty."

By Henry Bidwell.

I am a yellow honey-bee of the feminine kind. My occupation is to secrete wax and build it into combs; to gather the nectar from the flowers, and to store and digest the nectar, upon which to feed the maturing brood or to partly digest and give to the mother-bee for the rapid formation of eggs. The rule that governs the actions of my life is that whatever is to be done and you do not in doing. My mother is called a queen, but from her numerous progeny they more appropriately be styled a "mother-bee." My father is called a drone, but since he has no sac to gather honey in, no basket to carry bread in, and no stinger with which to defend the hive, he is called the "innoman-bee."

Mother and I, and 15 of my sister workers, came from Genoa, Italy, in a small box by mail. We had a quiet trip across the water, but were badly shaken up in transfer at New York City, then rolled across the country to our present home, where we revel in the immense fields of alfalfa bloom, which we prefer to the fragrant groves and sweet-scented vineyards of our native land. This is the home of the industrious bee; here we enjoy the right to swarm when we wish to, as Nature intended we should. To swarm naturally is the greatest happiness that comes to us. God's way is better than man's way, at least, for our increase.

In Italy we no sooner thought of swarming than our mother was ready as a rule. We were compelled to replace her from worker-larvae which were crowded in small cell as coarse food; thus our step-mother came to us with her size reduced, her color darkened, the number of her ova diminished, and her vitality largely destroyed. Again, the German bee, which was imported into the United States, would have operated our stock, left the brown stripes on our abdomens and inferior blood in our veins. But in America it was discovered that our race was variable, and by careful selection the brown stripes are being discarded.

It was a beautiful March day when we arrived at our present home. The bees, whose apiary we were to share, were returning laden with pollen from the maples. The box in which we were imported was placed in a strong colony of brown bees from which the mother-bee had been removed. Immediately our box was surrounded by queen-less bees that vainly tried to liberate us, and which in a measure consoled us by extending their tongues laden with liquid sweets thru the meshes of our prison doors. We gladly accepted the food offered us, but were even more glad the following day when released. Mother found many empty hives, recently vacated by baby bees, and at once began to deposit an egg in each cell, including a number of brood-cells. But we were fortunate, for a week or more we began to hatch, and in four more she began to lay eggs in the queen-cells we had prepared for her.

We swarmed on the last day of May, just as the workmen were going in to dinner after having mowed the alfalfa. We were all and hungry and handsome in circles that grew larger until we were nearly all out, then you would see brown bees mingling joyously; then the queen settled on a maple limb where we all clustered, bending the limb almost to the ground. We waited patiently for some one to hive us, but getting tired, sent out scouts in search of a suitable place to live. Soon one returned saying she had found an empty barrel; another saying she had found an open space between the siding and plastering of a house; another reported finding a hollow tree, and still another a small stone house which had never been occupied, for the padlock was sealed with rust. This seemed the most suitable, for our number was tens of thousands and we wanted plenty of room to work. The other bees by the scout, to the little stone building on a vacant lot near the center of town. We entered thru a crack on the door and immediately went to work. A few mud-wasps and spiders took possession of the house (which, by the way, was the calaboose) each year. The place was built up and account of there being no saloon in town it had remained vacant and we were left undisturbed.

In the course of a month we had built ten combs the size of a bushel basket, suspended from the ceiling down into the thickness of the house. On July 4th the door was opened with difficulty, and a tramp was thrust in. He lay in a heap on the floor until towards morning when he got up and began to swagger and swear; striking out in the dark with clenched fist he knocked down our combs, scattering them all over the floor. Amid the yells of murder and fire we ran in every direction until we reach the sides of the room; then we climbed to the ceiling again where we clustered. As soon as the light was sufficient we flew back and lit on a limb near our old home, which we found had been divided into ten parts—just the number of combs we had left in the hive. Each part had been placed in a separate hive and given one of the sealed queens which now were mother-bees.-looking about, we found an empty hive which we took possession of; and before winter we had it full of combs, honey, bee-bread and maturing brood.

Sedgwick Co., Kan.

Questions and Answers.

Conducted by Dr. C. C. Miller, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail. —Ebrook.)

Transferring Crooked Brood-Combs.

I have six colonies of bees in the cellar. They are in frame hives without the frames, except three, but the comb is so crooked that I cannot get them out or do anything with them. Will it pay to transfer them on frames of foundation?

Iowa.

Answer.—Wait till they swarm; hive the swarm on the old stand, setting the mother colony beside it. A week later lay out the old queens, because of the large number of eggs in the hive, and the time of swarming drum out all the bees and add them to the swarm. Then you will have the old hive free from all brood unless it be some drone-brood, and you can do what you like with the combs. The swarm having an extra force of bees ought to give you a lot of surplus honey, if there is any to be had.

Methods of Securing Increase.

1. I wish to get my increase the next season. My plan is this: in early swarming-time I think of taking the colony I wish to breed from, and take two frames with bees brood and queen, fill both up with empty frames with starters. Put the hive with the queen on the old stand; when the other has reared queen-cells within a couple of days of hatching, I divide as many more as I have spare queen-cells in the same way, placing the queens on the old stand and removing the queenless ones to a new place and give them a queen-cell. Will that plan work well? Will the bees destroy the queen-cells? Would I better give them the cell at once or wait a couple of days? If you think this plan will not work well, will you please give me a better one?

2. I have some extracted honey which fermented and then candied. Will it do to feed to bees in the spring if I liquefy it?

3. Since writing the above I have been reading an article by Mr. Doolittle in the American Bee Journal; he is good authority, and he advises against giving a queen after dividing, giving as a reason that it will bring on a crop of workers too late for the barley, and prepare the way for another swarm. His reasons seem good. Please give me what you consider the best system of dividing. I wish as little increase as possible.

Iowa.

Answers.—1. Instead of putting the queen with two combs on the old stand, and the queenless colony on a new stand, why not leave the queenless bees on the old stand and put the queen with her two combs on a new stand? The queenless bees will then be in a more flourishing condition and rear a better swarm, whereas by the way you propose they would be weak in bees and gathering no honey. Then when it came time to use the queen-cells you could return the queen to the old stand. The bees will be likely to destroy the queen-cells unless conscious of their queenlessness. It would be a good plan for you to take the queen from the colonies you intend to use for nuclei two days before, then when you put them in a new place as nuclei they will stay better where they are put, and the queen-cells can be given to them at the same time. But remember that when you make a colony queenless not all the cells will be good.
Some of the last reared will be very poor. Better give each nucleus two, three, or four cells, and there will be a better chance that there will be at least one good one in the lot. You can also judge something by the looks of the cells, the large, well-filled ones being transferred, although sometimes an inconspicuous cell may contain a healthy larva.

2. It will do very well. In spring, when bees are flying daily, it is safe to feed almost anything that bees will take. Possibly sweetened vinegar would do no harm.

Answer.—If you are in a hurry to extract the honey of a colony, and not enough time is at hand to allow the bees to make a pollen storage, you can hasten the working of the combs by feeding them sugar. If you have a queenless colony or a few bees, you can feed them sugar and the “run” will be made.

All the bee-keepers in this county (Davis), and a great number in Salt Lake County, will not use the extractor, claiming it does cause foul brood.

Utah.

Answer.—If there are no thistles growing on your place, there are two ways in which they may be introduced through the use of an extractor. A queen, alvei, and a spore are its seeds. Please get that clearly in mind—there must be the bacillus or the spore, or there can be no foul brood. The bacillus or the spores may be found in the honey, in the pollen, in the comb, or in the soil. The lice, roundworms, or the invaders in the honey is the thing most to be guarded against, for it is probable that in the great majority of cases it is the honey that the disease is carried.

Your question refers to whether the extractor causes foul brood. If there is no foul brood in your apiary, how can an extractor cause it? The extractor can produce neither spore nor bacillus. If, however, there is foul brood in one of your colonies the case is a little different. You may not be able to extract the honey of that colony, and the honey may be infected. You put a comb from the infected hive into a sound colony, and you have another case of foul brood. You put the combs of the infected colony for the bees to clear up after they have been extracted, and there is a chance for every colony in the apiary to get the disease. If you feed some of the extracted honey for any purpose (and the chances are that you are more likely to feed extracted honey than comb), there is a fair chance that any colony that fed will have the disease.

You will probably see now that the answer should be: There is no possibility that the extractor can produce foul brood where there is none; but if there is a diseased colony in the apiary it is quite possible that bad management in connection with the use of an extractor may greatly accelerate the spread of the disease.

Dead Bees Outside the Hive—Colony Destroyed by Moth.

1. Why is it that after a warm spell followed by cold, that a great number of bees are found dead outside of the hive?

2. Is it safe to use a hive after all the bees in it have been killed by the bee-moth? I caught three swarms myself, one of which was afterward destroyed by the moth.

New York.

Answers.—1. I should expect it to be the other way: after a cold spell when many bees have died, the advent of a warm spell allows the bees to carry out their dead.

2. The hive will not be injured in any way, and it will be perfectly safe to use it again. If you mean to ask whether it is safe to use the combs, the reply is that it will be all right to use them unless they are so badly destroyed that most of the septum or middle wall is gone.

I don’t know whether you mean literally that the bee-moth killed your bees, but as it is a rather common belief among beginners that bee-moths may attack a good colony of bees and overcome it, it may be well to say a few words about it. No bee-moth ever came off first best in a hand-to-hand struggle with a worker-bee. If you watch closely, you may see a moth toward evening trying to enter a hive, and if a bee gets after it there is no attempt at flight. The moth runs, and if the bees get hold of it has no means to defend itself, let alone trying to kill the bee. The moth tries to get into the hive to lay eggs, and laying eggs is all the harm it does, although it is harm enough. If bee-moths are plenty, you will probably find their eggs in or about the hive in the evenings. When these eggs hatch out into larvae, the larvae or wax-worms make a business of eating the combs, and that’s where the mischief comes in.

When these wax-worms are allowed full play, it will not be very long a time in hot weather until the whole contents of the hive will be a mass of webs and cocoon, hardly anything in the semblance of a comb being left. But in the majority of cases it is no more right to say that the moths or the worms destroyed the colony than it is to say a house maggot destroyed a house that one finds filled with maggots, the horse having been shot some time before. The colony has in some way come to naught, and then the worms come in to make a finish of the combs, just as the maggots come to roost.

Altho there may be eggs of the moth in the best colony you have, yet they do no more damage than the weed seeds that are found in your best cultivated ground. You keep the young weeds killed down before they get big enough to do any harm, and in the same way the bees keep the young worms rooted out before they get big enough to amount to anything. A strong colony will have no trouble in keeping the worms cleaned out, and even a weak colony will be all right if the bees are Italians.

Combs that have been out all winter so as to be frozen are sound until the summer, and are sound enough for fresh eggs to be laid in them. But if a colony dies in a hive, the combs will be ruined as soon as warm weather approaches. Put such combs under a strong colony of bees, and the bees will take care of them safely.

Sowing Cleome and Buckwheat.

When is the proper time to sow cleome seed?

When would be the time to sow buckwheat to have it bloom the first of July?

West Virginia.

Answer.—I don’t know the answerer to either of your questions, but I’ll make a guess at them, and if I’m wrong some good friend will correct. Sow cleome as soon as frost is out and the ground fairly settled. To have buckwheat bloom the first of July, sow the first of May.

When to Put Bees Out of the Cellar.

When ought I to take my bees out of the cellar, in this section of the country? And should they be put in the same position and place as last year?

Illinois.

Answer.—You will not be far wrong to go by the blooming of the clover. When the clover is in bloom, it is time for the bees to be out. Sometimes, however, the weather will be so cold and wet that it is better to delay a little if the bees are in good condition. On the other hand, if the bees are very uneasy, and are spotting their hives, it may be better to get them out the first favorable day. It is important to have a fine day for bringing out. After their long confinement they are anxious to get out of the hive, and if brought out on a bad day thousands of them will be lost. After lying idle for months they can not be expected to fly with the greatest vigor, and a strong wind will beat them to the ground never to rise again. Bring them out on a still day with the sun shining, and the thermometer at 50 degrees or more.

Having some years put my bees on the stands they occupied the preceding year, and other years having set them around promiscuously, I do not see that it makes any difference. Possibly in places where they are kept in the cellar a month or so, it might make a difference.

Our Wood Binder (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of $1.00 for your Bee Journal subscription a full year in advance, we will mail you a Wood Binder free—if you will mention it.
The Afterthought

The "Old Reliable" seen thru New and Unreliable Glasses.

By E. E. HASTY, Sta. B Rural, Toledo, O.

THAT MAGNIFICENT QUEEN PHOTOGRAPH.

I am inclined to get enthusiastic over that magnificent photograph of queen and egg on the front of No. 9. Between "approximately correct" and "correct" is a long and important step. One of the great, grand things that we want of the twenty-first century is to take away our approximations and give us some reals. For instance, let it take away our good novels, which are approximations, and a lot of our biographies, which are not so much as approximations, and give us some real views of other lives than our own. Well, here we have a real look at the queen on paper, can see the gloss on her back, and the fur on her shoulders, the exact shape of her foot, and the style of her "horns" (a la Utter); can see that the true taper of her abdomen does not look like a wooden plug whittled out; can see the three little eyes on the top of her head, sticking up like crab's eyes, and ready (if they do utilize X rays) to locate just where the last egg on the other side of the comb was put.

SINGLE-BOARD COVERS, WIDE FRAMES, ETC.

I agree with Mr. Greiner that the single-board cover is not an improvement on the old telecope roof. Also I like the old wide frames for putting on sections. As to the old honey-board, I'll let some other fellow agree with him about that—doubtless "other fellow" will not be very hard to find. Page 89.

A LESSON ON THE LAMP-STORE.

Friend Roe, You ought to know
30's too low
See's to go.

If you had known all that "with your heart," and had properly meditated on it last fall, perchance the treacherous lamp-store would not have been invited to do its worst. Now sit at my feet while I shake my finger and tell you. Lamp-stores are not to be trusted even if they are friends. Never should be left alone long. Liable to chair their own wicks, and get up such a state of things internally as will set up an impromptu lamp-black factory—if not worse. Set up there. Don't want anything worse. Whatever is to be seen to that purpose were "controlled" by the smoke and kept in their hives. O smoke, thou art a daisy! Some angel (sister to the one that gave the moss-rose its moss) surely gave thee bee-controlling powers. Page 89.

ALTERNATION OF RAINFALL IN CALIFORNIA.

Ten years of California rainfall shows up as a regular alternation of first scant and then plentiful, except that 1899, which should have been plentiful, was instead the most scanty of all—as if some cause, not connected with the law of alternation, had knocked it completely out. Page 90.

A CHIDER CHODE A LITTLE.

Mr. Carizen, page 91, chides Dr. Miller for not being explicit enough, and then proceeds to sin much more deeply and darkly himself. (No wonder we do just scuffle scolding: The privilege of being is just that of quicksilver—and can not be his meaning. We would grasp at the theory that 20 is merely a slip for 200 hundredths, that but that would be lighter than any fluid we have to do with. Perchance it's the arbitrary numbering of the scale on some little insinuation he has; but how are we to know that unless he tells us?

SWVRING-ECOCENTRICITIES.

The eccentricities related by Edward Knoll, page 92, seem to me to be instructive. Bees without a queen do not swarm, but a swarm left without a queen comes back soon. Here having gotten themselves partly on the end and partly on the roof of their home, they played that home hadn't any queen, and kept up the illusion for more than a week, not ready yet to give it up when the second swarm issued, but "saw the point" when the third swarm appeared. I surmise the old queen came out when she did because the bees had recently been worrying her—for them to kill her would be rather the normal course, I think.

Perhaps the Frenchman was right.

Mr. Badant, may it not be that that French manager was partly right? I mean about the non-advisability of working second-hand wood with power. Even here when a railroad wagon is tied sawed up men do it by hand with big saws. Too many gravel-stones that have work into cracks for buzz-saw work. Feeding a power saw allows too little time to "watch out!" and it can not be stopt when it strikes a stone.

Page 100.

MAKING A COLONY SWARM.

Well done, Mr. Revels! A practical way to make a colony swarm at will is one of the most urgent of our lesser wants, and you seem to have given us a good starter toward it. Booming colony—tall hive—queen in the attic—zinc to keep her warm—then just put her in the back, and most thoroughly ripened, select honey will keep is perhaps a little problematical yet. And his contribution 15 years in an open package, and good yet—is on the road toward finding out. As a general discipline I would say that honey not yet properly appreciated at times it is like the queen. There might be some failures, however. A phlegmatic colony might refuse to build cells below: and an irascible colony might kill the old queen when she appeared downstairs, and only save one princess. Page 101.

KEEPING EXTRACTED HONEY.

Dr. Mason was a little "off" on page 102 when he said it had never been tried how long extracted honey would keep. I've tried it a number of times when it didn't keep thru the first winter. How long it would keep is hard to say. The right, and most thoroughly ripened, select honey will keep is perhaps a little problematical yet. And his contribution 15 years in an open package, and good yet—is on the road toward finding out. As a general discipline I would say that honey not yet properly appreciated at times it is like the queen. There might be some failures, however. A phlegmatic colony might refuse to build cells below: and an irascible colony might kill the old queen when she appeared downstairs, and only save one princess. Page 101.

THE HATCH EXPERIMENT.

And ye experimenting folks, don't forget the Hatch experiment when putting on supers this spring—filling all the mid-frame-chamber with sealed brood, and having plenty of young larva in the outside frames. For locations with only one harvest, and that not very long, I shouldn't wonder if this might prove valuable. Worth something to start the storing in the outside sections, right over the young brood. Page 105.

BUMBLE-BEE DRONES WORKING.

Mr. Wallace, perhaps it is not very great merit in the bumble-bee drones that they work to the extent of getting their own food from the flowers. May be a simple case of "root hunger or die." It's true, however, that our hive-drones would promptly accept the "die" rather than the "root hog." Page 108.

UNCAPING HONEY FOR EXTRACTING.

I am not an expert handler of the uncaping-knife—good ways from it, I fear—and therefore the photograph of an expert at his work has special value to me (and perhaps to all my numerous family.) I am talking now about the photographs of Mr. Aikin on pages 117 and 118. He does not lean his comb over to the right as much as I do. He cuts the first stroke on the near end of the comb. Had I been in his shoes, and commanded to begin on one end, I should probably have cut the first stroke on the far end—working the heel of the knife continually into fresh territory in preference to the point—except of course when the surface is so uneven that the point has to be used. While ago I used to take off a little strip pretty much all around the comb first thing; but I have pretty well abandoned that as a greenhorn's unfulfilled craving. Had I been in Mr. Aikin's shoes and told to uncap that comb just as I pleased, I should probably have set it on one corner, leaned it over strongly to the right, placed the middle of the blade under the bottom comb and made the first stroke into the opposite or upper one. Then the rest of the territory I should have finish in a "permisive" kind of way. Presumably, Mr. Aikin's way should be the better—but I should greatly enjoy hearing other brethren just attack a comb—or, if they pleased, just how they would go at that particular comb which Mr. Aikin has in his hands.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.
INFLUENCE OF THE GOOD HOME.

The home is the greatest civilizer. A nation of good homes must be strong. Nothing will foster patriotism like the presence of innumerable homes where the beauty of the outside is equal to the beauty of the inside; and in such homes the home more beautiful, or anything that adds to its delights, not only makes good people—good fathers, mothers, children, good neighbors—but just as truly, good citizens. The man who has the home all to him, who longs for it when absent, and lives himself to it when business lets go his grip, who is only away from it when stern duty calls, who rejoices in it from cellar to roof—such an one feels that he has great things to live for. He can accomplish great things, for he has a heart light with joy, he has wondrous incentive to work—thought of the loved ones that make that home so precious: his daily tasks are only pleasures. Such are the ministries of the true home. Such a man must be a patriot—he has that which he must defend.

The happiest homes, are where all work together to secure comfort—where all give thoughtful love and rejoice most in what brings joy and good fellowship to all. It is not the home of wealth, where money and belongings every luxury, and gratification in fullest measure comes without effort, that knows the truest happiness. Such homes breed selfishness, and selfishness and happiness never travel together. I would never covet wealth for my children or friends. I would covet them only for the noblest and mightiest. Such a state of mind will be born of wealth. The man of wealth may hold upon generous purpose, unselfish regard, disinterested love, but his money is ever working to smother all these blessed instincts. Strong industry is the wisest and best integrative force to serve ever alive within him the highest ideals of life, thought and purpose, if wealth has ever waited at his call and responded to his beck. Not the home of wealth, then, but the home where the industry and frugality supply moderate needs, and all thought and effort must minister to the daily wants, is where joy is sweetest and best, and such homes are what will surely give to a nation perpetuity.

May we not rejoice then that our nation is blessed with such homes? That we are not all selfish, that all these noblest of actions and efforts that fosters such homes. May God raise his hand against efforts that tend unduly and unrighteously to build up either the homes of squalor, or the homes of the overwealthy.

Our American Bee-Journal home circles are the average ones. In them all minister. All are ready to give the helping hand. All are alert to add a sheaf to the store of comforts. Thoughtful love for other than self. All this is what makes glad some the heart.

In our homes, we love to read. The good book and the helpful magazine are the pride and pleasure of the household. The reading aloud, and the good talks called forth, as "Wild Animals That I Have Known," takes us into the fascinating fields of nature, are too precious and valuable to be at all curtailed. How can we gain time for more? So very important is the answer, that we may well share no time or pains to make all about the home convenient. A house-saving machine, no more so than convenience of plan and arrangement, should receive fullest heed and attention. In all this, as it is the workshop of the queen of the household—the loving wife who gives the sunlight to the home—a first place should be given to it.

THE KITCHEN.

The kitchen round of duties are every day, and many are oft repeated in each daytime. Steps that must be often taken should be short and few. Is the kitchen the cheerful room, where work is done? If not, are the walls cheerful and does an atmosphere of cheer and comfort make the kitchen a glad place?

Any pains to make the kitchen bright and attractive are well and worthily bestowed. Is the kitchen next to the dining-room, or is there a separate one, thus placing an ample cupboard, with convenient sliding or other doors that open both ways? Doors that slide either up or sideways are most convenient.

Is the sink close beside this cupboard on the kitchen side? And has it an ample drain board, and both hot and cold water that comes with a turn of a faucet? Suppose it does cost not a little, to secure all this. It is to help every day and oft-repeatedly, the dearer, the better.

Is the range convenient to sink and table? and has it a hot water tank? And does a first-class quick-heat gasoline stove take its place in the hot weather? Is it a neat wood-box close by the stove, and is it ever full of the best of fuel?

There is a lovely arrangement in the room and lovely, too, in the little of best room and lovely, to be so that all possible steps are avoided? Is there a long, narrow spice cupboard above the cooking table, with front door to open downward, that no steps shall be required to reach everything that is needed to make the food appetizing?

Is the pantry close at hand, and always stocked with all needed articles?

A husband can afford not to give all this most earnest heed. To save the time, the steps, the energy of the wife and mother, is his greatest privilege and his wisest and most blessed act. In building a house the most thought and study should be given to it, that it may be a model of neatness, beauty, and convenience. If the house is already built, labor and money spent in remodeling this room so that steps may be saved, and care, worry and labor lessened, will be most wisely used.

THE BATHROOM.

That wonderful man, Booker T. Washington, in the intensely interesting and inspiring articles just completed in The Outlook, and which is hoped will be published in book form, speaks of the bath, as a civilizing agent. He is right. No house should be without its own good and best arranged bathing arrangements. Indeed, "Cleanliness is next to Godliness." The bath—often used—is the good angel of the home. We are wise when we do everything to encourage to very frequent bathing. We must have the conveniences. Is the hot water tank heated every time the stove is lighted, gives hot water at the kitchen sink and to the bathroom.

I would work my fingers—short, if needs be, to have the best and most convenient kitchen and bathroom the county round. Have all our readers lived up to their opportunities in these directions? These should not be considered luxuries, but necessities—a thing not for the future, but for the now.

GRAHAM GEMS.

Nothing is more important in the home circle than good health. It is true that "what is one man's meat is another man's poison." White bread is often very unwholesome and, I may add, unwholesome. To any who, like myself, have found this true, I would suggest as a substitute graham bread or bread. I feel that my health, if not my life, is due to this displacement. The following is the recipe for graham crumbs which I have found very appetizing and wholesome:

To two cups of graham flour and one of white, add two teaspoonsful of good baking powder, and milk sufficient to make a thick batter. Stir it to the texture of one cup of the batter. Bake in a cup, or less, of some shape. If some cream is added with the milk, no harm will be done. Bake quickly in hot buttered gem-iron.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and thus often leaves a sale.

The picture shown herewith is a reproduction of a motto queen-button that we have been furnishing to bee-keepers for a long time. It has a pin on the underside to fasten to the coat-lapel. Price, 5c per pair, or six for 25 cents. Send all orders to the office of the American Bee Journal.
BEE-SUPPLIES! 

Don't you feel that your beekeeping is a little behind the times? This is the year for you to increase your bee supply. The catalog is filled with the latest in beekeeping supplies. Don't miss the opportunity to upgrade your beekeeping operations.

If you want the Bee-Book That covers the whole Apicultural Field more completely than any other publisher, send $1.25 to Prof. A. J. Cook, Claremont, Cal., FOR HIS "Bee-Keeper's Guide." Liberal Discounts to the Trade.

Queen-Clipping Device Free. 

The Monette Queen-Clipping Device is a fine thing for use in catching queens from hives. We mail it for 25 cents; or will send it FREE as a pre-paid order for $1.00. New subscriber to the Bee Journal for a year gets it free. Address: GEORGE W. YORK & COMPANY, Chicago, Ill.
WINTERING BEES—SWARMS SETTLING.

My bees are doing fine. I take common dry-goods boxes, having the top and bottom separate, set the hives on the bottom, put the boxes, then set the boxes over the hives, and fill in each cavity one in front of the entrance. I have tried this method several years, and have not lost a colony. I got the boxes as near 30 by 30 inches as I can, and succeeded in getting two hardware dealers to save me 57 last fall, at 30 cents apiece.

I have had several hives up in the trees every year, and have never failed to catch bees in them. The hives have been stored in and out of the hive for 42 days before they came to stay, but never knew them to take possession at once. When they had been there a few days, I have seen them hang on the front of the hive from 3 to 50 hours. If the bees settle because the queen is absent the hive will be very dry, about 4 inches to a foot of the entrance so long. I have seen them in the woods hanging just below some small hollows in a tree, and gone back in a few days and found them at work.

Last spring a swarm issued from one of my colonies, and I started off to meet it. I followed it to one of the neighboring's, where they settled on his barn, about 4 feet from the ground. My neighbor went back home with a hive and got a hive, and as we crossed the railroad track we noticed several bees flying around. I found a queen with 17 bees. This was about 40 rods from the cluster. I bought a hive and a queen—cage, put the queen in the cage, and set the hive at one side of the track, and asked my neighbor to watch the cluster, and if they entered the hive he might take them home and keep them. The second day at noon they went into the hive. Next day I went out and liberated the queen for him. They stored 24 pounds of honey and surplus, and cast one swarm. Do you suppose they were over on the barn waiting for that queen in the hive to rest? I don't think so. They sometimes have a tendency to settle in order to rest the queen, but I have caught the queen in my hand while flying in the air, after having traveled more than three-fourths of the bees had clustered.

Jasper Co., Iowa, Feb. 4.

J. H. ALBERT.

BEE-KEEPING EXPERIENCES.

I paid $8.50 for the first colony of bees I ever bought, and when I got it it was packed in a box 18 inches made of oak. Some time afterward I added a little further west, and worked for a man who kept about 35 colonies. We got the fever to go still further west, so we sold what we could and traded the balance. We sold when they went at $150 per pound, and could have sold more if we had had it.

During the civil war, while on the field of battle one day, in an old house that was full of bullet-holes, I found a colony of bees, which I gave to the good woman who had done some sewing for me. I have some relics of the old battlefield where the battle of Manassas was fought.

After the war I struck out for the West, and landed in Madison, Wis., about the middle of May, 1864. That part of the country was then a wilderness, with very few houses scattered about. I started out with two colonies of bees in oak boxes, and sold them for $240. I paid about $150 for bees by 1890, but the price has advanced to $600 and more.
Belgian Hares
CHEAP
PEDIGREE AND COMMON STOCK.
Having bought a Job Lot of a neighbor and added to what I had, I must dispose of same to make room for my increase. They are mostly young 6 months and over—with a few bred Does. ALSO

Italian Queens
of last season's rearing, ready as soon as the weather is warm enough to send thru the mail. Write for prices, Address

J. L. STRONG
Clarinda, Page Co., Iowa.

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Lone Star
QUEENS.
Tested...$1.25
Untested...65
G. F. Davidson & Sons,

Bee-Supplies
We are distributors for ROOT'S GOODS AT THEIR PRICES for southern Ohio, Indiana, Illinois, West Virginia, Kentucky, and the South. MUTH'S SQUARE CLASS HOME-JARs, LANGSTROTH BEE-HIVES, ETC.

Lowest freight Rates in the country. Send for Catalog. C. H. W. WEBER, Successor to C. F. MUTH & Son, 214-4 Central Ave., CINCINNATI, 0.

Hone-seeker's Excursions.
On the first and third Tuesdays of each month, Milwaukee & St. Paul Railway will sell round-trip excursion tickets from Chicago, Milwaukee and other points to its line to a great many points in South Dakota, North Dakota, and other Western and Northwestern States at about one fare. Take a trip West and see the wonderful crops and what an amount of good land can be purchased for a little money.

Further information as to rates, prices of farm lands, etc., may be obtained by addressing F. A. Miller, General Passenger Agent, Chicago, III.

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You Can't Afford to Guess
at results in the poultry business. If you fail to raise the chickens, you simply have no business. The way to be absolutely sure about getting the chickens to live is to use a Cyphers' New-\n\nborer in your hatchery. We guarantee them to last 16 years and to hatch any kind of eggs. The best way to know about them is to read our 52 page (CYPHERS) book, "Poultry Keeping," Has 320 illustrations and covers the entire subject. We send it for 10 cents in stamps. Address: CYPHERS INCUBATOR CO., Chicago, Ill., Wyland, N. Y., Boston, Mass.

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A Start in Life!
Everybody realizes its importance. Don't deny it to your chickens. Hatch 'em right, start 'em right, and they'd pay you back all right. Try to hatch first-rate eggs, with the famous

RELIABLE INCUBATORS AND BROODERS

The machines which have satisfied more particular people.

Our 5 Bantling Specials are absolutely the best. Our small Egg Incubators are specially made for size of egg. Our Bantling Special Incubators are made for size of egg. We will be most happy to furnish prices. Reliable Brooder Incubators, Bantling Specials, will be hard to find. Reliable Exhibition Cots are LEADERS.

RELIABLE INC. & BROODER CO.,
Reliable Poultry Leg Bands

You will not find a more reliable Eclipse Set of 10,Cats. 1-8 for all the parts. It is a wonder people can be found, and you won't catch the blue angels. If you haven't been getting good results, you're probably putting your eggs in the wrong incubator.

A great many of our poultry raisers are pleased with our Bird-Exhibitions Incubators. They seem to have been made perfect, and are sold away in the supers.

In going over them now I find quite a lot broken and a great many new, which I was not satisfied with. What would be the best thing to do with them? Shall I cut out all the comb put in new starters, or will the bees till out the combs? I had very bad luck last summer in introducing Italian queens, and
Tennessee Queens!  Fine lot of Choice Tested 4-year old hens.  All the daughters of select imported super-baited Queens, reared 3½ miles apart, and mated to select drones.  $1.50 each.  A feature of these select Queens, from same breeders, is that they have been owned nearer than 3½ miles apart, and never within 3, and but few within 5 miles.  2 years’ experience.  Discounted Contracts with dealers a specialty.  JOHN M. DAVIS, Clemons & Co., Salt Hill, TN.

Please mention Bee Journal when writing.

A New Radish—The John A. Salzer Seed Co., La Crosse, Wis., are the introducers this year of a magnificent new radish—a radish fit for use every day of the year—hence they have named it “Salzer’s Everyday Radish.” They say it is a radish worthy to grace the table of every king, monarch, president or citizen of the United States and the world. This radish, which is a variety of the rich red radish, is tender and juicy, and sweet, and crisp, as Salzer’s Everyday Radish is a cross between the two. It is sweeter than the old-fashioned radishes of the past—without their hard and bitter qualities. Not only are the Salzers introducers of new radishes, but they have a long list of vegetables that can be used for that purpose. Their catalog is worth $1.00 to any wide-awake farmer and gardener, and is available on receipt of but 5 cents postage. When writing please mention the American Bee Journal.

PAN AMERICAN EXPOSITION. Nothing since the World’s Fair, at Chicago, in 1893, has elicited the widespread interest that is manifest, all over the world, in the Pan-American Exposition. The first shipment of hives and bees from Buffalo, N.Y., to Falls, from May 1 to Nov. 1, 1901.

The purpose of the Exposition is to illustrate the progress of the countries of the Western Hemisphere during a century of wonderful achievements, and to bring together into closer relationships the people of the many States, Territories and countries of the Western Hemisphere. Acting under proper authority, the President of the United States has invited all the Republics and Colonies of the American Hemisphere to send representatives to the close of the Nineteenth and beginning of the Twentieth Century, by holding this International Exposition on the Niagara Frontier.

For this important event, the Nickel Plate Road has issued an attractive, descriptive folder pamphlet, elaborately illustrating the Pan-American Exposition, with all the necessary information. The Nickel Plate Road is the short line between Chicago and Buffalo, and affords competent train service from Chicago to the fair city. F. E. Peterson, office manager, and all points East, with trains of modern equipment, on which no extra fares are charged; also dining-car accommodations. In the baggage cars, special arrangements are made for meals in its dining-cars on the individual club plan, ranging in price from $35 to $1,000.

Call on any agent for Pan-American supplies, or the Nickel Plate Road, or address John Y. Calahan, General Agent, 111 Adams St., Chicago. Parties desiring hotel or rooming accomodations are invited to apply to J. H. McQuade, General Agent. 111 Adams St., Buffalo, N. Y.

HONEY AND BEESWAX MARKET QUOTATIONS.

Wanted

D. J. BLOCHER, Pearl City, Ill.

1001—Bee-keepers’ Supplies! We can furnish you with The A. L. Root Co’s patented Quadruple Extractor, to extract all grades of honey. We are one of the largest distributors of this machine in the Midwest. Will accept no substitutes. M. H. HUNT & SON, Bell Branch, Wayne City, Ohio.

DO YOU WANT A HIGH Grade of Italian Queens OR A CHOICE STRAWBERRY? Send for descriptive circular.

Honey market—We may have a customer within a short distance of you who wants your honey or beeswax. We are in close touch with our agents and are able to make a good market for your crop, stating quantity, quality, and lowest possible price. Reference to Mr. Blank for any business man in this city.

THOS. C. STANLEY & Son, Fairfield, I1l.

CHICAGO, March 25.—Fancy white comb sells readily at 65 ct., but all other grades are weak. White, 14¼½ ct; fancy ambo, 12½ ct; fancy comb, 9½ ct; medium, 9 ct; fdr., 8½ ct. Extracted white range from 80½ ct to 90 ct. Buckwheat, 55½ ct; Southern dark, 55½ ct; ambo, 50½ ct. 90½ ct and 95½ ct.

R. A. BURNETT & Co.

KANSAS CITY, Feb. 19.—Fancy white comb, 85 ct; fancy ambo, 80 ct; fancy comb, 70 ct; medium, 65½ ct. Demand fair, receipts in 100 cases, mostly. W. K. CROMWELL & CO., SUCCESSORS TO C. C. CLEMONS & Co.

CINCINNATI, March 9.—The demand for comb honey is nearly over, the stock of it also well cleaned up. Fancy white brings yet 10c. Extracted is in fair demand; dark sells for 55c; better grades bring 60½c; fancy white clover from 50c to 55c. H. W. WEBER.

ALEANY, N. Y., March 29.—Honey market is dull with light demand and very little stock, either comb or extracted. White comb, 15½; medium, 12½; fdr., 10½. Extracted, white, 50½; mix, 60½; buckwheat, 65½; ambo, 60½. R. W. WRIGHT.

BUFFALO, Mar. 7.—Fancy, 18½; No. 1, 14½; No. 2, 11½; No. 3, etc., 9½. Extracted, light amber, 45. Beehives 60 to 70 ct.

All grades of honey selling fairly well, and looks as if all lots would clean up.

BUSH, McCOMAS & CO.

BOSTON, March 11.—Fancy No. 1 white in carloads: A: No. 1 loc, at 1c; No. 1, 1½c. with a fairly good demand. Absolutely all dark honey this year. Extracted, white, 85½; light amber, 75½; dark amber, 60½. BLAKE, SCOTT & LEE.

NEW YORK, Feb. 19.—Comb honey is being well cleaned up on account of the severe weather which has lessened to quite an extent, on account, we presume, of the high price of the honey. Every bee ruler. Fancy white still brings 15c in a small way; fancy ambo, 10½; medium, 11½; ambo, 11½; buckwheat, 10½. Extracted桂花 very much in demand. California white honey, ¾ of a pound, $1.25; fancy white, $2.50. Beehives $10 to $15.

BEEKEEPERS’/S

BUFFALO, MAR. 7.—Fancy white comb, 15½; No. 1, 14½; dark amber, 10½; Extracted, white, 95½; amber, 52½; dark, 47½; beeswax, 75½c.

SAN FRANCISCO, Feb. 6.—White comb 130½; amber, 11½; 12½; dark, 85½. Extracted, white, 12½; amber, 10½; dark, 7½. Beeswax, 25c.

Not considering the limited quantity of comb honey last spring from California apiaries, present offer is, we think, a liberal volume and are mostly of amber grade. The market is slack but firm at the quotations. It is reported on good authority that the current crop is an average one and that dealers are not laying out in considerable quantity, which to character and size of market for the very limited business doing in the pure articles.

D. J. BLOCHER, Pearl City, Ill.

HONEY MARKET.—We may have a customer within a short distance of you who wants your honey or beeswax. We are in close touch with our agents and are able to make a good market for your crop, stating quantity, quality, and lowest possible price. Reference to Mr. Blank for any business man in this city.

THOS. C. STANLEY & Son, Fairfield, Ill.
We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR

Hives, Extractors
or anything you want in the Bee-keeping line.

WE MAKE ONLY THE BEST

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of The American Bee-keeper free. Address, THE W. T. FALGONER MFG. CO., JAMESTOWN, N. Y.

200-Egg Incubator for $12.00

Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day. GEO. H. STAHL, Quincy, Ill.

SWEET CLOVER
And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

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Prices subject to market changes. Add 25c to your order, for cartage, if wanted by freight, or 10c per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street, CHICAGO, ILL.

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I ARISE

To say to the readers of the Bee Journal that

DOOLITTLE...

has concluded to sell QUEENS in their season during 1911, at the following prices:

1 Unregistered Queen, $1.00
3 Registered Queens, $2.50
1 Test Queen, $1.25
3 Tested Queens, $2.50
1 Select Queen, $1.50
3 Select Queens, $4.00
Select Queen, last year's rearing. 2.50
1 Extra selected breeder, the very best, 5.00

Circulate free, giving particulars regarding each class of Queens, conditions, etc. Address, G. M. DOOLITTLE,
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We guarantee satisfaction. Why does it sell so well?

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PATENT WEED-PROCESS SHEETING. Because it has always given better satisfaction than any other.

Send name for our Catalog, Samples of Foundation and Veil Material. Because in 23 years there have not been any complaints, but thousands of compliments.

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Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

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The classic in Bee-Culture—Price, $1.25, by mail.

Beeswax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

200 Red-Clover Queen

Offer No. 35.

On September 1st last we announced that we finally had a red-clover queen fully equal to the one we had years ago. The colony of this queen has given one of the most remarkable showings on red clover of any bees we have ever had. The queen in question is an imported one, and therefore of the genuine pure-leather-colored Italian stock. We sent out daughters from her all the season. But we did not discover her value until the clover season, second growth, came on, and then her colony so out-distanced all the other 450 that she attracted attention at once.

It must be understood that these queens are not golden yellow, neither are their bees of the five-banded stock. They are simply leather-colored Italians whose mother came direct from Italy.

Since the notice appeared regarding this queen we have hardly been able to supply all of the queens that were wanted from this stock. Many daughters of this queen we sent out before we knew her value, and it now transpires that some of the finest bees in the land are from queens we sent out early. We are now booking orders for the coming season, and make the following offer, but no queens will be furnished except those that subscribe for Gleennings, and only one with each year's subscription. All arrangements must be paid to the end of this year. Gleennings for 1911 and one untested red-clover queen, $2.00; Gleennings one year and a tested red-clover queen, $4.00; a select tested red-clover queen and Gleennings one year, for $8.00. We will begin mailing these queens in June. Orders are already entered, and the same will be filled in rotation. Do not neglect to improve this opportunity and get some choice stock, and send your order early so you may get the queen correspondingly early in the season. We are using every precaution to winter this queen safely, but reserve the right in case of her loss this winter to substitute from other select tested stock, by which we are holding in reserve, or to give the subscriber the benefit of any of our other clubbing offers if desired.

THE A. I. ROOT CO., Medina, Ohio.

GEORGE W. YORK & CO., 144 & 146 Erie Street,
are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO.
Send to them for their Free Catalog.
Long-Tongued Bees
ARE DEMANDED NOW.

ONE Untested Italian Queen FREE as a Premium
for sending us TWO new subscribers to the
American Bee Journal for one year (with $2);
or, one Tested Queen FREE as a premium for sending us FOUR
new subscribers (with $4.00).

We have arranged with one of the oldest and best queen-breeders
(having many years' experience) to rear queens for us the coming
season. His bees average quite a good deal the longest tongues of
any yet measured. The Breeder he will use is direct from Italy,
having imported him himself. Her worker-bees are large, somewhat
leather-colored, very gentle, and scarcely requiring veil or smoke.
They stored red clover honey last season.

Orders for these fine, "long-reach" queens will be filled in rotation—"first come, first served"—beginning about June 10th. It is
expected that orders can be filled quite promptly, as a large number
of nuclei will be run. All queens will be guaranteed to arrive in
good condition, and all will be clipped, unless otherwise ordered.

CASH PRICES of these five queens will be as follows: Untested,
$1.00 each; Tested, $2.00 each. Send all orders to

GEORGE W. YORK & CO.
144 & 146 Erie St., CHICAGO, ILL.

28 cents Cash ** This is a good time
paid for Beeswax. *** to send in your Bees-
wax. We are paying 28 cents a pound—
CASH—for best yellow,
upon its receipt, or 30 cents in trade. Impure wax not taken at any price.

Additions as follows, very plainly.

GEORGE W. YORK & CO., 144 & 146 Erie St., CHICAGO.

Best White Alfalfa or Basswood Extracted Honey
ALL IN 60-POUND TIN CANS.

ALFALFA HONEY........
This is the famous White Extracted Honey gathered in the
great Alfalfa regions of the Central West. It is a
splendid honey, and nearly everybody who cares to eat
honey at all can't get enough of the Alfalfa extracted.

A sample of either, by mail, 8 cents; samples of both, 15 cents—
to pay for package and postage. Min. freight—one 60-pound can, 95
cents per pound; two cans, 95 cents per pound; four or more cans,
85 cents per pound. Cash must accompany each order. If ordering
two or more cans you can have half of each kind of honey, if you so
desire. The cans are box.

BASSWOOD HONEY........
This is the well-known light-colored honey gathered from the rich, nectar-laden
basswood blossoms in Wisconsin. It has a stronger
flavor than Alfalfa, and is preferred by those who like a
distinct flavor in their honey.

Order the Above Honey and then Sell It.
We would suggest that those beekeepers who did not produce
enough honey for their home demand this year, just order some of
the above, and剪。And of course FREE as a premium.

can get this honey and work up a demand for it almost anywhere.

Address,

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.
**Editorial Comments.**

Prof. Cook's Review of the "A B C."—When publishing Prof. Cook’s first article of the review of the "A B C of Bee-Culture," we should have stated that his criticisms referred to the edition of 1896-1900, and not to the latest, or 1901 edition. As the criticisms read, one would naturally infer that they relate to the new edition, and not to the previous one. With perhaps two exceptions, all the matter which Prof. Cook criticised in his first article has either been stricken out or materially modified in statement. Only about half of the edition of 1899 could be revised, owing to the limited time at the disposal of the revisers, but when the latest edition (the one for 1901) was under consideration, matter which had not been changed was either rewritten or revised. So, as it happened, Prof. Cook is calling attention to certain errors and other points that needed modification, but which are not in the book now offered for sale. This is well, as only a very few, comparatively, have a copy of the 1901 edition, the great majority having former editions, which contain the criticised matter.

Prof. Cook quotes E. R. Root as saying that "digestion is the separation of the nutrient part of the food from the non-nutrient, and the conversion of the nutrient into a liquid fit to mingle with the blood." This is not Mr. Root’s statement, but a direct quotation from Mr. Thos. Wm. Cowan, and, with all deference to Prof. Cook, Mr. Root writes us that he should not know whether to accept Mr. Cowan’s or Prof. Cook’s definition even yet. When doctors disagree, who shall decide?

Regarding the statement of the poor quality of honey from apple-blossoms, so much proof was furnished Mr. Root to the effect that such honey was of the very finest quality in color, body, and flavor, that the 1901 edition contains a statement praising that kind of honey in the highest terms.

Regarding the other points referred to in Prof. Cook’s review of the "A B C of Bee-Culture," the 1901 edition either does not contain the statements which are called in question, or else said statements are modified to conform to the knowledge of the present time.

Mr. Root has sent Prof. Cook a new book bearing the date of 1901, in which he will see that his suggestions and corrections have been generally adopted; for, be it said, a copy of the 1898 edition was sent to Prof. Cook, requesting him to point out its errors or its misleading statements, which he did.

Beet-Keeping for Women.—When the statement is made that bee-keeping is just the thing for invalids and women, a quiet smile is likely to be seen on the face of the bee-keeper who works hard at his business from "dawn to dewy eve," and who lies down at night more worn out than the average farmer. He knows that bee-keeping takes work—hard work—and a lot of it. He knows that he is not invalid, and yet the business requires all the strength he has. As a matter of fact, when bee-keeping is spoken of as a business into which invalids and women can enter and rapidly make a fortune, the realm of nonsense is entered.

And yet, taken in the right sense, it is not so far out of the way to say that bee-keeping is just the thing for an invalid woman. Not perhaps for every one, but for every one who has taste and adaptability in that direction. Indeed, there are not wanting those who testify that with poor health and too little strength for almost any physical exertion, when the time comes for the merry hum of the bees in the spring, they can go to work at their pets, using up their strength to its limit every day, but every day finding that strength on the increase.

There are two reasons for this. One is that they are kept out in the open air, that of itself being enough to make a vast difference in most cases. The other reason is the intense interest that bee-keeping begets. Many a bee-keeper will readily recall the time when he had not more than five or six colonies, and when at the close of a hard day's work in some other direction he has worked an hour at his bees, and when everything was done that he could find any reasonable excuse for doing, he would reluctantly stop, with regret that there was nothing more to do. If the occupation had been almost anything else, he would have found himself so tired that he would have been glad to have shortened up the task.

The woman who enters bee-keeping with no knowledge of the business, and with no love for it, but only with the thought that she may make a fortune at it, will be badly worsted in the outcome; but if she has some taste in that direction, and goes at the matter reasonably and intelligently, she may find a delightful recreation, and with gradual increase of colonies she may add to her pin money a sum not to be despised.

The attention needed by the bees can be given at a convenient time so as not to interfere with other duties, supposing that the number of colonies is not large, and when the number becomes sufficiently large, help at other duties can be obtained. In any case, it will not be hard to get help from "the lords of creation" in any part of the work that requires much physical strength.

Mrs. Axell’s article on this subject in this week’s number will be read with interest, particularly by the women of the bee-keeper's family.

**Immune to Bee-Poison.**—One of the German bee-papers reports that "Dr. J. Langer investigated 164 bee-keepers, and found 11 of them immune to bee-poison from the start; 120 became immune after a time; and 27 remained as sensitive as ever. Some lost their immunity, and sometimes suddenly turn sickness." So says a Stray Straw in Gleanings in Bee-Culture.

Editor Root says that he has never yet met a person who is immune to bee-poison from the start— that is, one on whom there would be no swelling at the first sting. Of course, there are persons who never can keep bees, owing to the fearful effect of the poison caused from stinging. The result of the investigation made by Dr. Langer shows quite conclusively that after a time the great majority become almost completely immune to bee-poison.

When we first began to keep bees we suffered greatly from the effect of the bee-poison. We remember very distinctly being stung above the eye, on one occasion, and the next morning we could scarcely see anything with that eye. After keeping bees a few years, and being stung more or less, we noticed that the pain became less after stinging, and that there was scarcely any swelling at all. Now, when being stung, we scarcely realize it half an hour afterward, unless it is a very severe case.

**Practical Lessons for Beginners in Bee-Culture.** by Rev. J. D. Gehring, of Douglas Co., Kan., are begun in this number. There will be several of the lessons, forming a series, which we trust will be read with interest and profit, especially by those who are inexperienced and have so many kinks to learn in connection with bees and bee-keeping.

It may be true that "anybody can keep bees," but it is certainly true that anybody can not keep them profitably or successfully without making a careful study of the business. While everything can not be told in the bee books or papers, yet there is very much that can
and must be learned by reading. We all learn by picking up an idea here and a thought there. Then in the aggregate there is quite a good deal of practical value gathered together. It is much like the bee when getting the nectar which it transforms into honey—a drop here and a drop there of sweetened nectar, then to the hive it is "hollered down" into the honey that is so delicious. We must, after reading, "boll it down," by thought and meditation, to the consistency that shall make it usable and valuable. Thus will our reading, of whatever kind, prove to be helpful and profitable.

**Contributed Articles.**

(Edited of 1899–1900.)

**No. 2—A Review of "A B C of Bee-Culture."**

By Prof. A. J. Cook.

(Continued from page 149.)

Page 147—It is stated that there are 53 different varieties of goldenrod. This is an incorrect use of the word variety. The goldenrods are species. The same as our bee—Apis mellifera. A variety or subspecies is one of the local races or races occurring in a single district. Thus the Italian bee is a variety or subspecies of Apis mellifera. In the figure on the same page, the three plants each represents a species.

Page 172—I am surprised at Mr. Root's style on this page. "Tarnal nuisance" and "pawed out" might do in Gleaming in Bee-Culture, possibly, but some one or other object to them in a book like "A B C of Bee-Culture." Still, this is a matter of taste, and I may be hypercritical.

Page 173—The typographical errors in this book are few, but the second one on this page I think a failure. I think the first one on the previous page gives a much clearer idea. This figure appears to me like a small cube inside a larger one. I should consider it a right-angled figure.

Page 177—A strange error occurs here, for which I fear my own poor chiropragraphy may be to blame. Mr. Root speaks of the coccids as scarab insects. This certainly should be scale insects. I have a dim recollection that in the last century, when this subject was written about, I, the settler made my scale a scarab. I fear that this is what misled Mr. Root. The statement is also made that these honey-dew-secreting insects—plant and scale lice—propagate in the topmost leaves of trees to build up honey-dew in referring to the first figure on this page. The letters should be reverst.

Page 174—The figures of the book are usually clear and admirable, but the second one on this page I think a failure. I think the first one on the previous page gives a much clearer idea. This figure appears to me like a small cube inside a larger one. I should consider it a right-angled figure.

Page 179—I am quoted on this page to the effect that much aphid honey-dew is deliciously wholesome, and the honey from it is a great delicacy. I thought it an absurd idea that "the ordinary stuff that we have in Ohio, and that which I have seen in other localities, is usually of a dark color and rank flavor, to me very sickening and unpleasant, and as Prof. Cook says, it should be sold to beekeepers elsewhere desiring an inferior or strong-flavored honey." The error. Mr. Root makes here is easily explained. I have no doubt but that the honey from Aphisides is almost always of pleasing flavor, and so always makes good honey. I have never seen a case in which the honey was not true. While in the Yosemite last summer, away upon one of the highest peaks (Cloud Rest) 10,000 feet above the level of the sea, we ran across plant-lice on the pine trees. There were bees in the region, and the honey-dew was present in great drops so that it was very easy to test it. All of our party pronounced it excellent. Perhaps I should say this was before they were told where it came from. This aphid honey-dew is common every year in nearly all sections of the country. Yet it is so unobjectionable that almost no one knows it. The bees take to it, and I doubt if they will often leave this even for the nectar of flowers. I have certainly known them to work the honeydew of the larch right at the trunk. Besides, who could resist the white clover bloom. Many of the bees were gathering from the clover, others were taking from the honey-dew. The mixture all sold readily as clover honey, and I am sure it sold as clover honey. The honey-dew on the other hand, is not so common, and is only present in certain years when the scale are very numerous. Another fortunate peculiarity is that it is dissolved into the honey, and thus yields a honey still more delicious. Likewise, the scale insects of the East prosper most in a succession of dry seasons, just at the time when the flowers do not furnish nectar. The honey from this source is dark and rank, and we have computed that 70 per cent of the honey made from this scale is honey-dew. I think our bee-keepers should all understand this distinction, and should become acquainted with the aphid honey-dew. It may be flavored. If so, it has not come under my observation.

Page 185—Two mistakes of faulty proof-reading are evident on this page. One of the beggar-ticks—Biedens frondosa, is referred to as Burr margold. This should be Burr frondosa. Likewise, the venus cardiosa should be motherwort instead of motherwork.

Page 193—Our author refers to the thorax of the bee as the shoulders. He shows the abdomen detachat, and states that it is detached from the shoulders. This use of the word thorax is evidently incorrect, and indicates that the thorax is a perfect good word, I see no need of coining a new one.

Page 204—The letter "O" is omitted as marking that division of the word. Uniformity would be better observed if the "O" were supplied.

Page 213—A case of misspelling is made very prominent on this page. I think it is always spelt jasmine or jasminum that has given rise to so many mistakes in other plant being poisonous. It would be so easy to make the mistake. We know that honey makes some people seriously ill whenever eaten. That it might occasionally make a person sick who usually was proof against the ill effects is easily to be believed. I can understand how Xenophon might have made a mistake. A lot of hungry soldiers eating freely of honey would in almost any case give employment to the doctor. We know that false-leaves are poisonous, the larvae of these bees have known cases where the larve of bees have been seriously poisoned by receiving honey poisoned with Paris-green which had been applied at time of bloom in the apple-orchard.

Page 214—In describing the way that bees get pollen, Mr. Root credits the tongue with an important part of the work. I have never noticed that the bee used its tongue to get the pollen. The antennae collector on the front leg gathers the pollen, not from the tongue but from the antenna. I hope others will observe and see whether Mr. Root is right in the explanation. My own observations would the rather teach that the compound hairs which clothe the body so generally, and the legs of the bees, are the instruments. Mr. Root has anything to do with it.

Page 222—Our author does well in using the development theory to account for the color of blossoms and birds. It is perhaps modest to say, "I can not positively affirm." I think, however, that no scientist to-day will deny the interrogation-point in using the evolution hypothesis to account for the color in flower, fruit or bird. To question it shows that the writer or speaker is not conversant with the latest in science. I am glad that Mr. Root has never been one to be afraid of truth.

Page 227—Is it wise to say that ten-day queens may be just as good as any? If I am right, experience, no less than theory, would tell us that ten-day queens would give us a good lesson in this matter. When things are normal they start the queen from the egg. I think the wise breeder will always do the same.

Page 230—It is very interesting if Mr. Root's views regarding the presence of eggs or larvae stimulating the
Adaptability of Bee-Keeping to Women.

By Mrs. L. C. Antle.

I am surprised that more women do not take up bee-keeping as a business, for I am sure they would find it profitable, conducive to health, and a pleasure, if followed perseveringly.

As bees never ought to be handled except in warm weather, in taking care of them there is no need of exposure in unsuitable weather, as is often necessary in other occupations. Women also would be greatly helped in their aches and ailments, especially if she has enough colonies to look after to keep her busy. When swarming begins and she has to see to it that the swarms are cared for if she is only half able to care for it, she will become more and more discouraged that before she is aware of it she will be on the fair road to recovery. She has been working out-of-doors, breathing the fresh air, been somewhat sunbaked, heard the birds sing, and forgotten home troubles. Some of our most successful apiarists are women. Most men bee-keepers have women helpers. Indeed, much of the work to be done with the bees seems just adapted to women, as they are more likely to look after the little things that are needed by them. When there is a brood of young ones or a heavy mortgage, the wife or grown-up daughter would engage in bee-keeping, she could do much toward lifting the heavy burden from the shoulders of the husband and father. Even if there are no debts to pay it is nice for a man to have a little money with which she feels satisfied herself, as there are so many ways in which she can use it—for benevolences and the like—and there is real joy in giving what one earns one’s self. Then, it is quite a help to have plenty of honey to sell. It doesn’t mean anything to most people, the unexpected company comes a section of nice honey or a dish of candied honey helps to fill up the table, and most people enjoy eating it.

I think one great reason why more women do not take up bee-keeping is that they are afraid of the stings. But if Italian bees are kept, and handled gently, working with them only when the weather is warm and sunny, always giving them a puff or two of smoke at the entrance before opening the hive, and getting the queen to move from one part of the hive to the other, the woman will feel satisfied herself, and ought never to be sold to beginners. Then the next thing she should have is a good text-book on bees—don’t buy an old one because it is cheap, but get one that is up with the times. Follow the book very closely the first few years, and pay little attention to what a neighbor advises unless you know him to be a practical apiarist. It is better to have few colonies at first, and I am not sure but that it is just as well to have five as to one. It seems to me to spend the time reading up for only one colony when one can just as well look after three or five.

Many women will say they have no time to spend in caring for bees, and yet they spend much time in working in the garden, and with flowers, or poultry, and none of these things pay as well for the time expended as do the bees. Better have a few colonies of bees, and a little less of something else—perhaps fewer ruffles and tucks on the children’s clothes, or make less pies and cakes.

In order to make bee-keeping easy and successful we must do everything at the right time, and have things in the right place. Bees will not put up with anything, and if we do not suit them they will not suit us. We must follow their instincts more or less, and help them in following them out to the best advantage.

If weak women would have the care of bees all to themselves, and be removed from all other work and care, very many of them would find their health. I know this from experience. Working with the bees has done me more good than hundreds of dollars spent for medicine could have done.

There is something very fascinating about bee-keeping. It is not necessary when you get your bees to care for them, to have their nectar made up, and made warm and dry and the rest on the summer stands. Simply remove all extra combs and surplus from the hives, and fill the empty space with dry chaff, first covering the combs the bees occupy with thick cotton cloth, to prevent the chaff from falling down among the bees.
**Large Brood-Chambers For Queen-Rearing.**

**BY G. M. DOOTILLET.**

A CORRESPONDENT writes thus: "Will you please tell us something new in large brood-chambers, in which the queen is placed, that we can see? I have used a large one-story hive holding 36 frames, running parallel with the entrance, so I can not very well use the plan given in the 'Bee Answer Book.' How do you proceed to rear queens in such a hive as the one spoken of above?"

The hive spoken of by the correspondent is very similar to the one which I used when the plan of rearing queens in large areas appeared in the Bee Journal. Some years before I had made four hives on the "long-ideal" plan, which was brought to public notice a score or more of years ago by D. L. Adair, of Kentucky. I had been using them for years for extracted honey, but laid aside, as I found it paid better to work my apiary more wholly for comb honey. Soon after this, D. A. Jones, of Canada, came out with a new plan for working for comb honey, in which he placed the queen in a box having six combs of brood in the center of a long hive and filled out the ends with sections, claiming that in this way large quantities of section honey could be produced without much swarming; and as these long-ideal hives would be just the thing to try the experiment with, it would cost me very little to see what there was in the plan. So I changed the combs and bees from my usual hives back into these hives again, put in two queen-excluders, and placed six combs in the middle of the hive, according to his plan, when the first thing which came to my notice in opening the hive a week later was sealed queen-cells wherever there was an unsailed brood left which the queen did not now have the means of reaching. To put it more clearly, I had no idea the bees would try to queen, but a time when work crowded so that the removing of these cells was neglected till they hatch, went out of the hive, were fertilized and commenced to lay, so that I had two laying queens and the rest of the fraction. But, I did not have a chance to try this experiment in producing honey on the Jones plan, as all probability "Scientific Queen-Rearing" would never have been written, for right here was where I got my first ideas of a system which finally developed into the method found in the book.

In carrying out the Jones plan wide frames of sections were put next the apartment containing the queen, and, every ten days or so, some of the combs that had been with the queen, and were now full of eggs and brood, were taken out and placed beyond the wide frames of sections toward the ends of the hive, and empty combs placed with the queen to take the place of those removed. In this way the queen is always in the center at the back of the hive, the bees kept from swarming, and the bees coact to work in the sections to the greatest advantage. And it was on these frames of brood, placed beyond these wide frames of sections, where these queens were reared as spoken of above.

It will be noticed that there were wide frames of section between the combs where these cells were reared and the queen-excluding division-board which kept the young queens in her place, and the wide frame was open on the other separators on them which tended to keep the young queens from going to the perforated zinc and quarella thru it with the old queen. As the plan of securing honey in this way was a failure in my hands, these hives were cast aside again, and the upper-story plan was adopted as given in my book. But I have found from long experience, that, where ever there is unsealed brood on which the bees cluster, but from which the queen is not doing much, you can put perforated zinc, enameled cloth with a hole or two in it, or a division-board with a crack in the same, the bees will generally build queen-cells on these combs, and if it is so that the young queen hatching from these cells can not "touch noses" with the old queen, and if there is a place of exit, as near the part of the hive in which this queen hatches, she will generally, in due time, become fertile, when a honey-flow is on, and go to laying, as she would if there were no other conditions.

Hence, to rear queens in such a hive as our correspondent uses, all we have to do is to fix the same so that two or three combs of brood can be put in one end of the hive, and better so four or five, and then place the laying queen, put two queen-excluding division-boards, these latter being half an inch apart, so that the queens can not touch each other. From past experience, my way of doing such hives would be to put the young queens at the rear end, and in many combs as I desired her to occupy, placing next to her apartment a queen-excluding division-board. I would now place two empty combs next to this division-board, and immediately in front of these but in another queen-excluder. I would now fill out the remaining space between the last excluder and the front end of the hive, or entrance, with combs of brood and honey, and rear queen-cells there, and have them fertilized from the same, as I gave in my plan above.

Now, while I have told what I would do when using such a hive as the correspondent says he is using, yet I do not feel like closing this article without saying that, in a place like central New York, I have used the one for the practical bee-keeper to use if he wishes to produce the most honey with the least capital and labor.

Ondaga Co., N. Y.

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**No. 1.—Practical Lessons for Beginners in Bee-Culture.**

**BY REV. J. D. GEHRING.**

I was working in my apiary one beautiful May morning transferring brood-frames from one hive to another. It was what bee-keepers would call a typical bee-day. I had hived four swarms that morning, and the bees were fairly crazy in their eager rush and hum, gathering in the rich nectar which the blooming white clover was yielding in great abundance that season. I was stooping over an open hive, the act of pushing a frame of brood from one hive to another. You have heard my name spoken, and some one saying, "I would just like to know what you are doing with that hive of bees?"

Straightening myself up hastily, I saw directly in front of the hive at which I was working, and standing within a few inches of the open hive, a woman, with the most winning smile I ever saw, was looking at me, focusing her beautiful blue eyes on me. I was struck dumb by such beauty, standing in a patch of sun shining on the face, and just knowing that I had to do or say anything, darted down the open stairway of the cellar, and was out of sight in a twinking.

I closed my two open hives and followed him, directing my son, who just came home from school, to the house, to take care of Mr. Bond's team. I found the run out inside of the door of the cellar, puffing and blowing, and rubbing the end of his nose. Noticing his action, I knew where to look for the instrument of torture. Drawing him toward the open door, I said, "Good boy, I got a little stinging out by placing my thumb-nail under the poison-sac, instead of grabbing hold of it with thumb and finger, as bee-sting doctors usually do, and thus squeezing into the wound all the formic acid contained in the little sac attached to the sting."

"Never rub a bee-sting," I said to Mr. Bond, "until after you, or some one else, has performed the operation I have just shown you. Never. It's a lucky thing the little fairy didn't hit you in the eye. We can apply almost any kind of a remedy to the nose, but not to the eye."

"Ain't it queer, tho', how quick those pesky bees left me when I got in here," remarked Mr. Bond, as he gently rubbed the end of his nose. "What do you do for bee-stings?" he asked, as we ascended the cellar-stairs.

"I usually pay no attention to them," I replied, "because generally I am too busy to run away from my work and doctor bee-stings. I seldom get stings in the face, however, because I wear a bee-velv when I do work among the bees that is liable to put them on the defensive. They always flight in defense of their home and property, Mr. Bond, and seldom for any other reason. And there is no telling when bees will not sting when they are being disturbed, and they suspect that the disturber intends some sort of mischief to them. The practical reason, however, why I wear a bee-velv is, because they always aim for the eyes when they have a chance and the disposition to sting. And, as I always need my eyes, even more than my
hands, and nose, Mr. Bond, when I am busy with a hive of bees, I wear a veil to protect them. When a man tells me—even if he is an old bee-keeper—that he never wears a veil in his apiary work, and that he never gets stung, I am disposed to believe him. I have been talking thru his last year's hat.

"Now come with me to the entrance of the room in the honey-house that I called my workshop. "I always keep a bottle of alcohol for emergencies. A small sponge saturated with some of it and applied to your nose for about ten minutes will relieve the pain and reduce the swelling. I think this will do for the fainting fits in the stinger.

"Now, please tell me," said Mr. Bond, after several minutes silence, "why I got stung the minute I stepped in front of that hive you were working at, and you, with your hands and your nose right down among the bees, wasn't too bad?"

"That's easily explained, Mr. Bond," I replied. "I account for it this way: My bees know me. They are accustomed to my presence and to my manipulations. You, on the other hand, are a stranger. They know you as such by sight and smell. Then, to make bad worse, you plant your perspiring person directly in front of their only door, and so near that they can't help but regard you as an intruder. I know the way to them. I know that there's a number of bees on guard at the entrance of their hive, and these guards are very vigilant. No doubt they saw you at once, and one of them took aim at your face and struck your nose. A hot sting like that is never an accidental one. Some bees are never satisfied. It's a good body to tell me those bees that followed me to the cellar left me as soon as I got inside the door?"

"They left you because bees never go into a dark room if they can help it, except, perhaps, to steal honey—and because they were satisfied as soon as you were out of sight when you got there. And here let me mention the fact for your benefit, that a person who is being stung and followed by a lot of angry bees can do nothing that so promptly and completely do them as to run into a room. A room, of course, is best, but any room will do better than to run about outside vainly fighting them. They give up as soon as they find themselves prisoners—always and ever."

"That's a very interesting fact to know," remarked Mr. Bond; "but I don't quite understand what you mean by saying, 'my bees know me.' You don't mean by that that bees know sense, do you?"

"Yes, Mr. Bond, I certainly believe that bees have sense. But my belief is surely not orthodox, for, everybody—even the vast majority of bee-keepers—give bees credit for a high degree of instinct, and nothing more. But can you tell me what instinct really is? Can you define it? And what is the distinction between instinct and intuition? By intuition we know things as by instinct. That is, intuition is knowledge which is not acquired thru the reasoning process. No one can prove that bees can not and do not reason. I can mention several things that bees do that they couldn't and wouldn't do by instinct alone. Here, for instance, is a sample of their work"—taking a pound section of honey near me and giving it up before him as I spoke. "Examine it and see if it isn't perfect in every detail. See how white and even the comb is, and how beautifully it is fastened to the wood of the section all around. When they put that honey into those combs, they put honey, but not nectar, or syrup, but very little thicker than water. They converted it into honey, thick as the best sugar syrup, by evaporating it. And how, do you suppose, do they know that vaporization is necessary? And how do they know how much they should evaporate? I suppose, and they seem to know, too, that fanning the open cells of sweet water will thicken it to its proper consistency.

"Bees seem to have sense enough, too, to understand that this fanning work is best done during the night, when all the nectar gathered for the day is stored in the combs, when the hive needs extra ventilation on account of the heat caused by the bees being at home, and because it saves precious time. It's the bees that do the work of gathering the nectar that must also do the evaporating work. Drones will not do it, because it's work, I presume; and the baby bees in the hive can't do it before they have learned to fly.

"Now, Mr. Bond," I continued, "look at the surface of this comb. You see it is perfectly smooth and regular, and almost snow white. I have 1,600 like this stored in my honey-room just beyond the partition, all filled and sealed like this, since the first of this month, by 16 colonies. You see, they not only know how to work, but how to do the best kind of work. They make no mistakes, and they never seem to forget anything. One of the most curious things about this comb work is, that there is an air-space between the honey and the wax with which the surface of the comb is covered, or sealed. How they manage to produce this air-space, and how they know if it is necessary, are bee-secrets which have never been whispered into inquisitive ears. But bee-keepers do know that, but for this air-space, that beautiful white surface of the comb would be an imperfection, because without it the honey would come in contact with the wax, soon softening it, causing it to break up, and let the honey ooze out. You can see how important this little item becomes when you realize the fact that with this air-space omitted by the bees, shipping comb honey to the markets would be out of the question. We would be limited to extracted or liquid honey."

Before I could proceed to explain further, Mr. Bond suddenly jumped to his feet and looked anxiously out of the window that afforded a view of the apiary and the street beyond, saying that the movement meant, and could afford to smile as I said:

"You are anxious about your horses, Mr. Bond. Well, you needn't be. My boy put them into the stable and fed them soon after the fracas. If you go with me to the house, we will now have some dinner, and I will show you my wife and children. Then, if you care for another dose of bee-talk, I shall be glad to have you spend the afternoon in the shop with me. I have a lot of sections to put together and prepare with comb foundation, and I can talk while I work."

(To be continued.)

REV. J. D. GEHRING.

The subject of this sketch was born Dec. 15, 1837, at Buchberg, situated at the foot of an isolated haystack-shaped mountain bearing the same name. It is presumed that the mountain existed before the town, hence it is also presumable that the town was named for the mountain.

From the top of this mountain the snow-clad Alps could be seen. The famed "Rhinefall" at Schaffhausen, Switzerland, is within hearing distance of Buchberg.

His father, at the age of 60, emigrated to the United States in 1848, with wife and eleven children, and bought a small farm in Fulton County, Ohio. Mr. Gehring enlisted as a private in Co. C, 27th Wis. Vol. Infantry, served three years, and was mustered out as 1st Lieutenant, and as a cripple for life. Disability was caused, mainly, by a sharp-shooter's "minnie ball," which past thru the back of his neck, fractured vertebrae, and resulting in partial paralysis of the left side. Other serious results develop as time made history and old age.

He began keeping bees in Parkville, Mo., in 1884, started with two colonies, both presents from friends who did not know what to do with them, and were anxious to get them out of the way for fear of getting stung. Transferring these two colonies to "movable-frame hives," and handling over 300 pounds of white clover honey, in pound sections, the first season in the new home, and then every improvable mind to believe that he had now cease to be a keeper of bees, and had become a bee-keeper instead. Mr. Gehring keeps his front door latch-string always hanging outside for visiting "friends."

Thus a somewhat remarkable combination of circumstances he and Miss Anna J. Doty were brought together in 1866, and have continued the happy union as husband and wife into this the 20th century. Five children—four
daughters and a son—are in evidence to propagate the parental union of German and Scotch-Irish blood.

It may not be amiss to say for Mrs. G. that she loves bees—in the abstract sense—but bees never learned to love her—not, however, because she is not a lovely woman, but, rather, because her husband's bees never seemed disposed to let her get intimately acquainted with their way of doing things when they were out of humor. It was not owing to any fault in her character; nor could the fault have been owing to her Scottish descent, that Mrs. Gehring's earnest effort to become her husband's "helpmate" in bee-keeping was a failure from the start. It remained a puzzle in Mr. G.'s mind to this day why bees—well-trained and usually well-behaved like his were—should behave so badly toward a sweet, mild-dispositioned and loving little woman as ever blest the life of a bee-keeper. But these bees did treat her badly—on a certain special occasion—and the resulting coolness between her and the whole apiarian tribe will end only with life.

Referring to the Falls of the Rhine, in Switzerland, Mr. Gehring writes us as follows:

The Rhine is one of the most interesting rivers in the world. Its source is among the Alpine glaciers of Switzerland, and its waters enter the sea thru the lowlands of Holland. On its banks is every variety of scenery, towering mountains, wild and picturesque rocks, dense forests and fertile plains. It flows between flourishing villages and populous cities, castles and ruins with which a thousand legends are connected. Along its course for many centuries great historical events have been taking place: the victories and defeats of the Romans, the heroic deeds of the age of chivalry, the coronation of kings, the meetings of ecclesiastical councils, and the wars of modern times. We can not wonder that such a river is regarded with little less than reverence, and that great numbers of tourists come from all parts of the world to look upon it.

The upper Rhine is especially remarkable for beautiful scenery. The Falls of the Rhine near Schaffhausen form one of the finest cascades in Europe. The breadth of the river above the falls is 126 yds., and the height of the unbroken fall is about 60 ft. The rapids above and below are taken into consideration, the total fall is nearly 100 ft. Not far above the falls is a bridge known as the "Rhinelfall Bruecke." (Bridge of the Rhinefall). High above the river on a wooden rock stands the Schloss Lauten (castle of the rapids). From a garden of this picturesquely situated edifice the best view of the falls may be obtained. One gallery projecting over the roaring, seething cataract.

In the year 1845, when eight years of age, my Aunt Ann, a sister of my mother took me on a visit to my grandparents, who resided about nine miles northeast from the falls, and about 18 miles from my home on the banks of the Rhine below the falls. On the way we past thru Schaffhausen, and stood together, hand-in-hand (I being afraid to stand alone) upon the bank of the river viewing the awakening scene. The spot where we stood was a little way below the cataract, not far from the old mill seen upon the left bank in the picture. The railroad bridge above the falls was not there then. There was no railroad in all Switzerland before 1850.

--John D. Gehring.

The Chicago Convention Picture is a fine one. It is nearly 8x10 inches in size, mounted on heavy cardboard 10x12 inches. It is, we believe, the largest group of bee-keepers ever taken in one picture. It is sent, postpaid, for 75 cents; or we can send the American Bee Journal one year and the picture—both for $1.60. It would be a nice picture to frame. We have not counted them, but think here are nearly 200 bee-keepers shown.

Questions and Answers.

CONDUCTED BY
DR. C. C. MILLER, MARENGO, ILL.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.)

Drones and Swarming.

1. If I destroy all the drones from a colony that wants to swarm, will this prevent swarming?

2. When a swarm leaves a hive, and I have the Allee queen and drone trap on, are you sure the swarm will return to the hive?

ANSWERS—1. No; but it is thought there is less likelihood of swarming if drones and drone-brood are kept down. But it can by no means be counted on as a sure prevention of swarming.

2. You have only one colony, you may count to a dead certainty that in the case you mention the swarm will return to the hive. If you have any more cases, you may ask that the swarm will not go off, and under ordinary circumstances it will go back to the hive from which it issued. But if it should happen that a little while before another swarm had issued and returned to its hive, the bees still making a loud call at the entrance of the hive, your returning swarm might return to this latter hive instead of returning to its own.

Tail vs. Square Sections, Etc.

1. I began bee-keeping last year and now have 36 colonies. My troubles are caused by the great variety of bee-supplies. I have 60 supers meant for 4½ x 4½ bee-way sections. Now I want tall sections with no bee-way. I think of buying 60 supers designated "L." These take 4 x 5 sections. Now, can I alter the old supers so they will carry 4 x 5 sections? I'm afraid robber-bees will get in.

2. Will filling all cracks with white lead injure bees in any way?

3. I think of using full sheets of light brood foundation in all frames when hiving swarms, these sheets to be wired. Is this a good plan?

4. Do you prefer tall sections with no bee-way to the old-style square ones with bee-way?

5. Are the combs less liable to be built together and do the bees enter them as readily tho they sit across the frames?

COLOMBIA.

ANSWERS—1. There are so many different surplus arrangements that take 4½ sections that it is impossible to tell how much change would be required; but by the exercise of a little ingenuity almost any of them could be changed to take 4 x 5 sections.

2. It will do no harm.

3. An excellent plan.

4. It is largely a question of one's market. Some prefer one and some the other.

5. You will probably find no difference.

Bees Diseased and Dying—Closed-End Frames.

1. I took 12 strong colonies of bees on shares last spring. One or two swarmed and almost all stored a little surplus. When I prepared them for winter—that is, took off the supers—they had plenty of honey and appeared to be strong, and along about January 1st, I examined and found all dead but three. On examining the combs of the dead ones I found fully 1½ of the cells with cap brood, with a small puncture in the cap, and an offensive smell, not like a glue-pot. I took five back to the owner last summer that were both weak to defend themselves, and I didn't want any robbing. The owner (a bee man of 20 years' experience, so he says) claimed it was caused by moths. The bees I have here haven't any moths in the hives; besides, I haven't any trouble with the moth, anyway.

2. If it is foul or pickled brood, why do they die in winter without any brood, and be stronger in bees than some of my weak ones?

3. What course should I take to prevent it from spread-
ing to my own bees? I fear they got some of their honey. The diseased colonies have been destroyed by fire and water, and every caution preserved all summer, or while I have been suspicious.

4. There is nothing like a bee-keeper who made hives of his own invention, and bought several for almost nothing. Knowing nothing about the hive, I would like to be enlightened. I enclose a pen outline of it. There being no space at the ends of the hive, will the bees work well on Langstroth frames? It is what I would call a closed-end frame.

INDIANA.

ANSWERS.—1. I don’t know what the trouble is, but it can not be charged to the moth.
2. Whatever disease of the brood, or whether any, there seems to have been some wintering trouble that would produce such loss.
3. Keep everything as snug and clean as you can, taking special precaution to prevent all robbing of infected or suspected colonies by allowing no cracks or too large entrances to invite robber-bees. Be sure that none of the suspected colonies are weak. If they are, unite them. There will be no real loss in this, even if nothing is wrong with them. Carefully study all you can find that will inform as to the brood diseases of bees, including what has been said in back numbers of this journal and Dr. Howard’s brochure on foul brood. A thorough knowledge of the whole subject will enable you to judge more intelligently what is to be done than can any one at all.

Basswood for Brood-Frames—White Clover—Honey in Candies.

Wisconsin.

ANSWERS.—1. Basswood is not too short-lived for brood-frames, but entirely too lively. You probably know that it is unusually bad to swell and shrink, and it twists out of shape altogether too much for anything that needs to be as exact and permanent as a brood-frame.
2. There is the common white, and the white Dutch. The former is a large kind, and sown on rich soil it grows quite large. But so will the common, and I feel sure the two are one and the same thing.
3. Probably not. It would be very much better for the public if some of the glucose in candies were replaced by honey.

Bees Dying—What is the Cause?

Of 76 colonies that were in fine condition about Dec. 1st, there remain alive at present 30 colonies, and I expect some or all to die soon if nothing can be done for them. They all had plenty of honey so that was not the cause, or at least the quantity. The bees could not fly one day for nine weeks. Of those that are dead, part of the bees are on the frames in a mass, and part in some lower corner; and all, alive or dead, have the inner part of those hives, including frames and bees, perfectly wet and soiled; also it smells very strong. All are on the summer stands. Some were in single-wall hives, some in chaff hives, some had chaff cushions over the frames, and some had none, but all are affected alike. There was hardly any honey for the bees to gather last fall, and they work freely on half-rotten and bruised apples in orchards; but some received their entire supply of winter food by feeding granulated sugar as late as Sept. 20th.

May it have been caused by doses of poison not sufficiently strong to kill them while gathering it? It is very probable that they received some. What shall I do for them?

West VIRGINIA.

ANSWER.—This is one of the times when it is painful to say I don’t know, and yet I am obliged to say it. Working on rotten apples in orchards could hardly do so much mischief, unless there were cider-mills from which they obtained large supplies. It will hardly do to lay the trouble to the general stores, for some had their entire supply of granulated sugar. The guess that there was poison in the case seems a reasonable one, but if it were poison would it not have killed the bees sooner? The thought comes that the entrances may have been closed so tight that there was something like suffocation in the case, but a man with 78 colonies has in all probability had too much experience to make a mistake. I was no doubtaggerated by the confinement of 9 weeks.

It is nearly certain that in your latitude bees are now flying, and there will be some good done by cleaning up all the hives and getting out the dead bees. If the trouble continues after the bees have had a good try at least a few by taking away their stores and giving them sugar syrup. It is to be hoped that a good flight will do much good.

Sugar-Candy for Winter-Feeding of Bees.

In the "A B C of Bee-Culture" (1891 edition, I think), there are directions for making hard candy for feeding bees, by boiling sugar with a little water. I believe Mr. E. T. Abbott has also frequently recommended such candy. I wish you would tell me thru the American Bee Journal if you have ever tried such candy, and with what results. I considered the above authority so good that I recommended it in a couple of instances before trying it myself. I also risk a few colonies to work on something that happened to discover in the nick of time that it doesn’t seem to do for this "locality." In short, one colony was dead—clustered right up against the candy and it was about half dead, that is, a large portion were just able to hang to the comb—then it all gave out to crawl around. The other colonies had a little honey yet and were all right. I hastened to give them combs containing some honey. The candy had been on only a week or two, and the colonies were in good condition when it was given. They are packed with leaves on the summer stands, and there has been no cold weather to speak of—a very mild winter here. They gnaw thru the candy and it falls on the bottom-boards as if granulated honey looks when the bees have such in their combs to use. I am sure the candy is not burned, in fact it looks just as Mr. Root says it should—"dry and hard as slabs of marble"—and about as valuable, according to my experience. What say you were wrong?

IOWA.

ANSWER—I have never had occasion to feed candy, but would have said with no little confidence that you would have no trouble whatever. I must confess that your experience staggles me, and I don’t know enough to account for it. I suppose that tons of candy have been fed, and I do not remember to have read a single report like yours. Of course it looks somewhat as if there had been so much stirring that it was stirred down to sugar, but that could hardly be the case if it stuck together as candy. If any of the good friends can throw any light on the case, it will be a great favor. Has any one else had a similar experience?

Convention Proceedings.


BY WM. G. VOORHEES.

The Michigan State Bee-Keepers’ Association held its annual meeting at Traverse City, Mich., Dec. 26 and 27, 1908. The meeting was called to order by the president, and Mr. J. Root officiated.

The president made a few remarks referring to present needs, and the purposes and educational work of the Association.

GETTING BEES TO WORK IN THE SUMMER.

A. S. Jackson—How can we get bees to work in the summer?

Mrs. George Jackson—Smoke them up into the sections when the brood-combs are filled with brood, and they will work there if you put on some unsealed sections.

W. Z. Hutchinson—Put on unsealed sections.
George Hilton—When using deep frames, and the bees do not enter the sections readily, take out the side frames that are filled with honey, and extract it; then return the empty frames to put them in the center of the brood-chamber. When the bees will not work in the supers it is sometimes because there is too much honey in the brood-chamber, and this choked condition is often caused by honey being carried over from the previous season. We have to put supers on early in northern Michigan.

Mr. Hutchinson—To get the bees to work in the supers, half or partly filled sections are sometimes used. Get the bees to clean out these unfinished sections the fall before, and in the spring they can be used. Sometimes the outside frames in the brood-chamber are filled with honey. These can be uncapped and placed in the center of the brood-chamber, when the bees will carry this honey up into the sections.

Mr. Beecham—You can not always get the bees to work in sections or starters.

Mrs. Hutchinson—I use drawn combs to get them started.

W. J. C. Davis—I have had no trouble with bees not working in the sections.

Mrs. Jackson—I have had no trouble with bees loaﬁng. I tier up the supers with partly ﬁlled sections.

POLLEN IN THE SECTIONS—CROSS BEES.

Mr. Beecham—I produce extracted honey altogether. I have had trouble with the Hedion hive, as I have to use a queen-excluder. When I produced comb honey and had to use a queen-excluder the bees put pollen in the sections, and the queen sometimes got thru the excluder and laid eggs in the sections.

Mr. Hutchinson—I have no trouble with pollen in the sections, and would suggest that Mr. Beecham put a comb in the brood-chamber from which the honey has been extracted, and this comb would work pollen. I think that being bothered with pollen in the sections in this way was a good deal of a matter of locality.

Mrs. Menold—When the frames are ﬁlled with honey I take out one of them and put a new one in its place.

Mrs. Menold—What shall I do with cross bees?

Mr. Beecham—Change your queens.

WINTERING BEES—PUTTING ON SUPERS.

Mrs. Menold—I do not winter my bees in the cellar. I put a dry-goods box over the hive and pack hay between the box and the hive.

Mr. Beecham—I have had trouble with bees storing honey on frosty nights. I would like to ask Mrs. Jackson if she winters her bees in the cellar.

Mrs. Jackson—Yes, I do not put them out until the willows bloom, and I put on sections in apple-bloom.

Mr. Beecham—I think that bees should be protected on cold nights in the spring. For the past two years I have wintered mine in this way, and think that when they are so protected they will succeed in the spring.

Mr. Coveyou—I think that the supers should be double-walled and tight. I should also want double-walled hives.

Mr. Root—I think that bees in chaff hives will not be affected by cold nights. If the bees are to work in the sections at night the supers must be warm enough for them to do so.

Mr. Berg—I lose more bees in the cellar than in chaff hives, so I prefer to winter them in chaff hives.

Mr. Hilton—I have cushions on all of my hives. I think the cushions must be retained on the supers in order to have the bees draw out the comb. The supers must be tight or the bees do not work in them, and it will not do to put on supers when the brood-chamber is only half full of brood. The brood-chamber must be ﬁlled with brood and no honey, and the hives must be warm.

Mr. Beecham—I was led to use the Hedion hive so as to avoid the handling of so many frames. I would like to ask if Mr. Hilton has any trouble in getting out the ﬁrst frame.

Mr. Hilton—None at all. I have self-spacing frames with thick top-bars.

Mr. Sillsby—I have no trouble in getting out the ﬁrst frame. I use a block with a slope to it, and laths and top-bars. Neither am I annoyed with brace-combs.

Mr. Hilton—I leave a 3⁄4-inch space between the top-bars to prevent brace-combs.

Mr. Beecham—There must be a good judge to know when is the right time to put on supers.

Mr. Townsend—I use full sheets of foundation.

Mr. Root—One must have the hives tight so that the cold air cannot enter them.

Mr. Beecham—I have had trouble with bees that would not store honey in sections, but would store it in the extracting combs.

Mr. Townsend—They will store honey in the extracting combs, rather than in the sections.

Mr. Hilton—I have had experience with both starters and full sheets of foundation, and the sections have been ﬁnished sooner when the full sheets were used.

PLAIN SECTIONS AND FENCES.

Mr. Coveyou—I like the fence separators best, as the queen does not like them.

Mr. Root—Three-fourths of the orders now are for plain sections with fence separators.

Mrs. Menold—I use a section plain all around.

Mr. Hilton—A plain section is one without the inset. I never have a first-class section of honey until I used plain sections. The sections must be taken off as soon as they are caped over or they will be travel-stained. The tiering-up must not be continued too long. The plain section without the inset has come to stay. The honey that sells to fancy trade is that secured by using plain sections and fence separators.

Mr. Berg—I used plain sections for the ﬁrst time the past season, and like them the best.

Mr. Fox—I have sold my honey in plain sections in this city.

USING OLD SECTIONS—ALSIKE CLOVER.

Mr. Root—Does it pay to use sections that have been used the year before?

Mr. Hutchinson—I think that if the old sections have been taken care of and kept clean they are all right to use again.

Mr. Hilton—I have put on sections that have been used before, but every year I use less of them. No sections ever come off as nicely as the ﬁrst I put on—the ﬁrst honey here is the best. I get better results when I use new sections, as the bees seem to work better in them.

Mr. Beecham—I have always used drawn comb in the sections. I take off sections before the buckwheat ﬂow, as I do not want it to get mixt with the white honey.

Mr. Berg—I have used cleaned sections with drawn comb, and have found that the bees would get these combs uneven. I get the best honey from new sections, when I use full sheets of foundation.

Mr. Sillsby—I sold all of my white honey for 15 and 16 cents per pound. There are 100 acres of aliske clover near me, and the bees work better on it than on red clover.

Mr. Storer—I had a ﬁne lot of honey from aliske clover; bees like it the best.

EARLY FEEDING—WORKING IN SUPERS.

Mr. Sillsby—I would like to ask about early feeding to build up the colony.

Mr. Hilton—Begin to feed as soon as the bees begin to ﬂy.

Mr. Hutchinson—I do not think that liquid feeding in the spring pays. A weak colony must not be stimulated in the spring; if this is done and a cold spell comes on then it’s “good-by” to the colony.

Mr. Berg—I have had trouble with bees not working in the supers. I reduced the swarming fever by extracting—putting on a shallow super, then extracting the honey they stored in it, and afterward putting on sections. I put a new super underneath the one partly ﬁlled, being careful not to allow the upper one to become ﬁlled.

Mr. Hilton—I put an empty super underneath the one partly ﬁlled, and tier up just as soon as the super is 3⁄4 full. Bees will not work by an empty super.

Mr. Coveyou—I think it pays to put supers on early, so as to get the early ﬂow.

SWARMING.

Mr. Berg—When bees have nothing to do they want to swarm. I would rear colonies from queens that do not swarm, as my experience has been that I get more honey from bees that do not swarm.

Mr. Beecham—If you run for extracted honey your bees will not swarm, but they will if you run for comb honey.

Mr. Berg—I had one colony that did not swarm, and they stored from three to four suppers of honey every year.

Mr. Sillsby—I have had no trouble with the bees swarming, as I run for extracted honey.

Mr. Kitson—I have had three queens in one hive, each queen having a part of the hive.

Mr. Beecham—It is very difﬁcult to keep the bees from swarming when producing comb honey. People should not eat comb honey, as the wax is not good to eat; it is indigestible, and is not made to eat, but to hold honey. Extracted honey is the best to eat.

Mr. Hutchinson—Extracted honey is more easily pro-
duced, and the outlook is good for it at present. The market is growing better all the time, and no bee-keeper who has kept a large number of colonies has made money unless he has run his bees for extracted honey.

Mr. Beecham—I would like to ask if the Hilton hive would stay pack!

Mr. Hilton—They are ready for use all the time—winter spring or fall.

KEEPING ANTS OUT OF HIVES.

Mr. Beecham—I am bothered with ants.

Mr. Berg—I used tarred paper under the bottom of the hives to keep the ants out. I like the chalk hives the best, and ventilate them in warm weather, when the bees hang out.

Mr. Root—I use tar paper to keep the ants out of the hives.

Mr. Hilton—I use salt to keep the ants away. It will drive the ants away, but not the bees. I put the salt on the inside of the hives, on the bottom-board.

Mr. Root—Some people like to know of something that will keep the grass and weeds down.

Answer—Salt will do this very well.

BEES AND FRUIT.

Mr. Root—What about that case near South Haven, Mich., where a peach-grower sued a bee-keeper for damages?

Mr. Rankin—The bee-keeper was sued by a peach-grower for damages to the amount of $200. The records of the Department of Agriculture at Washington, D. C., showed that bees will not attack fruit with a whole skin. From the evidence shown at the trial the fruit-grower withdrew his suit. It seems that some of the early peaches were affected with a peculiar this causes attack the fruit before it was ripe, and the bees work on this fruit.

Mr. Root—The same trouble occurred in the State of New York with the early cling-stone peaches. A suit came to trial there but the verdict was “no cause for action.”

Mr. Beecham—I have noticed this in this part of the country. The fruit-growers want the bees near their fruit to fertilize the blossoms. Many of them spray their fruit-trees while in bloom, and some bee-keepers have lost half of their bees from this cause.

Mr. Hilton—A law past while I was in the Legislature prohibiting fruit-growers from spraying trees while in bloom.

Mr. Kitson—I wish that law might be published in the bee-papers.

(Concluded next week.)

The Home Circle.

Conducted by Prof. A. J. Cook, Claremont, Calif.

KINDNESS IN THE HOME.

I never could quite understand the biblical expression, “The wind doth destroy the vines.” The fox has no love for the vineyard. The poultry-hose attracts him far more. Neither vineyard nor grape is toothsome to Reynard, yet the truth taught in this small fox, and despised vine-field, is absolute. The true home is built on real heart-sympathy. Unless each feels for the other, what will keep back the cruel sarcasm, the unfeeling word, the taunting laugh? And are not these, one and all, the little foxes?

I have a dear home in—father, mother, two daughters. It is a home where the bitter word, or thought that prompts it, was never in evidence. Paul’s grand words were ever heeded in that splendid home—“Let each esteem the other better than himself.” I mind me of a beautiful winter evening. I was the fifth one in that home circle for the time.

We were all talking in merry mood, except Edith, who was trying to manage a great volume of pictures. Her small lap and the big book were a great misfit. The not impatient, she turned the pages with no slight effort and trouble. With any break in our converse, the thoughtful father past thru the large wide-open folding doors to the next room, quietly reached a suitable chair, and soon the myriad pictures were resting on this improvised book-stand, where it was easy to turn the great pages. It must have been a rich reward to that thoughtful father’s heart, as his act was greeted with a sweet smile and hearty “Thank you.” This was just one of a whole troop of kindly acts that so filled that home with sun-
Maule's (35 new things for 1901) Seed Catalogue

You should, by all means, have this modern catalogue of modern times. It is replete with and overflowing with good things in vegetable, flower and forage seeds, bulbous plants, fruits, bulbs, etc. It contains 35 novelty crops, many of which have never been offered before, has 159 pages of illustrations and hundreds of diagrams. It gives practical, up-to-date cultural directions and offers many new prices. The first edition alone costs over $0,000, so while we send it free to all customers, we must ask others to send 10 cents for it, which may deduct from your first order. You will make a mistake if you do not order for this rare and valuable Novely Seed Book of the year. Address, W. S. HENRY MAULE, Philadelphia.

Bee-Supplies

GREAT home-grown and common stock

Having a job Lot of a neighbor and added to what I had, I must dispose of some to make room for my increased stock. They are mostly in May, June, July, August and September. Please mention Bee Journal when writing.

Belgian Hares

CHEAP! PEDIGREE, AND COMMON STOCK

Having a good Lot of a neighbor and added to what I had, I must dispose of some to make room for my increased stock. They are mostly in May, June, July, August and September. Please mention Bee Journal when writing.

Italian Queens

of last season's rearing, ready as soon as the weather is warm enough to send thru the mail. Write for prices. Address, J. L. STROEGER, Clarinda, Page Co., Iowa.

Please mention Bee Journal when writing.

Lonestar QUEENS

Breeder of FINE ITALIAN QUEENS

G. F. Davidson & Sons, Established 1855. FAIRVIEW, Wilson Co., TEXAS. DAIRY. Please mention the Bee Journal.

Winter Report—Long-Tongued Bees.

The season of 1900 was not a very good one for honey in this locality. I had a paying crop for three years, but look for better things the coming season. The indications for a good crop of white clover were good up to March 30, but it turned cold on the 4th, after having been warm for a few days, and melted all the snow, which leaves the clover in bad condition. Bees wintered outdoors have had a number of good flights during the winter, but the chances are the bees are not doing very well, being more uneasy than usual; more than a third of the 20 colonies in the Illegal are spotting their hive, and I think there are many more dead bees on the floor than in former winters. I have been keeping the records of the bee stock since Jan. 10, and also of the number of hives spotted, and will report on it later.

I have several of the long-tongued bees, 18 and 19 mm., the latter of the five-banded stock. I shall watch the tongue matter next summer, as I am preparing to measure the tongues. Theo S. BURLE, Tama Co., Iowa, March 3.

Bees Wintering Well.

Bees are wintering well, being build up nicely for next year, and, prospectively, had a honey crop; but sometimes we have dry weather that cooks us out. T. B. BOWDINS, Milan Co., Texas, Feb. 4.

Hard Winter on Bees in New York State.

So far the 20th Century has been the worst ever known for bees in this locality. There has been no winter where it was not a flight, and during the whole month of February it didn't thaw even in the shade, with the thermometer from zero to 30 degrees below the average of the month. The snow is from 4 to 10 feet deep in our roads, and the ice is from 18 to 22 inches thick on the ponds and lakes. Bees that survive will be of a hardy race—those wintering on the summer stands, at least. O nôngada Co., N. Y. March 6.

Report for the Past Three Seasons.

I am a man with a hard case of chronic bee-fever. Two years ago a friend gave me, late in July, a colony of bees in a box hive. They cast a swarm the next day, which I hired successfully in a Langstroth hive. Late as it was, it had not been accounted for; the weather being very cold and the next summer I divided them. The colony in the box-hive swarmed when I was doing another thing and came back to the box and never more. I got 125 pounds of comb honey that year.

The next spring I purchased 20 colonies at $3.00 each; that was poor fruit for honey in this locality, and I got 420 pounds of honey that year. I added 20 more and increased to 22 colonies. One of these was queenless in the spring, so I began the last season with 21 colonies which gave 1,250 pounds, which was a good yield, but there was no fall flow to speak of. I secured 73 pounds per colony.

Dittmer's Foundation!

Retail—Wholesale—Jobbing.

I use a process that produces every essential need of the beekeeper, and is most desirable in all respects. My process and all others need improvement on their own inventions, which enable me to sell foundation and work wax into foundation for cash at prices that are the lowest. Catalog giving full line of supplies, with prices and samples, free on application. Beeswax wanted.

GUS. DITTMER, Augusta, Wis.

Please mention Bee Journal when writing.

GREIDER’S POULTRY

always do well, in standard varieties. Handsomest poultry book of the season for 40 cents. Full of honey-making hints. No birds are winners.

B. H. GREIDER, Florin, Pa.

Please mention Bee Journal when writing.

ALBINO QUEENS

If you want the most prolific queens—if you want the greatest beekeepers on the market, and the best honey gathers, you can have them—try my Albinos. Unexcelled in the market. C. G. DITTMER, 1132 14th St., Washington, D.C. J. D. GIVENS, Llson, Tex.

Please mention Bee Journal when writing.

Bee-Supplies

CATTLE FREE.

1. J. STRINGHAM,
109 Park Place, NEW YORK, N. Y.
13204 Please mention the Bee Journal.

"Electric" applied to other Wheels or Uggs.

A sensational success. The public approves. The ethical application is a fact. In 6 years we sold 25,000 Electrically speaking, Electric wheels in 48 states. Electric Heavy Hauls. We make wheels with Electrically speaking, Electric Wheel Co. 161 Quill, Illinois. Please mention Bee Journal when writing.

For Sale Incubator, Brooders, etc.

One 400-egg, Prairie State Incubator; one 20-Section Hot-Water Brooder; one 10-Section Hot-Water Brooder; one 2-hand Power Dandy Box-Crater. All new. Will sell them for cash for less one-half of their value, or exchange for small steam-power. For reference and description, please mention Bee Journal.


Please mention Bee Journal when writing.

A 20th Century Catalog—It is not the fault of the seedsmen if the tables of the farmers at this season of the year are not adorned with colored illustrations of the products of the vegetable and flower gardens. While the seed catalogs and most attractive is "Maule's Seed Catalog, 1901," Its 136 pages are bristling with information about seeds that grow, which Maule sells. From it we learn that the concern is one of the largest and most progressive in the world, paying out during the last 5 years, for postage, $15,000. There are several valuable novelties in the catalog, the two leading ones being the "Success" tomato, which has been pronounced by the best tomato introduced to the American farmer and gardener, and the "Hard Core," a large, hard seed, to be the greatest milling corn in the world. Other new varieties are: Maule's Whinstone, the Model mangel, the Nameless cabbage, a new, unamed French Carrot, Imperial, Giant sugar-cane, Maule's trimmed lettuce, Excelsior Tree egg-plants, the Prodigal pea, and others. In the last catalog I have been unable to remember to have seen any one catalog. It would be an educator in any family, and be had free by our subscribers for the asking; others must send 10 cents for it. Published by H. Haas, Philadelphia, Pa., and mentioned American Bee Journal when writing.
We want *

To sell you BEE-SUPPLIES!

Our line is all new and complete. Send for our Illustrated Catalog; it will convince you that our Dovetail Hive is the best on the market. Our prices are right, and our service is prompt.

Fred W. Muth & Co.

WANTED APR. 18T. Address

L. H. GREENE

13AII. BOX 48, BERTHOUD, COLO.

BEE WANTED!

50 to 75 COLONIES.

If you have or know of any to write to H. R. QUIRIN,

PARKERTOWN, ORENTO.

WANTED

50 Strong Colonies of ITALIAN BEES in 24 frames. Will send our Brochure on request, with prices of beehives, Hoffman wired supers, &c.

CHAS. D. MANDEL, SAVANNA, ILL.

Please mention Bee Journal when writing.

Queen-Clipping Device Free....

The MONSEET Queen-Clipping Device is a fine thing for use in catching Queen Bees and Clipping off Wings. We mail it for 25 cents; or will send it FREE, as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for 10 cents we will mail the Bee Journal one year and the Clipping Device. Address.

GEORGE W. YORK & COMPANY, Chicago, Ill.


Please mention Bee Journal when writing.

Our Specialty is making SECTIONS, and they are the best in the market. Wisconsin BASSWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free illustrated catalog and price-list.


Please mention Bee Journal when writing.

BEE-KEEPERS' SUPPLIES:

THE FINEST IN THE WORLD.

Our New 1901 Fifty-Two Page Catalog Ready.

Send for a copy. It is free.

G. B. LEWIS COMPANY

WATERTOWN, WISCONSIN, U. S. A.

You Can't Afford to Guess

You may lose in the poultry business. If you fail to raise the chics, you simply have no business. The way to be absolutely sure about getting the chicks to copy a Cyphers illustrated Pamphlet, "Making Hives and Hiving Bees," Free for the asking. The best way to know about it is to read our 20-page (dull in,) book, "Profitable Poultry Culture," which illustrates and covers the entire conduction of raising poultry from hatching to market. Ask for book to Circulates mailed free. Address nearest office.


Please mention Bee Journal when writing.

Bee Wintering Nicely.

My bees have wintered nicely, and the prospect are better for a good crop of honey this season.

Wm. M. McNeal

Seloto Co., Ohio, March 19.

Prospects Bright—Controlling Swarming.

The rain is pouring down and the country in this vicinity never looked better. All the farmers are rejoicing over the prospects of a splendid season, and all is fine for the beekeeper as well as the farmer.

The last of next month I expect to requeen all of my colonies, and try to control swarming, if possible. Last year we had but 11 swarms, and I notice that one of my colonies has swarmed again this year. I have been moving all my colonies, so that no swarms issued from the prime swarm. A little while before swarming-time I requeen all colonies, giving them a young laying queen, so I am not very often troubled with swarms; but sometimes they will swarm in spite of all that I can do to prevent it.

San Joaquin Co., Calif., Feb. 23.

M. H. Voight

1900 a Poor Season.

Last season was a very poor one for bees here. There was not much for them to gather after July 1st, so a great many of them went into winter quarters with very little to live on thru the winter, and now I hear that over 60 percent are dead. Mine have not quite so far, I fed them last fall, and expect to feed again in the spring.


Bee Wintering Nicely—Good Report.

My 19 colonies of bees seem to be very quiet, and I think they are wintering nicely in the cellar. The bottom-boards are nailed tight to the bottoms of the hives, the entrances are open clear across, and the covers are shoved forward about two inches, with a cloth over

Marshall Manufacturing Company.

Our Specialty is making SECTIONS, and they are the best in the market. Wisconsin BASSWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free illustrated catalog and price-list.


Please mention Bee Journal when writing.

PAN AMERICAN EXPOSITION.

Nothing since the World's Fair, at Chicago, in 1893, has elicited the widespread interest that is manifest, all over the world, in the World's Fiscal Exposition, which is to be held in Buffalo, from May 1 to Nov. 1, 1901.

The purpose of the Exposition is to illustrate the progress of the nations of the Western Hemisphere during a century of wonderful achievements, and to bring together into closer relation the people composing the many States, Territories and Countries of the three Americas. Acting under proper authority, the President of the United States has invited all the Republics and Colonies of the American Hemisphere to join in commemorating the close of the Nineteenth and beginning of the Twentieth Century, by holding this International Exposition on the Niagara Frontier.

For this important event, the Nickel Plate Road has issued an attractive, descriptive folder—pamphlet, elaborately illustrated, the Pan-American Exposition, the buildings and grounds.

The Nickel Plate Road is the short line between Chicago and Buffalo, and affords competent train service from Chicago to Buffalo, New York, Boston, and all points East, with trains of modern equipment, on which no extra fares are charged; also dining-cars service the highest order. It affords meals in its dining-cars on the individual club plan, ranging in price from 35 cents to $1.00.

Call on any agent for Pan-American folder, or address John Y. Calahan, General Agent, 111 Adams St., Chicago.

Parties desiring hotel or rooming accommodations in Buffalo or Niagara Falls, during any part of the Pan-American Exposition, are invited to apply by letter or otherwise to F. J. Moore, General Agent, 291 Main St., Buffalo.

Please mention Bee Journal when writing.
The New RUMELY Thresher
will save enough extra grain in threshing to pay the taxes of the ordinary farm.

The extra cost of a round ball of clover...the old-fashioned "(1) Pencil, (2) Ruler, (3) Compass, (4) Pencil, (5) Ruler..."

Bumble-Bees in Winter—Prospects Good.
For a number of years it has been, and still is, a mystery how bumble-bees get safely thru the winter. If one will tell me how they get there I will tell where to find them. During the winter months a Bumble Bee Round Ball can be found underground, on the inside of which is a white, downy bumble-bee, apparently about ready to emerge. About the third of old gooseberry blooms the occupant comes forth and partakes of Nature's best. This round ball, so far as I can tell, is precisely the same as those formed by the tumble-bug.

Bee-Keeping Experiences.
About six years ago I bought two colonies of blacks, paying $5 each for them in July, and from one of these I obtained a super of nice honey that season. After wintering them in the cellar, from whence they came in August, I put them away in a drawer, and I also put one of the two colonies into winter quarters.

A HANDY TOOL-HOLDER!

Every Manufacturer, Miller, Carpenter, Cabinet Maker, Machinist, Wheelwright and Quarryman, who makes any one using a grindstone...should have one of these Tool-Holders. Every boy can do the work of two persons, and grind much faster, easier, and with perfect accuracy. Will hold any kind of tool, from the smallest chisel to a draw shave or ax. Extra attachment for sharpening scythe blades included in the above price. The work is done without wetting the hands or soiling the clothes, as the water flows from the operator. It can be attached to any size stone for hand or steam power, is always ready for use, nothing to get out of order, and is absolutely worth 100 times its cost.

How to Use the Holder.

Directions.—The Tool is fastened securely in the Holder by a set-screw and can be turned to any desired level by inserting the arm of the Holder into a higher or lower notch of the standard. While turning the crank with the right hand, the left rests on an steadies the Holder; the Tool is moved to the right or left across the stone, or examined while grinding, as readily and in the same way as it is held in the hands.

For grinding Round-Edge Tools, the holes in the standard are used instead of the notches.

GEORGE W. YORK & CO., 114 & 116 Erie St., Chicago, Ill.
CONVENTION NOTICES.

Chicago.—The next regular meeting of the American Bee-Keepers’ Association will be held Thursday, December 23, 1897, in the Briggs Hotel, Chicago, from 1 p.m. until some present get tired and quit, which is usually 9:30 p.m. A feature of the meeting will be the sale of bees for present use to $50 in a company. All are urged to be present and aid in making the meeting a great fashionable time.
Herman F. Moore, Sec.

Rocky Mountain Bee-Plant Seed!
(From British Columbia).

The ABC of Bee-Culture says of it: “This is a genuine and true description of this genus, and nothing of the honey it produces. It grows from two to three feet high, and has large, bright pink flowers. It grows naturally on the Rocky Mountains, and in Colorado, and is said to furnish large quantities of honey.”

We have a few pounds of this Creme seed, and are willing to sell it at a very low price. We have been a pleasure to receive communications from any of our members, who have joined our bee societies, and we strongly recommend the members to use this seed. Address, Pres. E. S. Loving, Salt Lake City, Utah, or J. B. Fagg, Sec. East Mille Creek, Utah.

HONEY AND BEESWAX.

MARCH 28, 1901.

American Bee Journal.

Chicago, March 28.—The choice grades of honey and beeswax are now on the market and mostly equal to the demand; all other grades are also much in evidence. The increase in price of pure grades is as follows: Fair grades of white, 140/150 cts.; best grades of white, 150/160 cts.; best grades of amber, 160/180 cts.; buckwheat, 75/90 cts.; dark honey, 50/60 cts.; buckwheat, 55/65 cts.; and all the extra grades are governed by the same law in the range of prices, the lowest figures in either of these grades applied to the sweet, or off-flavored, and variegated. Beekeepers will do well to remember this.
R. A. Burnett & Co.

NEW YORK, March 19.—Our market is very brisk, and we are receiving orders from all parts of the country for a large supply of beeswax and honey. We are also in receipt of the latest reports from beekeepers in various parts of the country, and are prepared to furnish the best information on the subject of beekeeping. We are now in receipt of reports from beekeepers in various parts of the country, and are prepared to furnish the best information on the subject of beekeeping. We are now in receipt of reports from beekeepers in various parts of the country, and are prepared to furnish the best information on the subject of beekeeping.

LAUNCHING A MILLION IN GOLD

From Alaska during the year 1900.

For millions of this came from the Nome district. Government officials estimate the output from the Nome district will be doubled the coming season. The Bluestone, Kougarok and Pilgrim rivers have been found very rich, and here is hardly a creek from Port Clarence to Norton Sound in which the precious metal is not found, and hundreds of creeks will be worked this summer. A rich strike has been made on the Yellow river, a tributary of the Kuskokwim.

For full information regarding routes, steamship accommodations, and rates will all correspond address Souther, General Agent. Passenger Department. C. M. & St. P. R'y, 95 Adams Street, Chicago.

California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of Cali- fornia's Favorite Paper—

The Pacific Rural Press.
The leading Rural and Agricultural paper of the Pacific Coast. Handsomely illustrated, 20¢ per annum. Sample copy gratis.
PACIFIC RURAL PRESS,
330 Market Street, - SAN FRANCISCO, CAL.

Please mention Bee Journal when writing.

S. W. YORKE & CO.
118 Michigan St.
CHICAGO, ILL.

Good Instruments.

Don't confuse instruments with tools. They are not the same thing. We have in stock the best superior and most modern instruments. The following are especially made for beekeeping and are certain to meet with your approval.

VIOLIN—small model, choice of 3 colors, with full gold medallion, 10% off.

GUITAR—full gold strings, 10% off.

MANDOLIN—full gold strings, 10% off.

All instruments are made by skilled workmen, with the best materials and the best workmanship. The following instruments are all made of the finest quality and are guaranteed to give satisfaction.

GEORGE W. YORKE & CO.
118 Michigan St.
CHICAGO, ILL.

The Emerson Binder.

This Emerson still-board Binder with cloth back at $1.50 each, usually costing $1.60 each, is now advertised at $1.50 each, but 60 cents for the bee journal for one year—both for only 50c. It is the only binding that will keep the book fresh as fast as they are received. If you have this "Emerson" no further binding is necessary.

GEORGE W. YORKE & CO.
118 Michigan St.
CHICAGO, ILL.

Please mention Bee Journal when writing.

BEEKEEPERS' SUPPLIES!

We can furnish you with the A. J. Root Co.'s great stock of beekeeping supplies at much reduced prices. We can save you freight and ship properly packed and delivered.

FREE TO A MENT...

If you are interested in Sheep in any way you cannot pass up the following. Free to a MENT...

American Sheep Pablishis in the United States.

WOOL MARKETS AND SHEEP.

If you are interested write to the following address for information about the American Wool Market, the best source of information about the American Sheep Market.

FREE TO A MENT...

If you are interested in Sheep in any way you cannot pass up the following. Free to a MENT...

American Sheep Pablishis in the United States.

WOOL MARKETS AND SHEEP.

If you are interested write to the following address for information about the American Wool Market, the best source of information about the American Sheep Market.
The Danzenbaker Hive.

This hive is rapidly gaining favor, especially in the Eastern States, where tall sections and closed-end frames are used to a considerable extent; and within the last year or so the Danzenbaker system has been working its way into California, Oregon, and even into Cuba. At the Paris Exposition the hive was awarded a gold medal, and at some of the honey exhibits in this country the comb honey from it has carried off the first prize. Some of the finest honey we have ever seen was produced in Danzenbaker sections; and in the opinion of others who have given the hive and system an extended trial, there is nothing to equal it for the production of a fine article of comb honey. Indeed, in some markets comb honey in Danz. sections commands one and sometimes two cents more per pound than other fine honey.

Mr. Danzenbaker has long been an advocate of warm supers and warm hives; for he has always insisted that, for the production of comb honey, the super and hive must be warm in order to do the best work in wax building. To a very great extent the Danzenbaker hive is double-walled; and the sections in the super are especially protected by a special paraffine mat which goes with every hive.

The brood-chamber itself has the same dimensions as the regular 10-frame Dover-tailed Langstroth hive, except that it is shallower: that is, it takes 10 closed-end brood-frames 7½ inches deep and 17 inches long. Each brood-frame is supported by a pivot in the center of the end-bars, so that it may be readily reversed. These brood-frames retain all the advantages of frames peculiar to this class; viz., being reversible, they insure the building of combs to the bottom-bar; as there is no opportunities for air-currents around the ends of the frames, combs, as a rule, are built clear out to the end-bars. This one feature makes them warmer for winter. When a division-board is used on each side we have, practically, a dead-air space around the ends and sides of the brood-nest. The Danz. brood-nest has the same capacity as the 8-frame Dow hive—a capacity that has generally been recognized as the best for the production of comb honey.

But Mr. Danzenbaker has gone farther by making his brood-nest shallower and wider—increasing the amount of surface for the super, and bringing the brood itself—a feature which many consider important—closer to the surplus. The Danzenbaker brood-chamber can be used with any of our 10-frame supers, either comb or extracted; with any of the 10-frame covers, bottoms, or hive-stands, or with the 10-frame Jumbo hive. There are four patents on the Danz. hive and frames.

NOTICE.—The Danzenbaker hive is not made in the 8-frame widths.

THE A. I. ROOT CO., Medina, Ohio.

GEORGE W. YORK & CO., 144 & 146 Erie Street, are headquarters for Root's Bee-Keepers' Supplies in Chicago.

Send to them for their free Catalog.
Did you hear the robin piping,
   Calling for his mate?
He has just returned from Southland—
   But, perhaps, she's late.
He tells us the plum-trees will soon be in white
To witness his vows and the bird marriage-rite.

Did you see the prairie crocus
   Held in childish fist
Tight as lover holds his sweetheart
   At the evening tryst?
This brave little flower opens early to fling
Its largess of gold on the honey-bee's wing.

Maples blush with ruddy blossoms
   E'er the frost is gone;
And the showy golden willow
   Brightens on the lawn.
The barn-fowls are noisy, proclaiming each day
The debt which they owe and are trying to pay.

Interspersed with cheery sunshine
   Weeping clouds appear,
But, together, they encourage
   Life with hope and cheer.
"The winter is past," every sleeping bud cries,
And seeds burst their caskets, determined to rise.
Long-Tongued Bees
ARE DEMANDED NOW.

ONE Untested Italian Queen FREE as a Premium for sending us TWO new subscribers to the American Bee Journal for one year (with $2); or, one Tested Queen FREE as a Premium for sending us FOUR new subscribers (with $4.00.)

We have arranged with one of the oldest and best queen-breeders (having many years' experience) to rear queens for us this coming season. His bees average quite a good deal the longest tongues of any yet measured. The breeder will use is direct from Italy, having imported him herself. Her worker-bees are large, somewhat leather-colored, very gentle, and scarcely requiring vein or smoke. They stored red clover honey last season.

Orders for these fine, "long-reach" queens will be filled in rotation—first come, first served"—beginning about June 10th. It is expected that orders can be filled quite promptly, as a large number of nuclei will be run. All queens will be guaranteed to arrive in good condition, and all will be clip, unless otherwise ordered.

CASH PRICES of these fine queens will be as follows: Untested, $1.00 each; Tested, $2.00 each. Send all orders to

GEORGE W. YORK & CO.
144 & 146 Erie St., CHICAGO, ILL.

28 cents Cash
paid for Beeswax.

This is a good time to send in your Beeswax. We are paying 28 cents a pound—CASH—for best yellow, upon its receipt, or 30 cents in trade. Impure wax not taken at any price.

Address as follows, very plainly,

GEORGE W. YORK & CO., 144 & 146 Erie St., CHICAGO.

Best White Alfalfa or Basswood Extracted Honey
ALL IN 60-POUND TIN CANS.

ALFALFA HONEY........

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who eats that honey at all can't get enough of the Alfalfa extracted.

BASSWOOD HONEY........

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms in Wisconsin. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

A sample of either, by mail, 8 cents; samples of both, 15 cents to pay for package and postage. By freight—one 60-pound can, 9½ cents per pound; two cans, 9½ cents per pound; four or more cans, 8½ cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. The cans are box.

Order the Above Honey and then Sell It.

We would suggest that those beekeepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

Address,
GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.
Granulated Sugar and Glucose.—Mr. Thos. Wm. Cowan, editor of the British Bee Journal, but now residing in California, sent us the following communication early in January, but owing to our "deluge," and also moving to our new location, it was overlooked until a week or two ago:

Editor AMERICAN BEE JOURNAL:—On page 810 of the American Bee Journal for 1900, alluding to granulated sugar, Mr. E. E. Hasty endeavors to explain what he thinks I mean when I say "much of the granulated sugar of commerce is adulterated with glucose." Also as a rule I do not notice criticisms, recognizing the right of everyone to his opinions, and do not care to be drawn into any controversy respecting such criticisms, yet in this case, having a pleasant recollection of a personal visit to and talk with Mr. Hasty, I think it is due in courtesy to him to explain that I meant exactly what I said, because glucose is found in commerce, at home and abroad.

On page 750 (1900) it will be found that, in explaining how glucose was made, I said, "The solutions are evaporated to a syrup consistency and sent into the market under the names of granulated, corn syrup, or to dryness, the solid product being known in commerce as grape-sugar." It is this dry glucose or grape-sugar that is used to adulterate granulated sugar, "the very dry white sugar" which Mr. Hasty alludes to. It is difficult to detect the adulteration by simply looking at the sugar. Raw or brown sugar is similarly adulterated.

The presence of glucose when mixed with raw or refined sugars may be generally known by paying attention to the following points:

1. Sugars mixt with powdered or granulated corn glucose, on solution in water invariably leave white particles of glucose undissolved.

2. On submitting a commercial sugar containing glucose to the polariscopic test, it will be shown that the reading does not remain constant, but gradually becomes less until a point is reached when the diminution ceases altogether. If the solution is observed immediately after preparation as little as three to five per cent glucose may thus be detected.

There are other methods of analysis, but they are only suited to the chemist's laboratory, and would not interest your readers. I can assure Mr. Hasty that it is not at all uncommon to find both raw sugar and refined dry granulated sugar adulterated with glucose.

With respect to pollen in honey, I can only say that in the large number of samples that I have examined, more or less pollen was found in every instance, and the presence of pollen-grains has frequently assisted me to determine with accuracy the source of the product.

If, and when, I have the time and inclination I should like to criticise Prof. Cook's criticisms of my book, "The Honey-Bee," but although I have a personal regard for him, I do not find pollinisation adduced anything which would cause me to alter any of my views expressed in that book.

Yours truly,

Thos. Wm. Cowan.

To Drive Ants from the Lawn.—Fine coal ashes sprinkled about the burrows of ants will cause them to leave. Ashes may be used on the lawn without injury to the grass. Sifted ashes are best, but those fresh from the stove, shaken from the stove-shovel, will answer the purpose very well.—April Ladies' Home Journal.
to pay his taxes all the same. If his bees are to be exempt because in some years they make no return, then his swine should be forever exempt because some years the cholera strikes them.

Those who believe with Mr. Tracy probably reason something like this: "There are years in which my bees not only pay me no profit, but are an actual expense, so that I would be better off at the end of the year if I had no bees. Manifestly I should not pay taxes on a thing of no value, and as the failure may occur any year, the easy way out of the difficulty is to have the bees exempt from taxation every year."

This has a somewhat reasonable look on the face of it, but one may imagine an assessor replying something like this: "Everything is assessed according to its valuation, not according to its profitability to the owner."

"But," says the bee-keeper, "this year if the bees yield no harvest they are of no value, and should not be taxed."

"At what price do you sell colonies of bees in years of failure?"

"Why, just about the same as other years."

"Then they have a marketable value, and rightly, because even although they may yield no return you do not give them away for nothing, holding them of value because of the possibility of what they may do in the future. And you seem to lose sight of the fact that you already have reduced taxes because of the uncertain character of your bees. If you could count on getting each year straight along more than $100 from each colony, as you did one year, then bees would readily sell for a much higher price than now—perhaps three times as much—and your tax on them would be three times as much. But the very fact that bees are uncertain property brings down their value, and so their price. If you insist that no tax should be paid in a year of failure, then in a good year when the profit on a colony of bees is as much as the profit on a cow, you ought to be willing to pay cow-tax on bees. When you are really giving away bees for nothing, it will be time for you to say they have no value."

Mr. Tracy closes by saying, "I believe that all property should be taxed. But I do not believe from my experience that it would be right or just to call bees taxable property." Which is equivalent to saying that bees are not property, or else there is a direct contradiction.

A New Honey-Eater.—Mr. Walter R. Ansell, of Ramsey Co., Minn., has sent us a sketch of a little animal which has been recently discovered in western Australia. It has been named Tarsipes Rostratus, and, though only as large as a common field-mouse, belongs, like the kangaroo, to the Marsupial order—animals that carry their young in a pouch. It enjoys the unique distinction among mammalia of obtaining its living exclusively by robbing flowers of their nectar with its long, thread-like tongue.

We have reproduced our new honey-loving friend for the benefit of our readers.

"The Best Article" that was ever publish in the Review it would be difficult to point out. I doubt, however, if very many better ones have been publish than the one by S. D. Chapman, that appears in this issue. It is somewhat lengthy, but not more so than is warranted by the magnitude of the subject. There is more in that article than appears on the surface. The exact methods described may not be suited to many readers, but the thoroughness with which the writer has studied the conditions of his locality, and devised a system of management adapted to those conditions, furnishes an encouraging example for us to follow."

This is what Editor Hutchinson says of the article by Mr. S. D. Chapman on page 215 of this number of the Bee Journal.

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The Weekly Budget.

To our Delinquent Subscribers.—We often wish we could sit down in the homes of all our subscribers who are in arrears on their subscription to the Bee Journal, and try to explain to them that in all fairness to us and to themselves they ought to do their best to pay at least all arrearages, and if possible a year in advance. It should be remembered that our expenses in connection with issuing this journal are regular, and must be met. We cannot put off our paper house, our printer, or our employees, with promises—they all must have their money. Hence, it is absolutely necessary that we should have the cash due on subscriptions in order to meet the necessary and constant expenses from week to week.

After we have favored several thousand subscribers by sending to them the Bee Journal for over two to four years without receiving any remittance, or any acknowledgement of our requests to them to pay their subscriptions, we feel that we are justified should we decide to take some other means in order to hear from them. While we would like to have every bee-keeper read the American Bee Journal regularly, we would not willingly and knowingly continue to send it to any one who does not want it. But we must insist that all arrearages, if any, be paid. We shouldn't think that any one would wish to discontinue a paper of any kind without being clear on the publisher's boon.

So many of us are careless about these matters. Of course, no one really intends never to pay his subscription. But do you know that when several thousand subscribers owe for say an average of three years at only one dollar, it amounts to a very large sum? And is it right that the publisher, who has faithfully furnish the paper right along, should be compelled to go without that much needed and very large sum, which belongs to him, and which could just as well as not be paid? For it means only a few dollars to each one who owes, but in the aggregate, to the publisher, it means the difference between a small profit and a big loss!

Reader, are you in arrears on your subscription to the American Bee Journal, or to any other paper that you are reading? If so, will you not do the proper thing, and "pay that thou owest"?

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The Hunt for Errors in magazines, or in any publication, for that matter, is an interesting and profitable investment of time. Every article that is publish in the Ladies' Home Journal, for instance, is read at least four times in manuscript form, and all statements of fact verified before it goes to the printer. Then it is read and revised by the proof-readers; goes back to the author for his revision; is re-read by the editors three or more times, at different stages; and then, by the proof-readers possibly half a dozen times additional. Thus, each article is read at least 15 and often 20 times after leaving the author's hands until it reaches the public eye. But with all this unremitting vigilance, errors of the most obvious kind occasionally escape observation until perhaps the final reading, but it is rare, indeed, that an inaccuracy hides itself in the pages securely enough to go them that magazine's edition.

The improvement in the proof-reading of most of the bee-papers is encouraging. Yet there is still room for the exercise of more care along this line in nearly all the periodicals devoted to bee-keeping, the old American Bee Journal included.

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The Rocky Mountain Bee Journal is the name of the latest claimant to the patronage of the bee-keeping public. It purports to be published "For Colorado and the Great Inter-Mountain Region." It is to be issued monthly, is neatly printed, and presents a good general appearance.

BY WM. O. VOORHEES.

Continued from page 203.

BEE-PARALYSIS—SPRING DWINDLING.

Mr. Berg—What are the symptoms of bee-paralysis and what is the remedy? Can it be cured without changing the queen?

Mr. Root—There are different kinds of bee-paralysis, or it acts differently in different locations.

Mr. Berg—The bees look shy, and seem to be shaking or trembling.

Mr. Root—in the South the disease is worse than in the North. When the queen is taken away they do better.

Mr. Kitson—I think my bees had that disease early in the spring.

Mr. Hilton—It is the result of inflammation. Mr. Chapman—I have not been bothered with it in my apiary.

Mr. Root—The bees that are not affected will put the sick ones out of the hive.

Mr. Rankin—I have had no experience with this disease. I have tried to put it up around the experimental wood queens and combs sent from the South, but did not succeed. I do not think that bee-paralysis will do much harm for far north.

Mr. Hutchinson—Nothing has been said about it for the last two years.

Mr. Kitson—I know what spring dwindling is; I lost one colony by it.

Mr. Kaufman—I lost a dozen colonies in that way. I cured them by changing them around, putting them in the place of healthy colonies.

Mr. Kirkpatrick—I do not think that the young bees have it; only the old ones are affected.

Mr. Root—When the bees begin to store new honey the disease disappears.

FOUL BROOD.

Mr. Hilton—I have a letter from C. A. Huff about getting a law past against foul brood.

George Jaquays—I got colonies with foul brood from East Jordan; it destroyed every colony I had but one.

Mr. Kirkpatrick—Four years ago in the spring I shipped 125 colonies from Indiana. I also took 67 colonies from a bee-keeper in this State to keep on shares. These last had been wintered in pits; I took them home, and afterward found that 37 of them had foul brood. I went all over the neighborhood but could not use any of the foul brood anywhere except in my apiary, and I burned all colonies thus affected. The next year I bought more colonies, but found that they also had foul brood, and I destroyed them. I lost 220 colonies all together.

Mr. Rankin—I do not think it necessary to destroy the colonies by burning them. The disease can be cured, but we must be protected from the bee-keepers who are careless to regard it. I think a law should be passed similar to the one in effect in Wisconsin. They have the disease under control in that State, and I think that when colonies are affected with foul brood and ordered destroyed by the foul-brood inspector, the bee-keeper should be compensated, as live stock is compensated for. We ought to have a State inspector. When I find a colony affected with foul brood I mark the hive with a capfull of iodine, and put a ripe hex around the letter. Iodine and the letter can cure the disease. Iodine and the letter can cure the disease. Iodine can cure the disease.

Mr. Kaufman—I tried to find a remedy for this, and I have found that Iodine—per cent. of iodine, per cent. of water, and per cent. of water—will cure this disease. Iodine and the letter can cure the disease. Iodine and the letter can cure the disease. Iodine and the letter can cure the disease.

Mr. Hilton—I have found it works very well, but we must be sure to use it in the right strength.

Chapman—I have had experience with both single-wafer and foul-brood. Ib.—Mr. Hilton—Have you used it in the open air?

Mr. Kirkpatrick—I have had experience with spring work, and have not lost many colonies from foul brood. My honey is from raspberry, clover, and basswood. I kill all queens at the beginning of the basswood flow, as I want young bees for wintering.

Mr. Hilton—Mr. Chapman must be very familiar with his honey-flow.

Mr. Chapman—I put all my light colonies in a row, and see that they have honey enough to last them until the honey-flow commences. I have very little swarming, and produce only extracted honey.

Mr. Berg—I should prefer to have the bees strong before fruit-bloom.

Mr. Hilton—I could not follow Mr. Chapman's plans for comb honey. One must know his location and know how to work his colonies. Mr. Chapman has two seasons for brood-rearing—one early in the spring and one in the fall. Those reared in the fall are the ones to be put into winter quarters. Bees can not winter on unripe honey, and every bee-keeper must know his location to a square mile. What method would do for one locality would not do for another.

Mr. Berg—I would like to ask if Mr. Chapman has good queens.

Mr. Chapman—I find I have better queens than I can buy. Mr. Root—Mr. Chapman could not rear new races of bees in this way, nor those extra-long-tongued queens.

Mr. Chapman—My bees are all Italians.

Mr. Hutchinson—I see no difference between rearing your queens and swarming. By his method Mr. Chapman makes up any loss.

Mr. Chapman—I keep watch of the drones and have only selected ones with which to breed, and permit only two colonies to rear drones.

BUILDING UP WEAK COLONIES.

Question—How can a weak colony be built up in the fall?

Mr. Hilton—We can build up a weak colony.

Mr. Berg—I made a weak colony with one that has a good queen, and sometimes unite three in this way.

Mr. Kirkpatrick—All colonies should be strong when put into winter quarters.
Mrs. Jackson—Could a weak colony be kept thru the winter by feeding a cake of sugar?

Mr. Hilton—The matter of increase can be overcome. You must have the best conditions in order to get the best results. Colonies must be strong in the fall if you want them strong in the spring. Bees can be fed during the winter in the cellar, with sugar-syrup, but you must be careful not to burn it when making it, and the best sugar must be used.

FOUL BROOD—CROSS-FERTILIZATION OF FRUITS.

Mr. Hastings, the representative from this district, had been requested to attend this meeting, and he made his appearance at this time. Mr. Rankin explained to him the effects of foul brood and States were doing to stamp out this contagious disease. Mr. Voorhies was called upon to explain what the effect would be on the fruit-growing interests of the State if the bees were destroyed by foul brood.

Mr. Voorhies—I am a pioneer in this part of the State. We first here had no honey-bees, nor even bumble-bees, here, and we could not raise melons, pumpkins, nor squashes without hand fertilization. I do not think all the fruit-growers realize the importance of cross-fertilization. I am more interested in fruit growing than in bee-keeping. I keep the bees on the fruit trees in the fall, and whenever we have a few bumble-bees in this locality, but no honey-bees. I am convinced from the experience I have had that the reason why we did not get more and better fruit was because the work of the honey-bees on the flowering was lacking. Fruit-growers nowadays do not plant Bartlett pears or Baldwin apples in large blocks, put in alternate rows with other varieties, and this is for the purpose of cross-fertilization. But we can not always depend upon this to get the best and not always good. There is nothing that I have found in my experience that effects cross-fertilization so perfectly as the honey-bee. In the growing of small fruits we have had the same experience. We plant pittillate, staminee, or perfect-flowers of extra-strawberry plants, in alternate rows, for this very purpose. Cross-fertilization will give the best results, and if we want No. 1 or fancy fruits, we must have it. The blossoms of small fruits do not usually keep open as long as the blossoms of apple trees may. The bees may not get along without the bees; one can not realize how important they are in this matter, unless he has had some experience.

Mr. Hastings—I will do what I can for the interest of my constituents while at Lansing. I have no doubt that the interest of fruit-growers as well as the interests of bee-keepers will be looked after. You have my best wishes for both of them.

It was moved and carried that the committee draft a bill similar to the one they have in Wisconsin, and present it to the legislature.

It was also moved and carried that the next annual meeting be held at Petoskey, the time of the meeting to be decided by the executive committee.

The Association then proceeded to the election of officers for the ensuing year, which resulted as follows: President, George H. Hilton; vice-president, Elias Covey; secretary, Wm. G. Voorhies; treasurer, W. Z. Hutchinson. Mr. Covey then desired queen-rearing as carried on by W. H. Pringle, of North Carolina.

QUESTION-BOX.

Question—Does it pay to paint the bottom-boards?  Mr. Hilton—It pays to paint both sides of the bottom-boards.

Mr. Kitzon—What kind of stands are best for hives?

Mr. Hilton—I would have 2 1/2 scantlings in clay, and have the bee-board 3/4 of an inch thick.

Question—Which way should the hives face?

Mr. Hilton—I want my hives to face the east.

Mr. Hutchinson—I have tried all ways, and do not think it matters any which way.

Question—Should hives be shaded in summer?

Mr. Hilton—Hives do not need shade except in the hottest weather—July and August. The shade-boards should project over the sides of the hives to shade it properly, and weights should be used to keep them from blowing off. Hives should not be shaded in the spring, as the sun is best then to warm the hives.

Question—What size of hives is best?

Mr. Hilton—The majority prefer the 8-frame Langstroth. Comb honey can be produced with an 8-frame hive, but the 8 frames should be full of brood. To do this the honey at the side of the brood chamber should be extracted, and the empty frames put into the hive. I can do much more with the right kind of knife. The handle-part of the fork is usually made of metal. [See Fig. IV.]

To uncrap honey for the bees I, like Dr. Miller and others, have used an uncapping-comb or harrow. This implement was originally devised by E. Huber, of Baden, Germany, in 1884, as shown in Figs. II. and III. The times

Contributed Articles.

Instruments Used for Uncapping Honey.

By Friedemann Greiner.

The first new thing in the line of apiarian implements coming to us in this new century will be an uncapping-machine—at least so it is hinted at. And, indeed, if a machine can be constructed to accomplish the work of uncapping for the extractor satisfactorily and speedily, we will have made a great step in advance, and all extracted-honey men will be quick, I think, to avail themselves of this invention. How great this step in advance is, will be apparent when I show the readers what the implements are like that have been used for the purpose in the past.

Nothing better seems to have been found by the American bee-keepers than the honey-knife. [Fig. I.] Regard-
and teeth of the harrow are crook at the ends and filed sharp; with them the cappings are sort of raked off, but can not be removed so perfectly but what a liberal portion of them will find their way into the honey and will have to be strained out or skimmed off.

I have no doubt that Dr. Miller's uncapping-comb varies somewhat in its construction from this one as well as mine; but we do not use ours to uncap for the extractor.

Another very old uncapping instrument is the spiked uncapping-roller. It works easily and rapidly, and it suits me to a dot. Of course it only mashes or destroys the cap-

[Fig. V.], with suitable small pieces of wood riveted on to make the handle complete.

Another uncapping instrument I see described as the uncapping-roller but neither the illustration nor descrip-
tion is an sufficient to give a clear idea of it, and as I do not find it spoken of in the bee-periodicals I judge that it is not a complete success.

The bee-keeping world is now awaiting with anxiety the forthcoming of Arthur Miller's uncapping machine.

Ontario Co., N. Y.

Working According to Locality—Killing the Queens Each Summer.

BY S. D. CHAPMAN.

SITUATED as we are, just half way between the equator and north pole, we have here in the northern part of the lower peninsula of Michigan long, cold winters, and usually it is very early in spring before we have a chance to work. We have deep snow, yet the ground never freezes in the woods, and very little in the fields. The snow comes early in the fall, and it is nearly the last of April before it disappears in the forests. Several seasons my bees have gathered their first pollen from elm and soft-maple while there was yet a foot of old snow in the woods. A mile and a half east of us we are nearly on the high of the land, and two miles west we are nearly on a level with the lakes.

In the winter it is from seven to ten degrees colder on the higher ground. Near the lakes we will find, usually, about one foot of snow; ten miles due east of there we will find four feet on the level. Raspberry and basswood come in bloom one week earlier on the low land. That part of the Grand Traverse region bordering on the lake and bays is not as frosty as southern Michigan or northern Indiana; but, just in my bee-range, we have early frosts, and the nights become cool early in the season. For this reason I believe in putting my bees in winter quarters quite early in the season—about October 15th. Years ago I found that my bees, if left on the summer-stands during our cold and frosty nights, would consume more honey from October 15th to the middle of November, than they would if put in the cellar October 15th and left till April 25th. I find from 8 to 9 pounds of honey will carry a colony of bees 190 days in my cellar. In the last 15 years, 180 days is the least time that my bees have been confined in the cellar—211 days the longest time.

At the present time I am using the ninth bee-cellar since starting with bees in this vicinity, I do not know as it is necessary for me to tell it, but I will say that in some of these cellars about eight large hives will occupy the cellar. This cellar that I now use is under my kitchen. It is 16x24, and there about 200 colonies in it. Some seasons there are a few more; in others, less. It is perfectly dry—so dry that you can not, at any time during the winter, find a drop of moisture the least bit of a pinhead on the under side of the cover that is right over the cluster of bees. I use no quilts nor cushions at any time of the year; and I prefer this kind of a cellar. I can not winter bees in a cold, damp cellar; but in a warm, dry cellar they come thru seemingly in fair condition. They consume rather more honey, however, and they have not the vitality a colony has wintered in a warm and perfectly dry cellar. If I could hold the temperature of my cellar to the latter part of spring to about 45 degrees, I have no reason to doubt that my bees would be in good condition, and not show a sign of disease at the end of eight months of con-

I use the eight-frame Langstroth hive. I have had some experience with very large hives, but in our cool cli-

te we can not build up a colony in a large hive so that it can take advantage of the flow from raspberry. With us it is necessary that our bees are confined in as small a space as possible, with plenty of stores, and just room enough for their present needs. This applies from the time of taking the bees out of the cellar, till the time sugar-maps and fruit-trees come into bloom. From the 10th of May, we usually get our first honey from this source. In this vicinity there are a number of quite large bee-keepers, and every one of them has come to the eight-frame hive. We all work for extracted honey. With my system of management, the eight-frame hive is large enough for the needs of any colony of bees I ever saw. And I know my colonies are as populous as it is possible to get with any style or size of hive.

I pay very little attention to my bees early in the
spring. As I take them from the cellar, any colonies that seem light in stores are put in a row by themselves, and fed; but I do not break the sealed covers on the others till needed. Since colonies of bees are the very ones I am trying to build up very light colonies in the spring is thrown away. If they make a live of it they can be handled to advantage later in the season. With us, the time of the year when they are strong in the colonies, is during the month of August.

At the beginning of fruit-bloom I examine all of my colonies. From all that need more room, those that have been in the building way and as many spaces well-filled with bees. I take one frame from each in the brood-nest, selecting the one containing the oldest brood. I shake the bees off in front of the hive, and put a frame containing all worker-comb in the middle of the brood-nest in place of the frame with the brood. I then put on queen-excluding honey-boards, and leave them on till the close of the season. The reason I take this frame of brood from the brood-nest is that I find the queens will lay much faster in the middle of the brood-nest than they will in the outside combs. This being the case, right in the middle of the brood-nest is where we want our queens to do their work. We are after all the young bees we can get.

Now I will tell you why an eight-frame hive is far the best in building up colonies early in the spring. It is far better to have the brood in six or seven frames in the eight-frame than to have the same amount in four frames in a large hive.

The frame of brood that I remove, is put in an extracting-super directly over the brood-nest, and the super filled on each side with empty combs. The bees go right to work. If it is true that little honey is coming in, I can, in four or five days, take from this same colony another frame of brood. If it is a strong colony I take two. They are put in the extracting-super directly. I sometimes think our best bee-keepers do not know just what a queen is able to do, provided the conditions of her colony are just right—and we keep them so for 30 days.

In a short time I take more brood from the brood-nest. This time I put it in another super and set it under the one, or over the brood-nest. At this time I destroy the queen-cells that have been started in the first upper story. This will not work if a dozen queens hatch in the upper story. I sometimes think of getting out one or two combs, as I need, that were beside the first frame of brood put in the super, and as the bees have cleaned these combs and put a little new honey in them, they are just right to put in the brood-nest in place of the brood removed. The queen is not wanted in the comb at this time. We are too little careful not to take too much brood early in the season from the brood-nest, or we may discourage the queen. While our object is to stimulate the queen to lay her fullest capacity, I sometimes think our best bee-keepers do not expect to find not less than 13, and in some of my best colonies as many as 25, frames containing brood and honey there is more or less brood in all of them. I think my colonies are much better than they would have been if I had given the queen the two upper stories and let them build up without any of my assistance.

I follow this system of management just as long as the bees will be worth anything to me on the raspberry or basswood. We must recollect that there is a certain time during the life of a colony, each season, when we can build it up faster than at any other time during that season. We expect to find not less than 13, and in some of my best colonies as many as 25, frames containing brood and honey there is more or less brood in all of them. I think my colonies are much better than they would have been if I had given the queen the two upper stories and let them build up without any of my assistance.

Two years ago I set apart five colonies that were better than the average of the yard, and I gave the queen of each of these stories, and let them build up just as suited their notion; they were framed with honey as they needed. With the remainder of the yard (77 colonies) I used my method of management. At the end of the season I had 1900 pounds of honey, extra, to my credit from the spring, and I sold this honey at 65c on cent boards. I tried this experiment in an out-yard, three miles from home. It took one-half day to go to this yard, put brood in the upper stories, and go back to the spring. I repeated this eight times, requiring four days of time, and I had this 1900 pounds of honey to pay me for my four days' labor. The showing in favor of the 77 colonies had been much better if there had not been a number that did not amount to much on the raspberry. This is not all; my bees never think of swarming. I am complete master of the situation, under any and all conditions. This was the case of last season.

During the last three years, raspberry has yielded about the same each season. My best colonies, those occupying four stories, have yielded, each season, from 100 pounds to 200 pounds. We have found that three-story hives, during this same time have averaged 90 pounds each; my two-story hives from 20 to 40 pounds.

The wild red raspberry comes into bloom not far from the 5th of June, and it yields continually till near the 1st of October. A colony of bees in the past season it came into bloom the second time, and my bees gathered fully five pounds per colony from the 1st to the 10th of October. This is nothing unusual, tho' I do not recollect getting any other colonies to do it since this source. After my bees were in the cellar there was bloom, green and ripe berries, up to November 1st.

Basswood comes in bloom about the 15th of July; but we have had little honey from this source the last four years. When basswood comes in bloom in the year the colonies that wintered the best, that built up early in the season and gave us such large yields from the raspberry, that prove to be the best on the basswood. Far from it. There is no colony of bees built up rapidly in the spring, that is impossible to keep colonies laying honey, except for a short time. The honey may be coming in every day, the bees are getting old, and those colonies are on the decline, while colonies that were lighter early in the spring having built up such a brood on the raspberry, they bloom they are liable to send out a larger working force of bees that are just the right age to take advantage of the yield from basswood; that is why our lighter colonies prove the best on the basswood.

Remember, the faster the colony builds up, the more vigorous are the bees; so that the colony is able to bring into action the largest possible force of bees that are just the right age to take advantage of the flow.

From about the 1st to the 10th of July I kill all of my queens. I have practiced this for 16 or 17 years. I would not go to this expense unless I thought I had some pretty good reasons for doing it, as it takes a day in each yard to hunt them up. Where queens are work as I work them, they never prove not as good the second year. With my management the average life of the best of queens is not over two years. The first year of their lives, not one queen in a hundred is superseded. The second year, from 30 to 50 per cent. of them will be superseded. We do not have a season, just at the time we want a good queen in every colony. This makes a big hole in my honey crop. But at the time I kill my queens my colonies are in the very best condition. I am sure of just as good queens as we can get when we need them. I want to keep the colonies of bees hiving the queens, for about 25 days, no eggs are laid in the hives. Our colonies are not rearing a lot of bees that would be consumers for this length of time. As the brood and the honey are the things we want, we can keep the bees filled with these combs of honey, leaving the colony in better condition for winter. One of my best reasons for killing the queens is that thereby each colony is furnished with a good young queen to keep them up for the winter.

Experience and a careful study of this matter will show many more reasons why it is profitable to kill the queens each year in northern Michigan. As I said in the beginning of this article, the time to build up colonies so they are strong in the spring is during this month of March. I use the same method in the fall that I do in the spring, but not on so large a scale. Near the first of June I select from four to six of my best colonies, and in each colony I introduce a queen, one or two at a time. I do not intend to rear any drones except from these colonies, as I use only worker-comb in the brood-nests, and if a few drones are hatched they are quickly killed by hyperactive bees. Some may make the killer of the queens, for about 25 days, no eggs are laid in the hives. Our colonies are not hiving the queens, for about 25 days, no eggs are laid in the hives.
about as soon as they will one. In 30 minutes these section-cases are filled with bees; and they go right to work. I take more section honey, late as it is in the season, than could be crammed into the other colonies so they gave me from the beginning of the honey harvest; and I have already taken 60 or 80 pounds of extracted honey before I put on the section-cases. They do the work so quickly that we get an extra grade of honey.

I have told you that my bees do not swarm, and I think I can tell you why they do not swarm. The raising of the brood to the upper stories, distributing it in three or four places, and there is no larger the brood which is not to be put in the same frame-cells in the upper stories. I should have had over 80 queenless colonies had not I discovered it just in time to take cells from those colonies that were rearing queens.

I mention this case to show the conditions into which we can bring our colonies; and how slow they are sometimes even to recognize the loss of their queens. I think these are the reasons why my bees do not swarm up to the time that the young queens hatch; and I think the management and care in keeping them from swarming at the time the queens hatch. My bees do not get the swarming-fever. When the young queens hatch, the conditions in the hive are changed; I have put nothing in the upper stories for a week or more previous to killing the queens. If there is a colony in the yard that has the swarming-fever at the time I killed the queen, I will have it swarmed in time to the 13th day, even tho I have not had my queen-cell that whole week, while the others do not have a queen till the 14th or 15th of the month because of the time of destroying the queens.

At the time the queens hatch there is no brood in the upper stories, and I extract the honey closely, so, at this time the queen may come. My bees do not swarm at the time the queens hatch. I have run my out-yard of 90 colonies the whole season, killed all the queens, and have had but one swarm; and that swarmed at the beginning of fruit-bloom before I had put on any upper stories. The swarming-fever is a spontaneous impulse, and we can so change the conditions of a colony that it is liable to contract the desire to swarm in 15 minutes. Supposing, at the time the young queens hatch, that some one has them, and that not all of them have destroyed the queen-cells, now remove all the upper stories, confining these large colonies to the brood-nest, and I should expect every one of them to swarm. I would have my hands full for a day or two. With the conditions I have known a colony to swarm 30 minutes after we had brushed the bees carefully from the combs. If we shake the bees from the combs we cover them with honey, and have spoiled the experiment.

Just before the queen hatch I make my increase by division; and it is not at the expense of my honey crop. In union there is strength. I have kept the bees in each colony together till near the end of the honey harvest. Many of our best writers have frequently told us always to keep our colonies strong. I hardly think this is good advice for our locality. Years ago I would have given a good deal if they had given a little farther and told us just how small the colonies must be, or left an argument to show how strong. And now, just for the fun of it, I would like to know, when their colonies are strong how they always keep them so.

It is necessary that every bee-keeper should understand his own locality, and what is best adapted to the requirements of his location.

I have not written this as a pattern for bee-keepers in New York, or California, or any other State, but simply at the request of a few bee-keepers I have written it in order to show what I have been accustomed to do in using the American Bee Journal—both for $1.10. Antrim Co., Mich.
Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Muncie, Ind.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—Enron.)

BROOD DISEASES.

A subscriber sends me a sample of brood that may be affected by foul brood or something closely allied to it. In matters of so much importance it is wise to take no chances and to waste no time; so I advise anyone who has reason to think that anything like foul brood, pickled brood, or black brood, is present in any of his colonies, to send a sample with the regular fee of $2.00 to Dr. W. M. Howard, Fort Worth, Texas, so that it may be analyzed, and then the sender will know positively what is the trouble, and what is to be done with it. I know of no one in this line more competent than Dr. Howard, and bee-keepers owe him a debt of gratitude for his investigations.

C. C. MILLER.

Transferring and Dividing Colonies.

1. My bee-book tells how to transfer colonies, but if I do it by the Heddon plan, what is to hinder the parent colony from being robbed during the 21 days, if near the apiary?

2. Why could I not drum them into the new hive at once that has old combs, having it tight around the bottom, not using the forcing-box?

3. If I make swarms by dividing according to the textbooks, will the queenless part rear a queen if there are no queens or queen-like workers at the time the swarm is made, or wouldn't they be worthless, like many other queenless colonies?

4. Would colonies made by dividing, be likely to produce as much surplus honey as if left to swarm naturally?

ANSWERS—1. The supposition is that the bees will defend themselves against robber-bees, but it will be well to help them by contracting the entrance somewhat.

2. That certainly will be better, if the hives are such as to allow it.

3. Set it down as a fact that if you want good queens they must be in strong colonies and in favorable circumstances at least till sealed. That settles the question that the queenless part must not be allowed to rear a queen from the start unless the prisoner would not.

4. Just as much, if of the same strength and having the same advantages.

Spring Requeening—Introducing Method.

If you were to requeen an apiary in the spring with young queens from the South, what method of introduction would you practice?

IOWA

ANSWER—This matter of queen-introduction is such a constantly changing and elusive thing that it is hard to tell a month ahead what one would do. Just as it happens to look at this minute, I suppose I should take the regular way of introducing in the cages that brought them. If I didn’t follow that exactly, it would be to do something that had before proved successful in my hands, without much reference to what had succeeded with others. Explain it as we may, there’s something about the matter that allows A to be successful in one way and B in another, while both

t than the other senses, are often be-trickt, especially if our minds are excited. For instance, I abominate tomatoes. One of the other gave some in a box of pumpkins, that changed itself like a coin, because the corpuscle inside smell so bad. It was not falsehood that allied these clerks, but just the fallibility of the poor human critter.
might fail if they should swap plans. If time was plenty, and it was decided to take extra precautions, this might be done: At the time of day when bees were busy flying, remove the old queen and set the hive in a new place, after first taking from it a frame of brood and bees to put in another hive on the old stand; put the new queen in the removed hive and perhaps two days later return to the old place, giving it back its frame of brood.

Now it’s none of my business, but if you’re requeening with young queens to avoid swarming, I’ll volunteer the remark that in this locality it doesn’t do to make the change too early.

Transferring—Controlling Swarming.

I got a start in bees last summer. Can I transfer or increase, and incidentally control swarming, by placing Langstroth hives with starters under or over box-hives? or does the “A B C of Bee-Culture” (which I have) cover the whole ground? If so, I shall have to follow instructions therein.

Indiana.

Answer.—If you put a box-hive over a frame-hive having its frames filled with foundation, and allow the bees to work down and fill the lower hive, you will probably have, if you wait long enough, all the brood in the lower story, and consequently the colony transferred, and you may confidently count on no swarming. With a little more trouble you can have a surer and quicker way. Put on the stand of the box-hive a movable-frame hive filled with foundation, and put over it a queen-excluder. Drum the bees out of the box-hive until you think you have the queen, and run them into the frame-hive. Set the box-hive over the excluder, and close up any opening over the frame-hive or under the box-hive. A week later look to see if you have eggs below, and if not drum again. Three weeks after the queen is drummed out all the brood will be below (unless it be a small amount of worthless drone-brood), and the box-hive may be disposed of. No danger of swarming. It will be a help in either case if you can get a frame of brood from another colony and put it in the frame-hive at the first.

Stimulative Brood-Rearing in the Spring.

When should I begin, and how much should I feed, to stimulate brood-rearing in the spring? The colonies are pretty weak.

Answer.—Unless you are somewhat experienced, and unless you are very careful, you will do well to let stimulative feeding alone. It may do good and it may do harm. If you feed so as to start the bees to flying out when it is too cold that they will be chilled and lost, it will be a losing speculation. If the bees are started out flying, and then it suddenly turns cloudy when the temperature is not very high, the bees may never return to their hives. It may be a safer thing, and perhaps just as well in the long run, if you see that the bees have abundance of stores, and have all cracks about the hive closed, and then leave them to themselves. But if you think it best to try stimulative feeding, begin when the bees fly out every day at least a little, feeding every evening, or every alternate evening, a half pound of sugar with an equal or greater quantity of water.
DESKS FOR GENTLEMEN AND LADIES!

These desks are made of quarter-sawn oak, first-class finish, well put together, and will please every purchaser. They are an ornament to any home, as well as being a useful necessity. Would make a FINE GIFT for father, mother or sister.

The Combination Desk and Book Case

is just the thing for a farmer or business man, of any kind, to keep his private papers in, and for his books, etc. The drawers have locks, and there are a number of pigeon-holes inside each of the desks shown herewith.

The low prices quoted are f.o.b. Chicago. Send for free catalog. Address,

The Royal Star Combination Game-Board Co.,
773 to 779 Carroll Ave., CHICAGO, ILL.

Combined Desk and Book Case

Size, 66 in. high, 36 in. wide, 19 in. deep. Price, $13.75.

Ladies’ Desk

Size, 40 in. high, 25 in. wide, 15½ in. deep. Price, $22.85.

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Outdoor-Wintered Bees.

I am afraid that some of our outdoor-wintered bees have been lost for their own good. Bees in the clover never were quieter at this time of the year.

Ontario Co., N. Y., March 18.

W. G. L. HINZ.

Boulder Co., Colo., March 19.

Bees Wintered Splendidly—Prospects Bright.

My bees have wintered in fine condition, 90 colonies having come thru without a single loss. I hear some of my neighbors complaining of losses, but I attribute it to negligence on their part.

We have had an unusual amount of snow this winter, which insures plenty of water for irrigating purposes, besides a large crop of alfalfa, and the beekeepers are expecting large returns—disappointments not included.

The weekly contents of the "Old Reliable" are as eagerly awaited as of yore.

J. B. WILLEY.


Bees Wintering All Right—Bee-Literature.

We are having a fine winter, and bees seem to be wintering all right so far. They gathered the first pollen on Feb. 17th, and again on March 2d and 3d, but the weather has turned cold again, and they have stopped work. I am employed in a store here, and see a great many people, and have the opportunity to

Bee-Keepers' Supplies.

Just received a consignment of the finest up-to-date HIVES and SUPPLIES we have had. They are 3d to none. Complete line of Bee-Keepers' Supplies on hand. Bees and Queen's Catalog free.

THE A. I. ROOT CO.
H. G. ACKLIN, Manager.
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HOTE-SEEKERS' EXCURSIONS.

On the first and third Tuesdays of each month the Chicago, Milwaukee & St. Paul Railway will send round-trip excursion tickets from Chicago, Milwaukee and other points on its line to a great many points in South Dakota, North Dakota, and other Western and Northwestern States at about one fare. Take a trip West and see the wonderful crops and an amount of good land can be purchased for a little money. Further information as to rates, routes, prices of farm lands, etc., may be obtained by addressing Gen. Passenger Agent, Chiago, Ill.

Belgian Hares

CHEAP.

PEDIGREE AND COMMON STOCK.

Having bought a Job Lot of a neighbor and added to what I had, I must dispose of same to make room for my increase. They are all young—3 months and over—with a few bred Does. ALSO.

Italian Queens

of last season's raising, ready as soon as the weather will permit to send thru the mail. Write for prices. Address,

J. L. STRONG.
Clarinda, Page Co., Iowa.

Belgian Hares

Cheap.

HOTE-SEEKERS' EXCURSIONS.

On the first and third Tuesdays of each month the Chicago, Milwaukee & St. Paul Railway will send round-trip excursion tickets from Chicago, Milwaukee and other points on its line to a great many points in South Dakota, North Dakota, and other Western and Northwestern States at about one fare. Take a trip West and see the wonderful crops and an amount of good land can be purchased for a little money. Further information as to rates, routes, prices of farm lands, etc., may be obtained by addressing Gen. Passenger Agent, Chicago, Ill.

Italian Queens

of last season's raising, ready as soon as the weather will permit to send thru the mail. Write for prices. Address,

J. L. STRONG.
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Please mention Bee Journal when writing.
QUEENS!

Improved Golden and Leather-colored Italian queens are warranted as the best. H. G. QUIRIN.

We have one of Root's best long-tongued Red-Queen Breeders from New York, and a Golden Breeder from Doilittle, who says if there is a BREEDER of queens in the U. S. worth $20, he is one worth that sum. The above breeders have been added to our already improved strain of queens for the coming season.

J. L. Gandt, of Humboldt, Neb., wrote us on Aug. 15, saying that in the colony having one of our queens had already stored over 400 pounds of honey (mostly comb); he states that he is certain that our bees won on Red-Lover, as they were the only kind in his locality and apiary.

A. J. Root's folks say that our queens are extra fine, while the editor of the American Bee Journal tells us that he has good reports from our queens from time to time. We have files upon request.

W. H. Quinney.

After considering the above evidence, need you wonder why our orders have increased each year? Give us a trial order and be pleased. We have years of experience in raising and rearing queens. Safe delivery will be guaranteed, and instructions for introducing sent with each lot of queens.

QUEENS SOLD TO MAIL.

Warranted stock, $1.00 each; six for $5.00.

Selected tested, $1.50 each; six for $9.00.

Selected tested, $2.00 each; six for $10.00.

We have too many Folding Cartons on hand, and QUIRIN Queen $3.00 per 1,000, with rear address printed on in two colors: 50c, $2.50, $9.00.

Spanish and Italian queens, $2.00 each.

ALBINO QUEENS

If you want the most prolific queens—which you want the greatest bees—try our ALBINO. We are the only dealers in these bees with experience. Our clients have not a single complaint to make. The ALBINO is the most prolific bee that can be raised, and the bees from this strain produced twice as much as our other colonies.

Beeswax.

Rendering Beeswax.

With reference to the color of wax I would like to say a word in regard to my own experience with the wax that I have melted during the past five or six years. It is true that beeswax of different colors may be produced in the same apiary, but I believe the foreign varieties have a good deal to do with the color of the wax. In refining the beeswax that was refined, I had one that would have with hot water or hot hard, giving them a dull, dirty appearance that no amount of cleaning would beautify. The secret of bright wax does not lie in the light coloring, but in the melting, which should be very slow. I extract the wax in a solar reflector, then put it in an earthen pot, and set the pot in a dish pan full of cold water, setting it on the stove, temperature and point where the wax begins to melt. Then I push it back and let it melt as slowly as it will, and that is the most important point. I meet the wax half off, dip it off and put it into molds, which I have sitting in hot water. This slows the melting so that I can sell the beeswax. I sell it in small cakes weighing about two ounces each for 2 cents a cake.

My bees are wintering well.

Robert J. Cart.
Fairfield Co., Conn., Feb. 25.

Belgian Hares and Bees.

Prof. Cook was right in saying that Belgian hares were all right for the business, as few animals can be found that will yield more profit than Belgian hares. They can not be raised here locally, as we have had nothing but short crops and failures for over 10 years, which has made it necessary for us to add something else to beekeeping.

Last season was one of the poorest we have ever had. I did not get a pound of surplus honey, and had to feed sugar syrup in order to keep the queen-rearing colonies in good condition for rearing queens.

After purifying the Belgian hares the first and most important thing is to have a place for them that is dry and well ventilated, as they can not be raised in a house. It is almost in the same manner as raising rabbits. A small room called a hutch, about 2x2x1 feet, or larger if convenient. Place a nest in one end of it. 12\x21

To sell you BEE-SUPPLIES! Our line is all new and complete. Send for our Illustrated Catalog; it will convince you that we specialize in Bee Supplies. We are the best on the market. Our prices are right, and our service is prompt.

Fred W. Muth & Co.
S. W. Cor. Frost & Walnut Sts., CINCINNATI, O.

BEE HIVES, SECTIONS AND ALL BEE-KEEPERS' SUPPLIES.

Big Catalog Free. Write now, Leahy Mig. Co., 212 S. 13th St.

Mention the American Bee Journal.

We want * BEE-SUPPLIES!

We plan to offer you BEE-SUPPLIES at prices that are the lowest. Catalog giving list of Supplies, with prices and samples, free on application.

ALBINO QUEENS.

If you want the most prolific queens—if you want the greatest bees—if you want the best honey-gatherers you ever saw—try my ALBINO. We are the only dealers in the U. S. with experience of this strain. Our clients have not a complaint to make.

ALBINO QUEENS.

We are distributors for ROOT'S GOODS AND S.W. & H.S. MURPHY'S FAYETTEVILLE, INDIA.

ITALIAN QUEENS

G. F. Davison
Established 1885.
FAIRVIEW, WILCOX CO., TEX.

MUTH'S SQUARE GLASS HONEY-JARS, LANGSTROTH BEE-HIVES, ETC.

Lowest prices in the country. Send for Catalog.

C. H. W. WEBER
Successor to C. F. MUTH & Son,
214-49 Central Ave., CINCINNATI, O.

DAHLIA QUEENS.

We have many of these bees in the country. Send for Catalog.

G. H. GIVEN, LIBSON, TEX.

Dittmer's Foundation Foundation

Retail—Wholesale—Jobbing.

I use a PROCESS that produces EVERY ESSENTIAL necessary to make the BEST and EASIEST jelly in all respects. My PROCESSES AND AUTOMATIC MACHINES are our own inventions, which enable me to SELL FOUNDATION and WORK WAX TO FOUNDATION FOR CAN at prices that are the lowest. Catalog giving list of Supplies.

GUS. DITTMER, AUGUSTA, WIS.

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Pig & Horse-High!

Bull, Young Bull, or Fine Horses.

Bull Brooders, Wire Ware, Wax, etc., etc., make our customers keep us busy.

Full Summer Run on Favorite Breeds.

BILL FRIED lands and W. B. SCHREDER.

1502-13 Mission St., San Francisco.

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POULTRY BOOK FREE, 46 pages, illustrated with 50 new, trial transcription to our paper, the INLAND POULTRY JOURNAL, Indianapolis, Ind.

Tennessee queens! Fine lot of Choice Tested queens reared last season, daughters of select imported and domestic strains, have reared 33 miles apart, and make good queens in each; untested unproved Queens, from same breeders, either domestic or imported, at lower prices. For orders, communicate to us. We have been owned over 24 miles apart, and have been reared in the same lot, and have about 14 miles apart, and have been reared by the same breeder. Discount on large orders. Write for price list with dealers a specialty.

JOHN M. DAVIS,
4320 Spring Hill, Tenn.

Please mention Bee Journal when writing

PAN AMERICAN EXPOSITION.

Nothing since the World's Fair, at Chicago, in 1893, has stimulated the widespread interest that is manifest, all over the world, in the Pan-American Exhibition, which is to be held in Buffalo, from May 1st to Nov. 1st, 1901. The purpose of the Exposition is to illustrate the progress of the countries of the Western Hemisphere during a century of wonderful achievements, and to bring together into closer relationship the people of the United States and the Republics and Colonies of the American Hemisphere to join in commemorating the close of the Nineteenth and beginning of the Twentieth Century, by holding this International Exposition on the Niagara Frontier.

For this important event, the Nickel Plate Road has issued an attractive, descriptive folder—sample—elaborately illustrating the Pan-American Exposition, the buildings and grounds. The Nickel Plate Road is the short line between Chicago and Buffalo, and affords complete connection from Chicago to Buffalo, New York City, Boston, and all points East, with trains of modern equipment, on which no extra fares are charged; also dining-car service of the highest order. It affords meals in its dining-cars on the individual club plan, ranging in price from $3 to $4 per cent.

Call on any ticket agent for Pan-American folder of the Nickel Plate Road, or address John Y. Calahan, General Agent, 111 Adams St., Chicago.

The Nickel Plate Road has complete accommodations at Buffalo or Niagara Falls, during any period of the Pan-American Exposition, are invited to apply by letter or otherwise to P. J. Moore, General Agent, 15 Farmen's Bldg., Buffalo, N. Y.

No. 4—12Aa3)

AMERICAN BEE JOURNAL
April 4, 1901.
AMERICAN JOURNAL OF THE AMERICAN BEE INQUIRY

April 4, 1901

1901—Bees-Keepers' Supplies! We can furnish them fast. Our going prices are just what your customers want to pay. We have them at wholesale or retail at their prices. We can ship them to you immediately, and you can have them shipped free of all charges paid for bees. Send for our latest catalog.

R. A. BROWNE & CO.,

New York, N. Y.

115 Park Place, New York, N. Y.

CATALOG FREE.

I. J. STRINGHAM,

1328 W. 3rd St. Indianapolis, Ind.

Please mention Bees Journal when writing.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, May 5.—The choice grade of white comb honey is 25c to 30c above the fair demand for all grades. Fancy white is still selling readily at 41c to 45c; No. 1 white at 51c; amber at 61c; price of scented honey, 80c to 85c. Extracted, white, ranges from 79c to 84c; brown, 90c to 95c; buckwheat, 59c to 65c. All of the extra grades offered by the market is from 25c to 27c. The range of prices, the lowest figures in each of the classes to be 20c to 25c, and Genper, Beeswax, 3c.

R. A. BERNETT & Co.

New York, May 5.—The market is virtually bare of comb honey, and there is a fair demand for all grades. Fancy white is still selling readily at 35c to 40c; No. 1 white at 45c to 50c; amber at 60c; price of scented honey, 65c to 80c. As to extracted, the market is quiet and inactive, and a certain amount will have to be carried over, prices are declining somewhat. And if the honey is not moved in large lots, consumptions will have to be made. We quote: California white, 70c to 75c; light amber, 50c; other grades, darker, 80c to $1.00 per pound, or by the barrel, depending on the amount. Beeswax very firm at 28c to 29c, and exceptionally fine yellow, 2c.

BUFFALO, May 5.—Beekeepers and Beekeepers.

OMAHA, May 5.—Demand fairly good for the next season. Honey in Ohio continues steady, and moving at 70c to 75c per lb. We do not expect any price change for the balance of the season, as present supply is sufficient to meet the demand, and there is not likely to be a return of increasing prices.

DETAFT, May 5.—Fancy white comb, 14c to 15c; No. 1, 13c to 14c; dark and amber, 10c to 11c. Extracted, white, 70c to 75c; amber, 50c to 60c. Beeswax, 27c to 28c.

M. H. HUTCHISON & SON.

CINCINNATI, May 5.—The demand for comb honey is nearly over, the stock of it also well cleaned up. Fancy white comb is still strong and firm. Extracted is in fair demand; dark sells for 50c; and white down to 60c. Tallow is still firm, at 85c. C. H. W. WERR.

KANSAS CITY, May 5.—Receipts light; demand normal at steady prices. Fancy white comb, 15c to 16c; No. 1 amber, 10c to 11c. Extracted, white, 70c to 75c; amber, 50c to 60c. Beeswax, 27c to 28c.

W. R. CRUM.

ALBUQUERQUE, N. M., May 5.—Honey market is also very quiet. Local demand for comb honey, 75c to 80c; dark, 50c to 55c. H. R. WRIGHT.

BOSTON, May 5.—Fancy No. 1 white in car- tons, A. A. No. 1, 31c to 32c. B. A. No. 1, 15c to 16c, with a fairly good demand. White, 70c to 75c; light amber, 50c to 60c; dark honey this year. Extracted, white, 80c to 85c; light amber, 75c to 80c; dark, 50c to 60c. BLAKE, SCOTT & LEE.

SAN FRANCISCO, Feb. 6.—White comb 12c to 13c. B. A. No. 1 white, 40c to 45c; A. A. No. 1, 30c to 35c; Extracted, white, 70c to 80c; light amber, 60c to 70c; amber, 50c to 60c. Beeswax, 26c to 28c.

Considering the light output of honey last spring from California apiaries, present offerings rate of 100 percent are strong and are mostly of amber grades. The market is quiet at the present quotations. Fanciness and demand is the general feeling that adulterated and imitation honey is being dealt with considerable quantity, which accounts for a great part of the very limited business done in the pure article.

BEEKEEPERS’ SUPPLIES, 90th Street, St. JOSPH, MO.

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If you want the Bee-Book

Prof. A. J. Cook, Claremont, Calif., For His

"Bee-Keepers’ Guide."

Liberal Discounts to the Trade.

TWENTY MILLIONS IN GOLD

From Alaska during the year 1000.

Five millions of this came from the Nome district. Government officials estimate the output from the Nome district will be doubled the coming season. The Bleshonek, Kongsarok and Pilgrims rivers have been found very rich. There is hardly a creek from Fort Clarence to Nome where bees have not been seen. Tallow is the most important of the by-products of the honey and the propolis is not found, and hundreds of creeks unexplored. A rich strike has been made on the Yellow river, a tributary of the Yukon.

For full information regarding routes, steamship accommodations and rates to all points in Alaska, address C. N. Solick, General Agent, Passenger Department, C. M. & St. P. R. Y., 95 Adams Street, Chicago.

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Please mention Bees Journal when writing.
We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR

Hives, Extractors
OR ANYTHING YOU WANT IN THE
BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundations are ahead of everything, and cost you money than other makes. New Catalog and copy of the American Bee-Keeper free. Address,

THE W. T. FALGONER MFG. CO.,
JAMESTOWN, N. Y.

Scott, R. E., East Norwich, N. H., carries a full line of our goods at catalog prices. Order of him and save freight.

WANTED!

25 to 50 colonies of bees in good condition. Must be cheap.

S. J. DUNNE,
155 S. Forest Ave.
HALT RIVER FOREST, COOK CO., ILL.

SWEET CLOVER
And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

Sweet Clover [white] .................. 30c 50c 1.00
Sweet Clover [yellow] .................. 50c 1.25 2.50
Crimson Clover ....................... 50c 1.25 2.50
Alsike Clover ......................... 50c 1.50 3.00
White Clover ........................ 50c 1.75 3.50
Alfalfa Clover ....................... 75c 2.00 4.00
Japanese Buckwheat ................. 30c .50 1.00

Prices subject to market changes. Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and pack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie St., CHICAGO, ILL.

200-Egg Incubator
for $12.00

Perfect in construction and labor. Has every fertility. Write for catalogue to-day. A. R. STAHL, Quincy, Ill.

The Danzenbaker Hive.

T HIS HIVE is rapidly gaining favor, especially in the Eastern States, where tall sections and closed-end frames are used to a considerable extent, and within the last year or so the Danzenbaker system has been working its way into California, Oregon, and even into Cuba. At the Paris Exhibition the hive was awarded a gold medal, and at some of the honey exhibits in this country the comb honey from it has carried off the first prize. Some of the finest honey we have ever seen was produced in Danzenbaker sections; and in the opinion of those who have given the hive and system an extended trial, there is nothing to equal it for the production of a fine article of comb honey. Indeed, in some markets comb honey from Danzenbaker sections commands one and sometimes two cents more per pound than other frames.

Mr. Danzenbaker has long been an advocate of warm supers and warm hives; for he has always insisted that, for the production of comb honey, the super and hive must be warm in order to do the best work in wax-building. To a very great extent the Danzenbaker hive is double-walled; and the seams in the super are especially protected by a special paraffin mat which goes with every hive.

The brood-chamber itself has the same dimensions as the regular 10-frame box-tailed Langstroth hive, except that it is shallower; that is, it takes 10 closed-end brood-frames 7½ inches deep and 17 inches long. Each brood frame is supported by a pivot in the center of the end-bars, so that it may be readily reversed. These brood-frames retain all the advantages of frames peculiar to this class; viz., being reversible, they insure the building of combs to the bottom-bar; as there is no opportunities for air-currents around the ends of the frames, combs, as a rule, are built clear out to the end bars. This case feature makes them warmer for winter. When a division-board is used on each side we have, practically a dead-air space around the ends and sides of the brood nest.

The Danzenbaker brood-chamber can be used with any of our 10-frame supers, either comb or extracted; with any of the 10-frame covers, bottoms, or hive-stands, or with the 10-frame Jumbo hive. There are four patents on the Danzen and fixtures.

NOTICE.—The Danzenbaker hive is not made in the 8-frame widths.

THE A. I. ROOT CO., Medina, Ohio.

GEORGE W. YORK & CO., 144 & 146 Erie St., CHICAGO, ILL., are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO. Send to them for their free Catalog.
MISS ADA L. PICKARD,
Secretary of the Wisconsin State Bee-Keepers' Association.
Red Clover Queens

LONG-TONGUED BEEs ARE DEMANDED NOW.

ONE Untested Italian Queen FREE as a Premium for sending us TWO new subscribers to the American Bee Journal for one year (with $2; or, one Tested Queen free as a premium for sending us FOUR new subscribers (with $4.00.)

We have arranged with one of the oldest and best queen-breeders (having many years' experience) to rear queens for this coming season. His bees average quite a good deal the longest tongues of any yet measured. The Breeder will use is direct from Italy, having imported her herself. Her worker-bees are large, somewhat leather-colored, very gentle, and scarcely requiring veil or smoke. They stored red clover honey last season.

Orders for these fine, "long-reach" queens will be filled in rotation—"first come, first served"—beginning about June 10th. It is expected that orders can be filled quite promptly, as a large number of nuclei will be run. All queens will be guaranteed to arrive in good condition and all will be shipped unless otherwise ordered.

CASH PRICES of these fine queens will be as follows: Untested, $1.00 each; Tested, $2.00 each. Send all orders to

GEORGE W. YORK & CO.
144 & 146 Erie St., CHICAGO, ILL.

28 cents Cash paid for Beeswax. ** This is a good time to send in your Beeswax. We are paying 28 cents a pound—CASH—for best yellow, upon its receipt, or 20 cents in trade. Impure wax not taken at any price.

Address as follows, very plainly,

GEORGE W. YORK & CO., 144 & 146 Erie St., CHICAGO.

Best White Alfalfa or Basswood Extracted Honey
ALL IN 60-POUND TIN CANS

ALFALFA HONEY....... This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.

BASSWOOD HONEY....... This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms in Wisconsin. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—one 60-pound can, 95 cents per pound; two cans, 9 cents per pound; four or more cans, 85 cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. The cans are boxt.

Order the Above Honey and then Sell It.

We would suggest that these bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

Address,
GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, I11.
Make Haste Slowly is very good advice. Mr. Doolittle, in the Progressive Bee-keeper, says: "Being hasty in adopting new methods and ideas is unwise. Test them thoroly before entering into them largely. Heavy investments, once in a great while, give large returns, but only too often failure follows, unless one makes haste slowly. Especially is this true of apiiculture." Verily, the one who is wise enough to hasten slowly is likely to be here longer, or have the larger success with bees.

Sowing Sweet Clover Seed.—As several of our readers have requested directions for sowing sweet clover seed, we will quote from those who have had much experience, as reported in Gleanings in Bee Culture:

Mr. H. R. Boardman, of Huron Co., Ohio, writes this paragraph: "For field culture I sow sufficient seed to get a good liberal catch, and not sow more land than I could and do this. It, if added to the acre of the unmixed seed is not too much. The spring of the year I think is the best time to sow it. I will make a good catch on wheat or rye ground, but I think I should prefer to harrow or cultivate it in deep with a light crop of oats."

Mr. G. J. Yoder, of Cass Co., Mo., gives the following about where sweet clover should be sown, and something about cutting and threshing the seed:

"It will grow almost anywhere, even on very rocky hillsides and waste lands, but I prefer to sow where I can keep control of the land and get a crop of bloom and a crop of seed; then the next spring a crop of some kind, and in the fall a crop of hay, or to wheat in the fall, and in the fall a fall a crop of hay."

"Every other year it resids itself; but if put to cultivated crops a few years it can all be killed out. I made a garden-spot on a sweet-clover patch where there were millions of seeds, and in two years it was all gone.

"With us it grows from four to eight feet high, thus making it almost impossible to get it into a thrasher or harrower. But put it with a self-rake reaper, then make a platform on a 16-foot hay-rack, placing it on a skid made of poles bolted together with cross-pieces; then hitch three horses to it, and pull it to the field. With two light poles about eight feet long, and just heavy enough for a man to have, as well as two pitch-forks, we are ready for business. Now fill your platform, not too full; and if the clover is very dry, a few good strokes will land the seed in the bottom of the platform. Now tumble out the refuse; drive up, put more on, and so on around the field. A little experience will show how this should be done. When all is threshed off, run it a thrasher, and you have the bokhara seed."

Mr. Wm. Stolley, of Hall Co., Neb., in an article in the American Bee Journal for the year 1895, wrote this paragraph:

"Treating meatloaf exclusively as a forage-plant, I will say that I have sown 15 pounds of seed to the acre, and secured a good stand. I have sown early in the fall, so as to insure good rooting of the young plants before frost; and I have sown also late in the winter, so as to allow the seed to take advantage of the early spring moisture, with the same satisfactory results. Even the stubble of small grain, or a corn-field, is good enough for sweet clover without further cultivation, except a slight harrowing, and it will take care of itself in this part of the world. I have frequently scattered the seed indiscriminately on vacant places, on public roads, where noxious and worthless weeds were growing, and three years later the sweet clover had run out the weeds entirely. But let me state right here, that sweet clover growing on and alongside of public highways should be cut about June 20th, so as to dwarf the growth of the plants. If this is neglected, sweet clover is likely to grow so rank and high as to make it a nuisance in winter, by causing the drifting snow to hang up, thus making the public road impassable. Many rank weeds, however, generally growing now on public roads, are just as objectionable in this respect as sweet clover. By mowing it the middle or 20th of June first, if the aim is to make it profitable for the apstariist as a honey-producer, sweet clover will furnish bee-pasturage until frost kills all growing vegetation, and is not objectionable in any way to anybody if growing on the public highways. I have seen millions of acres of land over which the honey-workers have been kept up and it keeps the roads in good condition. In a mild and late autumn I have seen meillot thus treated blooming in December, and the bees at work on it here in Nebraska."
Association's influence gets every possible profit and delight out of his bees.

31.-To protect and defend its members in their lawful rights. We insist that bee-keeping is a lawful and honorable occupation, as history, and as much deserving of protection as any other rural pursuit, but ignorance and jealousy are not yet outgrown, and bee-keepers are never safe until they understand and maintain their rights. An efficient organization can do much good toward this end, as has already been proven.

32.-To enforce laws against the adulteration of honey. This is a matter of direct concern and need. Bees in cities and towns are not as well cared for as those in the country, and the danger of adulteration is greater. Pure honey is an article of great importance, and the legislators of every State have enacted laws to protect the purity of honey. This Association purposes to spend money if necessary to enforce them. Pure honey cannot be produced and sold in competition with glucose syrup, and as this substance is the chief adulterant of honey, there is need of anti-adulteration laws in every State, and strict enforcement of the same.

Some of the things this present organization has done.

It has endeavored to prevent quarrels and litigation. The present Manager is for peace if it can be obtained honestly. He does not carry a chip on his shoulder during some one to knock it off. He tries to avoid troublesome lawsuits, and believes he has done so in many cases. This doesn't bring any glory to the Association, but it is beneficial and praiseworthy nevertheless.

With that object in view, a 12-page pamphlet on the benefits of bees to horticulture, and the danger and uselessness of spraying when new, has been prepared for distribution where needed.

Many jealous neighbors have been deterred from threatening attacks on bee-keepers by judicious circulars and letters.

The aid given by this Association to prosecute adulterators of honey in Chicago, in 1899, had a wholesome effect, as we have been credibly informed. If not all was accomplished which was desired and aimed at, the results hastened the branding of adulterated honey in the country so as to denote its true character.

During the fall of 1900 there appeared in many of the Eastern papers highly sensational accounts of a lawsuit between a fruit-grower and a bee-keeper, tried in the court of New York, the defendant's bees had ruined plaintiff's crop of peaches. In justice court the bee-keeper lost. The Association had the case appealed, and after a full trial, at which every argument and artifice known to skillful lawyers was resorted to by plaintiff, the Association produced enough expert evidence to completely turn the tide, and the bees were exonerated.

Had this case gone the other way there is no knowing how many other bee-keepers would have had to quit business or defend a like suit.

The opening of this case, and the valuable precedent establish, which will be quoted in all the courts of the country for years to come, is a triumph for the National Bee-keepers' Association, and worthy many times its cost.

If an Association for mutual protection and the general advancement of the art and science of apiculture meets with the approbation of any bee-keeper who is not already a member, he is hereby invited to co-operate.

The annual membership fee is $1.00. It may begin at any time during the year, and amount sent to the undersigned will be duly entered and acknowledged.

EUGENE SECOR,
Forest City, Iowa,
General Manager and Treasurer.

The number of drones needed in an apiary is a thing upon which all are not yet agreed. At this time of year, when one begins to plan for next season, it may be well to refer to Mr. C. A. Meinert's ideas somewhat settled on the subject, so as to know whether to encourage the production of drones or to discourage it by controlling the kind of comb in the hive. Mr. Meinert's series of articles on this subject will be of great service in the way of helping to decide this question.

The first objection likely to be urged against allowing the presence of many drones is that it is allowing a host of useless consumers that add nothing to the common stock. But if they are of service in other ways, they may earn the food they eat without gathering it for themselves.

It can not be denied that drones may be of real service to help keep up the heat of the colony, but it is replied to this that in the spring, when there is the most need of heat-producers, the drones are wanting, and when they are present in numbers the weather is so hot that a set of fanners must keep at work to make their lordships comfortably cool. Further, it is argued that a pound of workers are just as useful in keeping up the heat as a pound of drones; so the argument for drones as heat-producers is hardly valid.

In an apiary of 50 colonies thousands of drones are flying that are never needed. Why not restrict the number to the 50 or 150 that will actually meet the virgin queens? The answer is not difficult. With the large number always present, it has been many times observed that a virgin makes a successful flight not until the second or third attempt. If no drones were in the air except the one she was expected to meet, the chance of such meeting would be rather small, and the chance of being caught by some bird rather large. Besides, when a large number is present, there is a chance for selection. The most active and vigorous drone is the successful one, and this tends to the improvement of stock. One has but to observe Nature to note that each colony has a large number of drones, and it may not be wise to make so violent a departure from Nature as to suppress nine-tenths of the drones she would provide.

But it is a departure from Nature to mass 10, 50, or 100 colonies in one place, and no more drones are needed for the whole lot than would be needed for a single colony. Consequently the drones may be restricted to one of the two or three of the best colonies, thus adding greatly to the selection of the best.

So the probability is that in the average apiary there need be no anxiety lest there be a lack of drones, and the wise bee-keeper will take advantage of this by seeing that no drones are encouraged in mediocre colonies, but that they are suppressed in all but a few of the very best. If more attention were given to this, there would be a distinct increase in the average yield of honey per colony.

* * *

The Weekly Budget.

* * *

The Frank B. White Company, of Chicago, is one of the cleanest and most honorable advertising firms in the world. It is an organization of young men who are banded together to handle the advertising for such firms of business men as desire to use the columns of the general agricultural press. Mr. Frank B. White is the much-respected president or head of the Company, and a man whom to know is to love. Recently he conceived the idea of tendering a dinner or banquet, and sent out invitations, the following being a sample:

Frank B. White,
Chicago, March 29, 1901.
Mr. George W. York, Editor American Bee Journal.
Dear Sir:—I desire to give my business associates, and those occupying the more responsible positions in connection with our business here, a dinner at the Union League Club, Thursday evening, March 31st, at 6:30 p.m., and I trust nothing will prevent your being present.
Very truly yours,
Frank B. White.

Of course we were there, and it was a most delightful occasion. After doing full justice to the bounteous and tempting viands placed on a circular table before the assembled guests, several hours were spent in "after dinner" toasts or short speeches. There were about 20 of the employees of the firm present, and those financially interested. Each department of the rapidly developing business was called on to respond to an assigned topic, and each indicated the sprouting of Chauncey Depew wings of eloquence and wit, Mr. White, as host, speaking first.

The last speaker was the editor of the American Bee Journal after which one of the prominent employees presented to Mr. White a written and signed expression of appreciation and esteem in which he is held by all the employees. It was a sincere testimony, and one highly prized by the recipient, who merits all the kind things that were said of him on that enjoyable occasion.

* * *

Mr. C. Thurmans, of Wabash Co., Ills., about six weeks ago met with a serious accident, his horses running away with him in a sleigh. He was thrown out on a lot of logs lying along the roadbed, while the horses were going at a furious rate of speed. They were frightened by dogs running against them, causing them to become unmanageable. While no bones were broken, Mr. T.'s neck and hips were badly bruised and strained. He is improving slowly, we are glad to report, and all will unite in the hope that he may soon fully recover.

* * *

Prof. Cook having been quite sick recently accounts for the non-appearance of "The Home Circle" department in several issues. He has recovered now, so we trust that all may go on again without further interruption after this week.
Convention Proceedings.


BY ADA L. PICKARD.

The 17th annual convention of the Wisconsin Bee-Keepers Association was held at Madison, Feb. 5 and 6, 1901.

The meeting opened with a fair attendance considering the distance that bee-keepers are required to travel, and the number of Wisconsin bee-keepers who attended the national convention held in Chicago.

Pres. N. E. France asked the convention to come to order, and the meeting with well-chosen remarks after which the secretary read the minutes of the last meeting, which were approved.

The opening session was largely devoted to the discussion of a bill which had been introduced in the Wisconsin Assembly by providing that the number and value of the colonies of bees be inserted in the assessment roll, the same as other personal property.

The bill further provided that colonies of bees be moved about from place to place for the purpose of extracting honey, the tax to be assessed on each colony $1.00 per colony for each month or part of months. When that bill was introduced the State bee-hive was kicked, and each individual made a great roar. The bill was dis- cussed very thoroughly. The bee-keepers did not object to the taxation of bees as the majority now pay taxes on their bees, but it seemed that the assessment varied greatly, and seems very unjust. Thrown the State bees have been assessed from 25 cents to $1.50, and even as high as $2.00 per colony, while selling one of the same size on the market at 25 cents.

The unanimous voice of the bee-keepers favored the taxation of bees, for if bees were taxable property we could claim protection from the State.

It was the latter part of the bill to which the objection was offered. On motion a committee was appointed by the presiding officer for the purpose of writing a new bill to oppose the bill. The committee appointed was N. E. France, Jacob Hoffman, Elias Fox, and Ada L. Pickard.

At an appointed time the committee went before the legisla tive committee and then the work of the committee and the united efforts of the Bee-Keepers Association, the bill has been indefinitely postponed—virtually the bill is killed.

At the close of the discussion pertaining to the bill the convention stood adjourned until 1:30 p.m., when Pres. France called the meeting to order. On motion, Editors Hutcheson, Root, and York were made advisory members.

WINTERING BEES.

H. P. Miner read a paper on "Cellar or Outdoor Wintering," after which there was a lively discussion. Mr. Lapthorn said he had wintered bees both ways, but preferred the single-wall hives in cellars to the chaff hives. Mr. Ochsner favored the chaff hives for winter use, but not for summer, as he has had losses in combs and honey, from the fact that the chaff hives gets so hot during the hot weather, causing the combs to melt down. If chaff hives were used in winter, he suggested that they be transferred to single-wall hives in May. The discussion was summed up in not so much how or where to winter the bees, but to strike the bee-note of success depends upon getting the workers at the proper time for your location.

A recess was given the members for the opportunity of paying the dues to the State and National Associations, and the dollars rolled in almost faster than the secretary could book the names.

H. Lapthorn read a paper on "How to maintain the present prices of honey in the event of a good honey crop." In speaking of the good prices of honey he said, "Dealers go thru the country and buy up the honey from small producers, put it up in good shape and sell it for a good price. It is better to sell to the jobber if not willing or able to hold for good prices; never sell at low prices to retailers."

Here was a simple method of detecting adulteration in extracted honey? Ans.—Mix equal parts of honey and wood-alcohol together; stir until thoroughly mix. If sample contains gluten it will turn cloudy, if not it will remain clear. It does not make any difference what kind of honey you test.

Ques.—How can aster honey be kept from granulating within ten days after storing, regardless of temperature? Ans.—Do not know.

Ques.—Where is the proper place to keep extracted honey? Ans.—In a dry place.

Ques.—What is the best package for extracted honey? Ans.—(a.) The best package for storage and shipping the honey is the 55-gallon barrel. It has been found a great advantage to paraffine the barrels before using, as it saves soakage. The cost to paraffine a 350-pound barrel is about 10 cents. (b.) The best package for retail trade is the 60-pound tin cans, or pails holding 5 and 13 pounds each.

Ques.—Does it pay tocrate comb honey? Ans.—Yes. But the cases should be crated properly with plenty of straw for packing.

Ques.—How many combs should be left in an 8-frame hive for cellar wintering? Ans.—Majority favored eight.

Ques.—Is it advisable for the State Bee-Keepers' Association to recommend an experimental apiary in Wisconsin? Ans.—Yes. It was recommended that the Association recommend to the Experimental Station of Wisconsin to offer to donate his services if such an apiary should be started. A committee was appointed to visit the experimental station, composed of N. E. France, Jacob Hoffman, and Ada L. Pickard.

An adjournment was then taken until 7:30 p.m., when the convention was again well attended by Editors E. R. Root and W. Z. Hutchinson, who presented their instructive and entertaining stereopticon views, which must be seen to be appreciated. The views were most entertaining as being well paid for attending the convention, save the valuable information received from the papers read and discussions which followed.

SECOND DAY—Morning Session.

The morning session opened at 9:30 with a business program. The report of the treasurer was read and approved. The report of the officers resulted in the following: President, N. E. France; vice-president, Jacob Hoffman; secretary, Ada L. Pickard; Richland Center; treasurer, H. Lapthorn. The judge and alternate judge of the apiarian department of the State Fair were named F. Wilcox as judge, and N. E. France as alternate. On motion, the secretary cast a ballot recommending N. E. France as inspector of foul brood.

BEE-KEEPERS' HONEY EXCHANGE.

The secretary read a paper on "The Bee-Keepers' Honey Exchange," by C. A. Hatch, which was listened to with great interest. Mr. Root opened the discussion and mentioned the Colorado Bee-Keepers' Exchange, and said it was a good thing, enabling the bee-keepers to get supplies cheaper, but a bad thing for the supply dealer. The first thing to make the exchange a success is to have a good business man as business manager, who has the interest of every one in mind. It was thought not advisable to organize a honey exchange in this State, because the other State conventions have a chance to keep in touch with the prices.

E. D. Ochsner did not read his paper on "The Outlook for the Bee-Keepers' Exhibit at the Pan-American Exposition in 1901," because an expression of the convention was taken in regard to making an exhibit, and it was thought not advisable to make an exhibit because the appropriation is so small.

F. Minnick read his paper on "Short Cuts in Extracting." It was received with much enthusiasm. A very interesting discussion followed, and many new ideas were advanced. The afternoon session was opened by Pres. France reading and discussing the laws pertaining to foul brood.

The question-box being full, it was again opened.

The agent of the Citizens' Business League of Milwaukee, gave a very cordial call for the next meeting of the Association to be held in Milwaukee. On motion, the executive committee was authorized to name time and place where the next meeting shall be held. The members favored Madison.

The convention then adjourned sine die.

ADA L. PICKARD, Sec.

[The interesting papers read at the above convention will appear later, so far as we are able to secure them.—Editor.]

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is a beauty and is being predicted. We shall have a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at $1.00.
A at the dinner table my wife past the honey to Mr. Bond, saying as she did so: "Honey is almost as indispensable at our table as water. Mr. Bond. We use it at the rate of a pound per day the year thru. My husband thinks it is better than anything else, and I guess he knew no more than I did this morning about bees, for I remember hearing him mention the 'king-bee,' but never the queen-bee, of the hive. He had some very queer notions about bees, as the Pennsylvania Dutch all have and I never knew one that didn't keep a colony or more. You may have heard about their superstitious notion that when any one dies in the family all the bees will die, too, unless some one goes out at midnight and whispers the sad news to each hive."

"How many colonies of bees have you now, Mr. Bond?" I inquired.

There are some 45 or more. They are not all in one place, like yours, so I can't tell exactly how many there are. You see, I have always been in the habit of leaving them just where I found the swarm when I hived it. My hives are all the old style that my father used—square boxes with cross-sticks in them."

After dinner Mr. Bond returned with me to the honey-house, and, at his request, I took him to the honey-room and showed him my 1,600 pounds of honey, all in one-pound sections, and some of the cases ready for the market. After a minute's contemplation of the stock of white boxes, Mr. Bond exclaimed: "Never, in all my life, have I seen so much beautiful sweetness!"

Returning to my work-room, Mr. Bond turned to me, before he sat down, and said: "Now, then, Mrs. Gehring, will you please tell me, as briefly and plainly as you can, how you manage to get at the rate of 100 pounds of honey to the colony, and inside of 90 days' time?"

"I can tell you plainly enough how it is done," I replied, "but I fear I am not equal to the task of telling it very briefly. It is quite a lengthy and complicated story, Mr. Bond. The best way will be, I think, to take one hive as an example and illustrate the whole story as I go along. To do that, however, it will be necessary for you to go with me to the spot where the hive stands, so that I can explain everything to your eyes, as well as to your ears."

"What do you say to my plan, Mr. Bond?"

Mr. Bond did not object as strongly as I had expected he would, having in mind his manifest enthusiasm. He looked meditatively at the floor between his feet, twirling his straw hat slowly with his right hand, while with his left he gently stroked his nose, which, by the way, had not quite regained its normal size and color. At last he looked up and said: "Your plan is no doubt all right so far as you are concerned; but it looks a little bit risky-like for me. You see, I cannot quite forget my little unpleasantness with your 'well-behaved bees' this morning."

"But I shall fit you out with a bee-knight armor that thoroughly protects your face. Your hands you can put into the bee-pockets, if any attack is made on them. And, in the event of an attack, I procured from a small closet two bee-veils and a Bingham bee-smoker, and, handing one of the veils to him, I said: "The right kind of a bee-veil is a valuable article to any bee-man who has been recently stung. These circumstances. This is my own invention, tho not patented. I have seen some that are patented that I wouldn't have as a gift. This one, you see, is a very simple affair, not much larger than a man's hand. I will tell you how to make one like it, then you can get the material before you go home, and show your wife how to make one:

"Take half a yard of cheese-cloth and double it lengthwise. Sew up the open side about half way. Cut the other side with a pair of scissors to correspond lengthwise. Hem or bind the raw edges. Insert a rubber-cord band intended for the top, short enough to fit tightly around the crown of your hat, like a pucker-string. Now take a piece of silk bobbinet large enough to reach from the middle of your forehead to your chin, and from one ear to the other, and insert it in a square hole in the front of the upper end of your cheese-cloth sack in such a way that when the veil is in place the little silk veil is directly in front of your face. The open side of the face veil is called the front, and the other end is called the back of the veil. I hope this is now—carefully tuck inside your vest, or your coat when you wear one—which is then buttoned up, and—are there you! Your hat-rim should not be very wide, of course, unless you make a long veil like the one I have described. The meshes of the silk bobbinet should be rather fine, but not too close to obstruct your vision.

"Now, when you call for this bobbinet stuff at the store the clerk will possibly tell you that the cotton kind will do just as well, and is cheaper. But, let me caution you, never allow any one to induce you to take anything but just what I have told you. If you ever do, you will find out why I have warned you, without my telling it now.

"Now, I continued, 'I will start this little machine we call a smoker, and then we are ready for business. Let me show you how to manage the thing properly, Mr. Bond. First, you see, I remove the end, or nozzle, taking care not to remove any of the circular rings which hold it in place. Next, I take a cotton or an old linen rag, light it with a match and drop it to the bottom of the cylinder. Then I carefully drop in some more rags, gradually filling the smoker, but rather loosely, so that the fire is not extinguished. I leave the smoker standing nozzle-end upward all this time, you see, because in that position it acts like a chimney. When it is full and well started I replace the nozzle, put a handful of fuel-rags in my coat-packet, take the smoker and give it a few minutes."

On the way to the hive I said to Mr. Bond: "All the bee-books in use recommend the use of broken corn-cobs or punk wood as smoker-fuel. But I don't like either. Both are liable to become damp, and they are not as easy to start as other fuels. Besides, they are more dangerous. Bees are very much on the way in the smoker they make too much heat. When I need a smoker in a hurry—and that is almost always the case—give me cotton-rags for smoker-fuel every time."

"Well, here we are," I said, proceeding to remove the cover of the hive I had selected for the purpose in hand. Then taking the smoker and giving it two or three vigorous puffs to start a good volume of smoke, I went to one side of the front of the hive and blew smoke into the hive thru the bee-chest for some time. Afterwards, when it stopped smoking, I removed the smoker with slow, steady pressure, so as not to alarm the bees with the puffling noise made by the smoker when working with a short, quick motion.

"I then told him how to fill himself with honey," I explained to Mr. Bond, who was standing a few feet away with his hands in his pockets, watching the proceedings. "We will now wait a few minutes until they have drained themselves."

"What do you do that for?" asked Mr. Bond. Instead of giving him a direct answer I said, "Come and put your ear down near the top of the hive and listen for a moment."

Mr. Bond did so rather reluctantly; after a few seconds, and I said: "You hear them as if making a humming noise, don't you? Well, they make that noise to express their satisfaction. It makes them lazy and good-natured when they are full of honey. Bee-keepers know this, and take advantage of the fact when they have a tedious job of manipulation to perform in the apiary. These bees, you see, will be less liable to fight now, or to take wing and give the alarm signal to the hives close by."

(To be continued.)
Weak Colonies in Spring—When to Unite Them.

BY G. M. DOOLITTLE.

A CORRESPONDENT writes that many of his colonies of bees will come out weak in the spring, and wishes me to tell him in the American Bee Journal when and how to unite them.

When colonies of bees come out weak in the spring, it makes one wonder if these two weak colonies are going to survive. If so, they must be united, so that one strong colony may be made from several weak ones. Some suppose that if any uniting of weak colonies is to be done, the earlier in the spring it is accomplished the better the results will be. But from my experience along this line I am positive that such early uniting is a mistake. From some experience several years ago, I came to the conclusion that each would go thru the early spring better alone, and to test the matter I tried the following experiment: I had ten weak colonies and united six in one hive, three in another and left one alone, which was scarcely an average of the whole, as to strength of bees. This uniting was done in the latter part of April, and one and two weeks' time the colony formed by uniting the six was all gone. During the same time the one not united "held its own," while that where the three were put together was scarcely better than was this.

One of the bees having no help had by actual count 85 bees besides the queen, and the one made from the three was 105, according to an entry I find in my diary. As I was then anxious for all the bees I could get, I did the best I could with them without help from other colonies. The bees that were united were stored with honey, besides having enough for winter, the same coming from buckwheat. And other experiments made since then gave like results, so that, of late years, I have ceased altogether to unite in the spring.

After a careful watching I find the reason for this seeming inconsistent state of things to be, that with united colonies the bees seem to be invited to greater activity, by strange bees being thrown together, thus starting a larger and more universal division-board, and their little wear and tear reaching a point where they perish from exhausted vitality, or old age, before any young bees emerge from their cells to take their places; while those not united do very little, and rear only enough brood to take the places of those slowly dying off, keeping their numbers about good till settled warm weather comes, when these few (now) young bees are able to hold five times the brood they could in early spring, so that they now increase rapidly.

From the above it will easily be seen why I would not unite colonies in the season. Of late years I have united just before the honey harvest, as I consider it more profitable to let each colony go thru the season separately, as I did the one having 85 bees. If these colonies were divided among themselves, the best we can hope is that they will become strong enough in bees and honey for winter; while by uniting just before the honey harvest I secured a good yield of honey from the united colony and get the two in good condition for winter. My plan of work in uniting, and looking toward this end, is as follows:

As early in the spring as the bees can be looked over, all of the weaker colonies are shut on as few combs as they have brood, by using a division-board to contract the hive. They are now left till warm weather comes, being sure that all have stores enough where they can conveniently reach them to carry them until this period. They are now built up as rapidly as possible by reversing the brood, etc., so that by June 1st the best of them will have five frames of brood and small stores to carry them down to one for the very weakest. As soon as the best has its five frames filled with brood, down to the very bottom corners, a frame of hatching brood is given to one having but four frames, and an empty comb put in place. By adding a frame of hatching brood in this way I generally take all the bees there are on it right along, only being sure that I do not get the queen, so that all the young bees on this comb help to give strength to the weak one, as the younger ones will not return to their old home.

In a few days a frame of brood and bees are taken from each of those two five-frame colonies, and given to the strong one, and the process is continued till all have five frames each.

Do not make the mistake some do and try to strengthen the very weakest first, for by so doing from one-half to two-thirds of the brood will be liable to perish with some cool spell, as these last colonies have at this time all the brood they can properly care for.

By the above plan we are always safe, and advancing warm weather is in our favor also. In a few days after all have five frames of brood, we are ready to unite, and if all has been done as it should be, the uniting will be done about the time white clover begins to yield honey nicely.

To unite: Go to No. 1 and look at the frames over till the queen is found, when this frame having the queen on it is loosened and put in with the hive. If the hive is divided in two parts in No. 2, when the four frames of brood, bees and all, from No. 1 are carried and placed in each alternate space between the frames of No. 2, closing the hive. Return the frame having the queen on it to No. 1, placing beside it an empty hive, in which the division-board will be placed, and the work is done. In two or three days, put the sections on the hive No. 2, and see what a pile of honey they will store up. At the same time place an empty frame, having only a starter in it, between the two filled ones in No. 1, and in a few days one will have a frame filled with as nice worker-comb as you ever saw, which is much cheaper than to buy foundation. Nearly all the old bees carried to No. 2 will have returned by this time, so that No. 1 is a splendid nucleus, just right for building straight worker-comb, and by giving empty frames as needed this colony will be in good condition for winter, while No. 2 will have given three times the honey the two would have done if left to themselves, or had they been united in early spring.

Onondaga Co., N. Y.

No. 14—Interesting Notes on European Travel.

I THOUGHT that I had well-nigh exhausted the narration of my trip, but our kind editor has the desire of inserting in the American Bee Journal a photograph of the birthplace of my father, Chas. Daumbie, taken from the collection of an amateur photographer who has been dead many years. This photo was taken some 40 years ago, and it would appear, from the half-tone, that the original picture was good, although we are not justified in judging the appearance of the trees in the view.

It was on the 22d of May, 1817, that my father was born, 84 years ago, in the large house at the back of the picture. The nearest building, on the left hand was a blacksmith shop, and you can readily see two large grindstones under a brush shed. The church was being rebuilt, and they are putting the new building right over the old one. The whole village was absolutely deserted; the people had temporarily abandoned the work and boarded up the unfinished portion. The column in front of the church is a public fountain, and it is still there. The near house on the right is a grocery store. The houses, the roofs, as will be noticed, are of slate; the roads, entirely of stone. It takes rafters of wonderful size to bear such a load, and the attic of one of these houses looks like a monstrous structure, but once they are put up, the roofs last till the wood is entirely worn out. The rafters crack under the weight.

The trees at the back of the picture, which seem to flutter in a strong breeze, are on each side of the highway which traverses the village, and the little river is just behind that. At the time when the picture was taken, the public highway was the only means of communication with other towns, but of late years they have been supplied with railroad facilities, telegraph station, telephones, etc. The church is now finished and is a much finer structure than the one in the picture.

This village, Vaux-Sous-Aubigny, is the one which I mentioned in my second letter, page 629. It is the birthplace of my grandfather, when I was a boy, and which I visited with so much pleasure. I had been told on the way to Europe, by foreigners, who, like myself, had visited the home of their boyhood days, that I would find everything changed from what they had known; but no one ever thought to remind me would be very indifferent, and that it would be an all-around disappointment. Such was not my experience, although I had come prepared for a change. In this village as in one or two others that have been visited, and also in the city of my birth, six 20 miles from there, I found plenty of friends, old and new. As a matter of course, the new friends were all apiarists. The treasurer of the old college is an apiarist of some note, and I have seen strange influences with the greatest pleasure. He took pride
in showing me, on his desk, a copy of our "Lang-stroh Revised," with my father's autograph.

In one of these little villages, not far from the one in the picture, I met a man who used to drive a wagon for my maternal grandfather, and with whom I used to ride back and forth to school holidays, when I was 10 or 12 years old. This man, who was then about 32 to 35, is a bee-keeper, and as such I certainly have a right to introduce him to my readers. I must, however, own that he has none but straw skeps, and is not very progressive. When I went to see him during my last trip, he was out in the harvest field with his hired servant and his wife.

The house was made of the cradle, the woman was raking the wheat, and the old man was binding. He is now upward of 70. I walk up to him, he straightened himself and stared at me as in wonder whether the strange visitor was not out of his way. I ask, "This is Mr. V."

"Yes, sir, that is the way," I said.

"Well, I am an old acquaintance," said I. "Oh, I believe you are mistaken, I never saw you before."

"Look at me well: you know me; you have carried me in your arms."

"In my arms? You must have been smaller than you are to-day."

I gave him my name. The poor old fellow hugged me as if I had still been the little boy he had known, and said, "Is that you, my little fellow? and did you come all the way back from America to see your old friends?"

The harvest was dropt for that day. He took me back to the village and we had a good visit, and you may think how much we talked about. We went to look at the bees, but did not stay long with them—we had too many other things to see.

Around that vicinity a new impetus is given to bee-culture, for they have an important bee-association, which comprises a land division covering about the space of one of the small New-England States. This association is beginning the publication of a monthly bee-paper, "Practical Bee-Culture" (L'Apiculteur Pratique), which is very nicely gotten up. Whatever they do, the Europeans are not behind in the number of their bee-publications, for, in France alone, there must be some 10 or 12 of them, published in different places. I have not seen them on my desk now, and they are all wide-awake, all bent upon giving the peasants out of the old rut as rapidly as practicable.

But in these ancient places we saw some very queer people, with very extraordinary ideas about America. A fellow in our city asked me to come with him to pay our respects to a couple of old ladies who had known my folks long before my birth, and who express a wish to see me. They were between 75 and 80 years old. My daughter accompanied me and we were heartily welcomed. The old ladies asked why we had written the usual compliments, raised her spectacles, and looking at my daughter with unfeigned astonishment, said: "Why, your daughter is as white as you are!" She had evidently imagined that, living in that wild country—the backwoods of western America—I had married the daughter of some Indian sachem, some redskin Pocahontas. This amused my friend, as you may understand, and he laughed heartily, and went to great trouble to explain to these good ladies that America was not peopled with such ugly fellows, and that there were many families of the Caucasian race scattered over that great wilderness.

Now, Mr. Editor, I will close this too-long narration which has been continued thru 14 numbers, I will ask forgiveness of those bee-keepers who have followed me thru my hopes of getting a little bee-culture out of this talk, for they have been sadly disappointed. I will also express my thanks for the many kind words spoken in private correspondence by some who seem to have enjoyed my too-personal recollections of the most agreeable voyage I have ever made.

Hancock Co., Ill.

Birthplace of Mr. Chas. Dadant—Taur-Sous-Aubigny, France.

No. 3.—A Review of "A B C of Bee-Culture."

By Prof. A. J. Cook.

(Continued from page 197.)

Page 277.—A word about the queen dying because they have lost their sting. Several times I have had my students secure bees that have lost their sting, it having been pulled out consequent upon use. These were put into a cage and fed. Other bees, uninjured, were put into a cage and fed in the same manner. In two or three days all the first bees were dead, and none of the others, nor were the latter dead for days, even weeks. I would not wish to be understood as holding the view that stinging will necessarily kill a bee, as a slight sting would not pull the sting out and might not do any serious injury. But I believe that when the sting is extracted, it will always end in the death of the bee. The time, however, will vary, which argues that in some cases more injury is done to the internal organs than in others.

Page 290—I am a little skeptical as regards the queen leading out the bees. I would not be sure that Mr. Root was right in his conclusion. This may have been a normal swarm and the queen may have followed them to the old hive rather than have been led by them. In all my experience, I have never known a queen to lead a swarm. Her presence, however, will have much to do in forming the cluster, as every apiarist of experience knows.

Page 357—I think Mr. Doolittle is a poorer philosopher than he is an apiarist. I should have great respect for any opinion he might give in reference to bee-keeping. I am not at all sure of his dictum with reference to swarming. Surely bees do swarm out of their hive from other cause than the instinct to increase. Indeed, I think the old idea of instinct as being the unvarying and inerrant guide of insects and other of the lower animals in their actions will more and more be modified. I think now that our best naturalists are giving it up. Is not all instinct the result of previous acts guided by intelligence? Acts, repeated many times under volition, result in a habit in which case action becomes almost automatic, hardly guided at all by the will. Action that has long been habitual will after a time become almost unvarying, and becomes, perhaps, wholly automatic. The physiologist would call this reflex action with the gray matter of the spinal cord as a center. With man, and to a less degrading degree with other animals, the intelligence often interferes to modify habit and instinct. I believe this is equally true with bees and other lower animals. If I am correct, then swarming will not always follow from the same cause. I think every apiarist will recognize that varying conditions will very greatly modify the habit, or instinct, if you please, of swarming.

Page 362—I was surprised to note that Dr. Miller also gives his authority in favor of bees not clustering in case the queen does not go forth with the swarm. I have always been surprised at such assertions. For many years, I practiced clipping queens' wings, which I believe is always wise policy. I have had hundreds of swarms go forth where the queen was clipt, and so of course could not join them, yet I found it very rare that the colonies failed to cluster. In such cases they will always return to the hive, but in my long experience and observation, it will be
decidedly the exception and not the rule that they return to the hive without forming at least a partial cluster.

Page 299—Mr. Root in referring to turnips writes as follows: "If they are turned under just before going out of bloom, they make one of the most valuable of soil-ing. Thus a good turnip pasturage may be obtained with no extra work except sowing the seed, and the crop will be an actual benefit to the soil if turned under." Has not Mr. Root ever visited his intertubular chamber? A turnip is soil-ing used to refer to cutting green herbage for immediate feeding. When we cut green corn for our cattle, we are then soil-ing. Plowing under a green crop, as I understand it, is not soiling but green manuring. I think, also, that the green crop that works best that with the same crops of the best crops for green manuring. They would add no manurial element to the soil. They would be of advantage in adding humus. They are not very deep-rooted plants, and there is a large amount in the air and combining the nitrogen, it can be utilized for the production of the best crops by the bee forage. Some of the most valuable plants for the bee by excellence for green manuring. The man who is content to plow under the cereals like oats, barley or rye, turnips or weeds, instead of some legume, like clover and peas, is content with a half loaf when it was just as easy to secure a whole one. This latter is all the more valuable in view of the fact that nitrogen is the most expensive fertilizing element which we need to add to our soil.

Page 306—Is it true that all the moisture that is found in the hive, making the sticky mass after bees have been suffocated, comes from honey that the bees have regurgitated? I think there is good reason to believe that much of the moisture found in pollen is the result of its act of respiration. In such cases, bees try hard to cool off. The only possible way that they can do it is by evaporation of water. That they function in some way analogous to our sweating, I think there can be no doubt. That perspiration from the body, I believe the representations will prove that such moisture is more in evidence on such occasions than the honey which the bees regurgitate.

Page 308—Here, again, our author refers to bees separating water from honey while on the wing. I believe this is physically impossible. I have never yet seen this "mist" fall from the bees while flying in the air. The statement has so often been made by others who thought they had seen it that we can hardly doubt but that it had some basis in truth. If such mist does fall from the bees, it is probably by evaporation in the air-tubes, or else excreta from the intestines. This is certainly a matter which deserves very close investigation.

Page 310—The Chinese wax referred to on this page is the product of an insect. It is one of the scale insects or coccids. Thus it is related to the cochineal insect, which, as is well known, gives us our carmine dye. This Chinese wax is very white and is used for making candles. As Mr. Root well says, it is too expensive to be used to adulterate beeswax, and, more than this, detection would be very easy.

Page 321—In speaking of the willow, it is stated that it does not furnish honey, and the late Mr. Quinby is quoted to the same effect. This is certainly not true of all our willows. As is well known, the willow, like our pepper tree, is dioecious, that is, the male and female flowers are on different trees. I have seen the male bloom and over again thick on the blossoms of both. They were visiting, one for pollen and the other for honey. True they might get honey from the willow Apis, a plant-which is used in common gardening. The carvote, or the white willow, in various cases has shown me that they were visiting flowers and gathering nectar from trees not at all infested with plant-lice.

Page 322—On this page, Mr. Root gives an admirable illustration of a paper called "Comparable platy, the willow." Curiously enough, in giving the scientific name he exchanges the generic and the specific names. The plant is known as Epilobium angustifolium, and not, as he puts it, E. angustifolium. E. angustifolium is worthy all the good things he says of it. It is not only excellent for honey but has a most beautiful flower. This plant comes up thick over the burnt areas of northern Michigan, and so is often called fireweed. This name, like that of Indian-pink, is unfortunate, as these names are also given to other plants which are very different.

Page 335—Is it true that dark honey is more unsuitable for wintering than other honey? If we give the reason that some bee-keepers argue, that honey is the transformed nectar of flowers, then surely the above is not correct. It is true, however, that bees often gather nectar from barks, or scale-insect secretion, which I think they transform into honey and store in their hive for use during the winter. While I would not wish to use this latter in any climate where bees can not fly frequently, for purpose of winter food, I should not hesitate at all to use honey from any other dark floral honey for winter food in the apiary.

Page 348—In his glossary, our author gives Apis as the family to which the bee belongs. This should have been the genus to which the bee belongs. I think, with one of our bee-keepers for me to give the groups from first to last in succinct form, to which our pets of the hive belong. The phyllum or branch, which is used to be called Articulata, and which included worms, is now known as Articulata. This is the class Hexapoda, or insects. The former name is given because they all, in the mature state, have six legs. They are called insects because their body is cut up into three well-marked portions, head, thorax and abdomen. The other rings and joints are called these three divisions. Of course this class does not include the lobster class, with their varying number of legs, the eight-legged spiders, or the many-legged myriapods.

The bee belongs to the order Hymenoptera. This word comes from the Greek and means membranous wings. They are so called because they have thin wings like those of the common house-fly. This order does not include butterflies, two-winged flies, beetles, bugs, locusts, etc. The family of the bee is Apidae, a word signifying honey-bee, as the typical genus is Apis. In this family, the larvae are always fed on pollen, and thus the bees are always provided with means for collecting this valuable food substance.

We have a great many bees, from the huge bumble and carpenter bees down to the small solitary bees which are often very beautiful. With very slight exception, none of the bees ever do any harm, and all of them will co-operate with the honey-bee in the valuable work of pollinating the flowers of our fruits and vegetables. The carpenter bees sometimes bore into cornices and window-casing of houses, but rarely do any serious mischief, and can always be killed by the use of a mustard, a kerosene oil. The genus of the honey-bee is Apis, and includes all those bees that have their hind legs best fitted for carrying pollen, and have no tibial spur on these legs. The species of the honey-bee is mellifera, the source of our honey from which we have domesticated, of which there are several races, as the Italian, Syrian, German or Black, Carniolan, etc.

In concluding these views of our three most important bee-books, I wish to say that the task has been altogether pleasant one. There is so much to communicate, so little to criticise. I am proud of our bee-books, and am proud of my brother authors.

Los Angeles Co., Calif.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

Note.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one of the buttons; as it will cause people to ask questions about the busy bee, and many of my bees have started me up a very good sale of more or less honey; at any rate it would give the bee-keeper a superior opportunity to enlighten many people the truth about bees and their honey."
Questions and Answers.

Conducted by

Dr. C. C. Miller, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail. — Editor.)

A Beginner's Questions.

My bees were put into winter quarters very light in store, and I think they won't have enough to bring thru till spring opens. I began feeding too late in the fall, and cold weather started in, so they didn't have time to store much.

1. Can I feed them before good weather comes, or will I have to wait till good weather comes in the spring?
2. How large should the hive-bee entrance be in the spring of the year?
3. Will bees taken from a bee-tree in the woods swarm as much as tame bees do?
4. How much honey does it take to winter a colony of bees?
5. What time do bees generally begin swarming in the spring?
6. How can a person tell when the bees are to swarm?
7. Will bees taken from a tree store as much honey as a tame swarm?
8. How long does it take a new swarm to fill up the brood-chamber after they are hived, when there is lots of honey in the fields?
9. How many times should bees be allowed to swarm?
10. Should the entrance-guard be kept on when robber bees are troublesome?
11. How long does it take bees to fill a super when there is lots of honey in the fields?
12. Where do the bees gather propolis?
13. Should bees have shade on a hot summer day?
14. Do bees need any salt in summer when they build comb?
15. How can I prevent second swarms?
16. Do bees store any nectar from corn, pumpkins and cucumber blossoms?
17. Will putting supers on a ten-frame hive prevent swarming?
18. Do the drones build comb and gather honey when newly hived?
19. Should the honey-board be on top of the frames, that is, between the super and the frames?

Wisconsin.

Answers. — 1. If they have enough stores to last till that time, wait till weather when they are flying. But if you fear their starving before that time, don't wait; you may as well disturb to death as to let them starve to death. If you feed before they are flying, you must make sure they can get the feed. Hang a Doublet feeder close to the cluster, or give them a brood-comb containing syrup, or give them candy right over the cluster.
2. No larger than in the winter, if as large. Anywhere from one to three square inches, according to the strength of the colony.
3. Fully as much.
4. It varies greatly: from 6 to 25 pounds or more. The size of the colony, the character of the winter, whether wintered in cellar or not, all have to do with the matter.
5. If wintered in the cellar, about the first day they are taken out. If wintered outdoors, perhaps about the last of March in Wisconsin. But these are hunger-swarms, or swarms because there is something wrong. Normal swarming for increase comes later in the North than in the South. In Wisconsin there may be rare cases in the last of May, June being as early as it generally begins.
6. By finding a number of queen-cells started in the hive. If a colony swarms the second time, it will generally be somewhere in the neighborhood of eight days after the first time swarm.
7. Just as much as another of the same strength. You will find the colony taken from the tree just as tame as any other.
8. That depends upon the size of the swarm and of the hive, and the time of the swarm. It may be a week, and it may not be till the next year.
9. Once or less.
10. It will be a little help, but is not commonly used for that purpose. Strong colonies are a better guard against robbers.
11. It will be excellent work if done in two weeks. It may be less, but it is often a week more before all sections in the super are sealed.
12. From the buds and twigs of poplar and other trees. It is desirable.
13. They seem to have a liking for salt, and a few bee-keepers take pains to furnish it to them. It perhaps has more attraction to them than comb-building.
14. The swarm on the old stand, and set the old colony close beside it, both facing in the same direction. A week later move the old colony to a new place.
15. Yes; much from pumpkins and vines of that sort, but mostly pollen.
16. Yes, it will be an excellent plan if there are bees enough to fill them; but it may not prevent swarming.
17. I have never seen them engaged in such occupations when first hived.
18. That is the proper place for it if you use one; but honey-boards are not as generally used as formerly, except as queen-excluders.

Spring Questions.

1. I put into winter quarters an even 50 colonies, about 50 Italians and 50 balance blacks. In the fall I ran them all together, made two rows, 12 in each row, back to back, and covered with gable roof like a house. From some cause my Italians went into the winter with less stores than the blacks, but I thought all had an abundance, and could have, though taken two frames from each hive, but as it has turned out fortunately for them I did not do it.
2. Feb. Ist I put them all on their summer stands. At that time I thought they had plenty, but, for fear, I fed all the Italian colonies about five pounds of syrup each. Sunday, March 17th, as I was looking at them I noticed from my best Italian colony the bees crawling all around the front of the hive on the ground, and many dead bees. I got the smoker and looked into the hive and found they were starving not one bit of honey. All my Italians are in the same fix, but not quite so bad as that one. The blacks are, most of them, able to go through but not begin to feed, but I fear too late. What shall I do? We have had no winter, scarcely a day but what the bees have been flying. The peach-trees are all putting out in bloom yesterday and to-day; elm and soft maple are also in bloom, and the early wild flowers. Do you think the elm, maple and peach will provide food for them—that is, can they hold their own on that, or will they keep getting shorter of food?
3. Was it you that made a visit to Sebastian Co., Ark., some weeks ago? I have forgotten who it was. If you kindly give me your impressions on bee-keeping and probable success in that portion of the country, as I live only 75 miles from Ft. Smith. The bee papers give as very little information relating to our part of the country, in fact it's all for Northern bee-keepers.
4. Why have my Italians fallen behind the blacks? The Italians did store just enough honey to carry them thru the winter, but it has turned not enough to do that, while many of my blacks had from 1 to 2 supers of surplus. One early swarm of blacks stored 252 pounds surplus. I bought queens from several of the leading queen-breeders last year, but had very poor success with them. Does it take more stores to run them than blacks? or why is it they are all just ready to starve?
5. I want to clip all my queens. When would you do it—right now, or wait till they are strong &a As they now are they not only open a hive but the robbers are right after me, and just cover the hive after putting in feed. I have to close it entirely up tight. I am nearly discouraged. Tell me what to do, and I will be so thankful.

INDIAN TERRITORY.

Answers. — 1. It is quite possible that the bees will be able to take care of themselves, but it will be well to make sure by giving some feed. In any case it will not be lost. You are fortunate in having weather when they can fly nearly every day, for that makes feeding an easy thing.
2. I have never been in that part of the country, and can give you no reliable information about it.
3. I don't know why the blacks should have done better
than the Italians. Possibly you have black bees that are unusually good and have been unfortunate in not having the best of Italians. More likely the treatment had something to do with it. The blacks were perhaps interfered with and the other bees, the common black bees, queen-cells, etc., the Italians would not have so good a chance. As you had an open winter, the bees flying nearly every day, the bees would use more stores in winter, and it might be that the Italians were extensively put two inch stores faster, but that would not account for the great difference in the amount stored last summer. There is room for considerable suspicion that the blacks had the better chance.

2. Try not to open hives unless absolutely necessary until time of robbing is over, when the bees will get enough to do on flowers that they will turn to honest pursuits. Certainly you should not clip till you can do so without harm to the bees. If you are obliged to open hives, better do it toward evening; then there will be less danger of starting robbing, and if it should trouble a little, darkness will soon come to your relief.

A Dozen Questions.

1. The burning question with me is how to winter bees. This is the fourth year I have tried them in North Dakota, the north of the United States. That year I have them in the same frame building, I have 11 hives closely packed together, and on top of each other, and covered with some wheat chaff. I gave no upward ventilation, left the honey-boards sealed down, put a wood tray, two inches deep under each hive, and with wire-cloth on the entrance 2x3 inches. No ventilation on the bee-house ceiling, above the ceiling it is packed with chaff. The house is warmly built, and an extra door on this winter, which gives two air spaces. I went in last week, and the thermometer was 29 degrees above zero. I could hear the low hum in all the hives I could reach.

Last season on account of the dry weather I got only about 10 lbers. of honey, and surplus honey from the 3½ colonies, spring count, and in September when fixing them for winter I thought they had enough to tide over till spring. Two years ago I took your advice and sowed sweet clover; but for that, last season would have been a blank for honey. The past seasons I have kept down natural swarming by dividing, and extracting from the top hive. The coming season I would not seek more than one swarm from the strong colonies, and would like to know the best methods of dividing for increase. Guided by the American Bee Journal I have tried several ways, but had many failures. I seemed to lose at least time, honey, and sometimes bees. When is the best time to divide; and I want the half of the hives? What is the best time and place where there need to destroy the extra queen-cells they make?

3. I sent South and got a good many young queens by mail; they all came in good order, and there were some fine ones to choose from. I am not satisfied with them for lack of care on my part, not looking out for the other queen in the hive. Now tell me how long they should be without a queen before they have one introduced?

4. If making a nucleus could I take a frame of brood with bees on it and introduce a young queen at the same time? or how many days after?

5. How far apart should nuclei be set to make it safe for young queens to enter her own hive?

6. Do you advise me anything to do with my queens getting lost sometimes?

7. Is there any danger of crowding too many bees into a hive? In September, when taking off the upper story, there were so many bees that they could scarcely all get into the lower hive. Would that hurt them in wintering? or would it be better to give some of the bees to a weak colony?

8. Is there any danger of killing the queen when you mix together bees of different colonies? How do you prevent it?

9. In taking a frame of brood and bees from a strong colony, to build up a weak one, will these bees be liable to kill the queen?

10. Would there be any danger in introducing a young queen to the part that is queenless, after dividing a strong colony? How long should it be before you give it one?

11. Would the bees receive a matured queen-cell as readily as a queen? How long should they be queenless?

12. In dividing a strong colony, how or where would you place the hives?

MINNESOTA.

Answers.—1. It is possible you may have to give up the idea of wintering in that house. It is a hard thing on bees to be in a place where the thermometer stands at 29 degrees continuously. You may say it is much colder than that outdoors. So it is, but when a warm day comes the outdoor bees can have a flight, whereas your bees will not. It is questionable if you should leave the covers sealed down, but if there is a sufficient amount of warm packing over, and once they will be fine. I put two 2-inch trays under the hives is good, but it is not a good thing to fasten the bees in the hive with wire-cloth. When bees want to come out of the hive to die, they ought to have that privilege. You might find that the bees would merely stay there. So as soon as a day comes that is still, with the sun shining, and the thermometer 48 degrees in the shade.

2. If you want no more than one increase from each strong colony (and you are wise in desiring no more), it is possible that natural swarming would be the best thing for you. With that it is easy to prevent second swarms. If you divide artificially, do not begin before the time of swarming is nearly at, there will be no need to destroy queen-cells. Perhaps the nucleus plan may suit you as well as any. Take a colony that is very strong and has a good queen—if not as strong as you wish, make it so by giving brood in advance from other colonies—and take queen-cells with you from these colonies, and put in an empty hive on a new stand. Seven to nine days later form nuclei, giving one each two or three frames of brood and bees from your queenless colony, and seeing that you have one bees to a frame. The queen-cells are at the outer edges of the combs, put them on the central surface, fastening them with a staple or nail. Put the hive with the old queen on the old stand, putting a nucleus in the part of the queen. A week after forming the nucleus give each of them a frame of brood from the other colonies that have not been disturbed; a week later still, one or two frames of brood; and so on till you have a full colony.

3. You may be successful by removing the queen at the same time you give the new one, providing the new one is not releasable too soon; but it is safer to have the new queen releasable four or five days after the removal of the old queen, and to make sure of this with the usual shipping-cage the old queen should be removed two or three days before the new one is put in the hive.

4. If the queen is caged, she should be put into the nucleus at the time it is formed. Two days after it is formed there would be much risk to the nucleus and queen.

5. If the nucleus was formed with queenless bees—and generally it should be—then any kind of a queen, and especially a very young virgin, could be given at once without caging.

6. If there are more than four of them they need not start at all. Two of them may be side by side, almost touching, with the other two facing the opposite direction, the two pairs standing back to back. Then another group of four may come with four feet of space between the two groups, and so on.

7. It may be.

8. Don't be afraid of too many.

9. Generally one of the queens will be saved, but it is well to take the precaution to kill a day or two in advance the other one of the bees you get.

10. Not much danger unless you add nearly as many bees as were already in the weak colony.

11. If the queenless part is put on a new stand there would not be much danger after a day or two. But look out in taking bees from a queen and putting them on a new stand, that they do not desert the brood. It is safer always to form your nuclei of bees already queenless.

12. Generally a queen-cell will be received more readily than a queen. It will be a rare case that any colony will not receive a queen. This is a question of the bees and the worker's care.

This does not refer, however, to bees with laying workers; hard to get them to receive anything unless it be a virgin just out of the cell.

13. If you mean dividing into two parts—a thing that is of doubtful policy—you might set the two side by side on the old stand; then if one should get more bees than it should have you could move it away a few inches and bring up the other.
BELGIAN HARES

CHEAP.

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CHEAP.

PEDIGREE AND COMMON STOCK.

Having bought a Job Lot of a neighbor and added to what I had, I must dispose of same to make room for my increasing flock of Sophistic—3 months and over—with a few bred Does.

ALSO

Italian Queens

of last season's rearing, ready as soon as the weather is warm enough to send thru the mail.

Write for prices.

J. L. STRONG,

Established 1885,

FAIRVIEW, Wilson Co., Tex.

Please mention the Bee Journal.

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We are distributors for ROOT'S GOODS

AT THEIR PRICES for southern Ohio, Indiana, Illinois, West Virginia, Kentucky, and the South.

MUTH'S SQUARE CLASS HONEY-JARS,

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Lowest Freight Rates in the country.

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Successor to C. F. MUTH & Son,

214 & 25 Central Ave., CINCINNATI.

ALBINO QUEENS

If you want the most prolific Queens—if you want the gentliest Bees—if you want the best honey-gatherers you ever saw, please order them from Untested Queens in April. $1.00 Tested, $1.50

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Langstroth on... The Honey Bee

Revised by Dadant—1900 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroughly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.25, or club it with the American Bee Journal for one year—both for $1.75; or, we will mail it to you as a premium for sending us THREE NEW subscribers to the Bee Journal for one year and $1.00.

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250 Poultry Pictures

Illustrating every phase of poultry raising and management. This is a practical book, with a profuse amount of practical and valuable information. It contains 250 large pictures and all the information necessary for the successful management of poultry. It is especially well adapted to the use of poultry raisers. The pictures are all large and well defined. The book contains also about the warranted for 10 years by the manufacturers, which is guaranteed to pay for any other book, or money re- fund, for life. The pictures are made of the best and most reliable materials. The book will be sent to you free of charge. For both 50 and 100, only 75 cents.

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ROOTS GOODS

AT OUR PRICES.

Everything used by bee-keepers.

Prompt service. Low Freight Rates.

NEW CATALOG FREE.

WALTER S. POUDER.

Remove—Queens

I wish to inform my many kind friends and acquaintances that I have removed my store from Merigold, Miss., to Cool Creek, Tenn., where I am making a SPECIALITY OF REARING QUEENS that produce the very prettiest and best workers that work on red clover. All Queens $3.00 each.

DANIEL WURTH, Cool Creek, Anderson Co., Tenn.

Please mention Bee Journal when writing.

BEE-KEEPERS’ SUPPLIES.

To sell you BEE-SUPPLIES ! Our line is all new and complete. Send for our Illustrated Catalog; it will convince you that our Dovetail Hive is the best on the market. Our prices are right, and our service is prompt.

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PULTRY BOOK FREE. 64 pages, illustrated with 32 new, full size reproductions. Send for your copy to INLAND POULTRY JOURNAL, Indianapolis, Ind.

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TENNESSEE QUEENS.

I am the owner of several choice boxy queens located near last season, daughters of select imported and select gold queens, reared 3½ miles apart, and rated to select drones. $1.50 each: untested warranted queens, from same breeders, either strain, 7½ each. No bees owned more than 2½ miles. Discounts from 10 per cent on orders and contracts with dealers a specialty.

H. D. BUELL.
Spring Hill, Tenn.

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Bee-Keepers’ Supplies.

Just received a consignment of the finest up-to-date HIVES and SECTIONS and lids. They are 2½ to none. Complete line of Bee-Keepers’ Supplies on hand. Bees and Queens. Catalog free.

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1024 Miss. Street, St. Paul, Minn.

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Good Instruments.

S.7.65.

This instrument is of the best make and is warranted to answer its purpose. It is made in the best style and is warranted to be the best in the market. It will answer the purpose of the instrument in the best possible manner.

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California ! If you care to know of the best quality of honey or other Apiary supplies, send for a sample copy of California Bee Journal.

The Pacific Rural Press, The leading Horticultural and Agricultural paper of the Pacific States, is handsomely illustrated, $2.00 per annum. Sample copy free.

PACIFIC RURAL PRESS,
30 Market Street, SAN FRANCISCO, CALIF.

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WANTED I A trustworthy box or hive of bees as a starter for bee-keepers who are in apiary work, to learn practical bee-keeping and earn good wages. 100 colonies of bees for sale. C. THEIL- MAN, Theilman’s, Walla Walla Co., WASH.

Please mention American Bee Journal.
BEE-KEEPERS' SUPPLIES

THE FINEST IN THE WORLD.

Our New 1901 Fifty-Two Page Catalog Ready.

Send for a copy. It is free.

G. B. LEWIS COMPANY.

WATERTOWN, WISCONSIN, U. S. A.

A HANDY TOOL-HOLDER!

Sent by Express, for $1.50; or with the Bee Journal one year—both for $2.00.

Every Manufacturer, Miller, Carpenter, Cabinet Maker, Machinist, Wheelwright and Quarryman, Farmer, or any one using a grist-stone, should have one of these Tool-holders. One boy can do the work of two persons, and grind much faster, easier and with perfect accuracy. Will hold any kind of tool, from the smallest chisel to a draw shaver or ax. Extra attachment for sharpening seyde blades included in the above price. The work is done without wetting the hands or soiling the clothes, as the water flows from the operator. If wetted, it is just as easy to any size stone for hand or steam power. is always ready for use, nothing to get out of order, and is absolutely worth 100 times its cost.

No farm is well-equipped unless it has a Tool-holder. Pays for itself in a short time.

How to Use the Holder.

Directions.—The Tool is fastened securely in the Holder by a set-screw and can be ground to the desired level by inserting a pin up the handle of the Tool, which is longer than the desired length. While turning the tool with the right hand, the left rests on an steadies the Holder: the Tool is moved to the left, or left hand, or stone, or examined while grinding, as readily and in the same way as if held in the hands.

For grinding Round-End Tools, the blocks in the Standard are used instead of the notches.

GEORGE W. YORK & CO., 114 & 116 Eric St. — CHICAGO, ILL.

Marshfield Manufacturing Company.

Our Specialty is making SECTIONS, and they are the best in the market. Wisconsin BASSWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free illustrated catalog and price-list.

SA22

Marshfield Manufacturing Co., Marshfield, Wis.

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YELLLOW OR WHITE

Sweet Clover Seed

Free as a Premium

For Sending us One New Subscriber for a Year.

There has been so much written about the white and the yellow variety of sweet clover, that we will simply say here that if one of our present regular subscribers will send us $1 with a new name for this year, we will mail, postpaid, to the one sending the name, to the total of the dollar, either one pound of yellow sweet clover seed, or two pounds of the white sweet clover. This is a good chance to get a start of both kinds of these honey crops. Better send two subscribers (with $2.00) and get the three pounds of seed.

Address, GEORGE W. YORK & CO.,

44 & 146 Erie Street, CHICAGO, ILL.

FREE FOR A MONTH... If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper published in the United States.)

Wool Markets and Sheep has a big business it is the sheep breeder and his industry, first, foremost, and all the time. Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.

Please mention Bee Journal when writing.

The Emerson Binder.

This Emerson stuff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this “Emerson” so further binding is necessary.

GEORGE W. YORK & CO.,

118 Michigan Street, CHICAGO, ILL.

Mistake in “Averaging Up.”

On page 157, J. D. Gehring wonders if F. P. Gunzel’s report of 4,000 pounds from 94 colonies is not a mistake.” One thing is certain, as Mr. Gehring “figures it.” His 170 pounds average is a huge mistake. Would not 349 pounds (nearly) reduce the cause for wonderment? W. M. WRAY.

Bee-Keepers’ Society.

J. P. BLUNK.

Webster Co., Iowa, March 9.

[No, we don’t know anything about fishing, so if Mr. Hasty wants a companion, on such a job, he’d better take Mr. Blunk, who is a diligent student of the late, lamented Isaac Walton.—Editor.]

Mistake in “Wintered Well.”

I wintered 25 colonies in with-packed hives, and up to this date they seem to be lively and doing well. J. A. GOLDEN.

Morgan Co., Ohio, April 1.

Mistake in Mathematics.

In Mr. Getaz’s article, on page 151, a little mistake in mathematics appears, and should be corrected without any delay, because mistakes—according to an old maxim—are no haystacks, and a knowledge to carry 2,000 pounds of material, taking 50 pounds on a trip, to a place 500 yards distant, he will truly have to make 40 trips, but if going to a point from the place of deposit he will have to walk 1,000 yards to complete his trip; therefore, the man carrying 40 pounds on a trip will cover a total of 4,000 yards, and the one carrying 100 pounds will walk one-half the distance, or 20,000 yards. E. F. RENBACH.

Northampton Co., Pa., March 11.

Experience in Getting Subscribers.

The editor has said from time to time that any one could get at least one new subscriber, but we have tried every thing in this line that keeps bees, and sent in 16 names at one time for sample copies, but not one would part with his dollar for subscription, but let his bees rot with foul brood, and then say “Let them go; they don’t gather any honey, anyway, so they might as well be dead as...”
Short of Stores.

Bees in this community are scarce and stores, and the time is critical, but as peach-bloom is now on, with open and warm days, I hope they will pull through without much loss.

L. T. SHIRLEY, M. D.
Pickens Co., S. C., March 29.

Report for 1900—Other Matters.

I have only a small apiary—from 40 to 50 colonies. I have a farm to work on, and the hives are not sold as there is no market here for extracted.

I depend upon the local market and orders by mail. I like calling for comb honey. I disposed of 1,000 pounds of last season's crop in that way, at an average of about 13 cents per pound. I have put bees with weight and grade, and in packing I am careful to have each section clean, properly filled, and as good, or a little better, than the outside exhibition section. In that way I have secured a trade that takes all I can supply at one price. I have seen three and four cases in a light box or crate with hazy foundation in the bottom, and ship by freight, unless ordered otherwise, most points in North Dakota.

Last season was a fairly good one, my yield being 65 pounds of honey to the colony, and 30 percent comb. I make all my own hives, sections, etc. The hives are 14½×11 inches. Inside measure, with a 2½ inch hive. The sections are covered with paper or super; also rabbeted top and bottom to fit. The bottom-board is fastened to the hive with three hooks, one in the middle of the back, and one on either side near the cover. The front is flat, having 2½ inch cleats nailed to it. The cover has three battens at each side. The hives are 3½ inch by width of hive, regulated by a triangular block to suit sections. I have 3½ inch cleats increasing in size to fit the ends of each hive, and taking them out when placing in winter quarters.

I raise the cover slightly and put on the heavier covers with newspapers when placing on the summer stands, then remove the cover, making all tight and warm. I do not remove the paper until settled warm weather, and seldom lose a colony. I allow them to swarm naturally, and place the swarm on a tree in the spring, with newspapers and allowing it to remain two or three days, when I move it to another stand. I usually give them a frame of honeycomb of the same brood, placing it in the middle, and never have a swarm leave the new hive.

I had one new colony that cast a swarm the eleventh day, and don't understand it. I make my brood top-bars 1½ inch, split with a saw to within two inches of the ends. The ends are 1½ inches, with little pieces banded on the edge to serve as spacers. The bottom string, and the framework, is 1½ inch, to prevent the frame from touching the bottom. J. B. KNOWLES.

WINONA, Minn., March 8.

The Thun and the Wheat.—The wheel in its various forms, and the scythe or scythe-blade, are the crude cart-wheel of the ancients to the whirling snail of the modern dynamo, has been one of the most important factors in the evolution of the race. Take away all the wheels of the 20th century, and we would have a pale imitation of the primitive.

As we believe that much de-
We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR

Hives, Extractors

OR ANYTHING YOU WANT IN THE

BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation

are ahead of everything, and cost no more

than others makes. New Catalog and copy

of THE AMERICAN BEE-KEEPER free. Address,

THE W. T. FALGONER MFG. CO.,

JAMESTOWN, N.Y.

** W. M. GERHARD, East Nottinham, N. H.,
carries a full line of our goods at catalog prices.
Order of him and save freight.

WANTED!

25 to 50 colonies of bees in good condition.

Must be cheap.

S. J. DUNNE,

105 S. Forest Ave.,

1146 RIVER FOREST, COOK CO., ILL.

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can

furnish Seed of several of the Clovers by freight

or express, at the following prices, cash with

the order:

** 10th 25th 50th
Sweet Clover (white) ....... 10c $1.20 $2.75 $5.00
Sweet Clover (yellow) ....... 10c $1.50 2.80 6.25 12.00
Crimson Clover ............ 10c 1.20 2.75 5.00
Alsike Clover ................ 10c 1.00 2.75 5.00
White Clover ......... 10c 1.25 3.00 5.00
Alfalfa Clover ............. 10c 1.25 3.00 5.00
Japanese Buckwheat ....... 10c .50 1.00 1.50

Prices subject to market changes.

Single pound 5 cents more than the 5-pound

and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartons. If

wanted by freight, or 10 cents per pound if

wanted by mail.

GEORGE W. YORK & CO.,

144 & 146 Erie Street, • CHICAGO, ILL.

200-Egg Incubator

for $12.00

Perfect in construction and

action. Has given every fortune

egg. Write for catalog and day-

GEO. H. STAHN, Quincy, Ill.

2A2R. Please mention the Bee Journal.

LARISE

To say to the readers of the Bee Journal that

DOOLITTLE...

has concluded to sell

QUEENS in their season

during 1918, at the follow-

ing low prices:

1 Untested Queen $1.00
2 Untested Queens 2.00
1 Tested Queen 3.00
3 Tested Queens 5.00
1 selected Tested Queen 1.00

Extra selected breeding the very best $1.00

Circular free, giving particular regarding each

class of Queens, conditions, etc. Address,

G. M. DOOLITTLE,

Borodino, Onondaga Co., N. Y.

$15.00 and $25.00 Queens

Having a Measured Tongue Reach.

The call for queens of our celebrated $200 imported mother

has been so great that we have decided, in addition to the $2.00,

$4.00, and $6.00 grades of this stock, to offer some $10.00, $15.00,

and even $25.00 of this same blood. But these prices are for tested

queens, the tongues of whose bees have been measured.

The $100.00 queen is guaranteed to produce bees with a tongue-

measurement of 19-100.

The $15.00 queen, 20-100.

The $25.00 queen, 21-100.

These last are very rare and with one exception this (21-100)

is the longest tongue reach yet secured. We reserve the right,

when we do not have the stock with the tongue reach called for,

either to return the money or to send the next lower, remitting

the balance. It would be well for our friends to put in their or-

ders at once, and as soon as we get the grades we will send notice.

When the money is sent, the queens will be forwarded. These

will be put up in the very best manner possible; and while we

guarantee safe arrival in good order to any point in the United

States, on any railway line, we will not guarantee safe intro-

duction. Such valuable queens should be releas on hatching

brood.

N. B.—It seems as if it ought not to be necessary to say that

not a queen-breeder or a large honey-producer should order

these high-priced queens: but it is a fact according to our expe-

rience that beginners with only a few colonies will order our high-

est priced imported queens. Such bee-keepers have no more use

for such queens than a pig has for a wheel-barrow.

THE A. I. ROOT CO.,

U. S. A.

GEORGE W. YORK & CO.,

144 & 146 Erie Street,

are headquarters for Root's BEE-KEEPERS' SUPPLIES IN CHICAGO.

Send them for their free Catalog.
MR. M. B. HOLMES,
Director of the Ontario Bee-Keepers' Association.
(See page 244.)
Red Clover Queens

LONG-TONGUED BEES ARE DEMANDED NOW.

One Untested Italian Queen FREE as a Premium for sending us TWO new subscribers to the American Bee Journal for one year ($1.75); or, one Tested Queen free as a premium for sending us FOUR new subscribers (with $4.00.)

We have arranged with one of the oldest and best queen-breeders (having many years' experience) to rear queens for us the coming season. His bees average quite a good deal the longest tongues of any yet measured. The Breeder he will use is direct from Italy, having imported her himself. Her worker-bees are large, somewhat leather-colored, very gentle, and scarcely requiring veil or smoke. They stored red clover honey last season.

Queens for these fine, "long-tongued" cells will be filled in rotation—"first come, first served"—beginning about June 19th. It is expected that orders can be filled quite promptly, as a large number of nuclei will be run. All queens will be guaranteed to arrive in good condition, and all will be cipt, unless otherwise ordered.

CASH PRICES of these fine queens will be as follows: Untested, $1.00 each; Tested, $2.00 each. Send all orders to

GEORGE W. YORK & CO.
144 & 146 Erie St., CHICAGO, ILL.

28 cents Cash paid for Beeswax. This is a good time to send in your Beeswax. We are paying 28 cents a pound and CASH—for best yellow, upon its receipt, or 30 cents in trade. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO., 144 & 146 Erie St., CHICAGO.

Best White Alfalfa or Basswood Extracted Honey

ALL IN 60-POUND TIN CANS.

ALFALFA HONEY......

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.

A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—one 60-pound can, 9½ cents per pound; two cans, 9 cents per pound; four or more cans, 8½ cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. The cans are boxt.

Order the Above Honey and then Sell It.

We would suggest that those beekeepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

Address,
GEORGE W. YORK & CO., 144 & 146 Erie St., CHICAGO, III.
Freight Rate on Comb Honey.—On page 211 we called attention to the fact that the Western Classification Committee had before it a proposition to raise the freight rate on comb honey. We also urged that everybody interested should address a letter to Mr. J. T. Ripley, chairman of the Western Classification Committee, Room 604, Great Northern Building, Chicago, Ill., protesting against the proposed injustice. Among the responses to our editorial we have received the following from an Eastern commission firm:

GEORGE W. YORK & CO., Chicago, Ill.

Mr. Ripley,—We feel it incumbent upon us to express a strong desire that the rate on comb honey be fairly fixed. Hayward, who proposes to raise the rate, has not given us any reason to suppose that the present rate is inadequate to meet expenses. On the contrary, we believe that the present rate is too low. Moreover, any change in the rate of freight on comb honey should be made in consultation with the beekeepers as well as the railroads. The beekeeper is just as interested in keeping his honey as the railroad is in carrying it. Any change in the rate should not be made without consulting the beekeepers, who are the most interested parties. The rate should be raised in such a way as to reflect the increased cost of handling comb honey and not to penalize the beekeeper.

Sincerely yours,

[Signature]

BOSTON, April 6, 1901.

Blair, Scott & Lee.

In reply to the foregoing most excellent letter, we would say that we have already sent in our protest, as strong as could be made. What is necessary now is, that all the honey commission firms and comb honey shippers everywhere shall simply point in their letters vigorously protesting against the proposition to increase the present too-high freight-rate on comb honey. They should be mailed to Mr. Ripley as above directed.

What you should ask for is a rating of 1st Class—the present rating is 1½ times 1st Class. It should be lowered instead of raised.

The reasons we gave why lower rating should be made were these:

1. The business will not stand such rates. In bulk and value honey compares favorably with 1st Class articles. Under the provision of Rule 4, the carrier assumes no risk whatever for loss or damage. Covering the glass fronts, or parking in plain wooden boxes, would be no advantage, as the fact that the goods can be seen insures careful handling. Honey in plain wooden boxes will be thrown around roughly, the same as any other freight.

2. Other reasons will suggest themselves to our readers. Let us urge immediate action. Write at once—before you do another thing—if you wish to help prevent the enactment of an unjust ruling on the part of the railroads. Many protests coming from all sections of the country will have great weight with the Committee. Mr. Ripley will be in Washington, and are properly interested. Send them direct to him, and make them strong, but courteous.

Spraying During Bloom.—Green’s Fruit-Grower is one of the leading authorities on the subject to which it is devoted. In the March issue it gives some excellent suggestions on spraying fruit-trees, and urges that it be not done while in bloom. Here is what it says, and every bee-keeper should not only read it carefully, but see to it that his neighbors read it—better get your local newspapers to copy it:

SHELL WE SPRAY TREES WHEN IN BLOOM?

In the coming time, to insure success in fruit-growing the fruit-grower will be obliged to manage his orchard in accord with scientific principles. Perhaps farmers with little scientific knowledge will be able to manage an acre or two so as to produce all the fruit required for home consumption; but to grow fruit for market so as to be able to compete with those who grow fine, first-class fruit, he will be obliged to know enough of entomology to know what poisons to use to destroy the different species of insects, and also when to apply those poisons to effect greatest results, and at the same time do the least harm to the trees or fruits. He will also need to know enough of fungology to be able to combat the different kinds of remedies, when those remedies will be most effectual. As it happens, most of the insect enemies come into active life with the first warm days of spring. A few warm days will cause all the eggs in which the insects have past the winter to hatch, and the larvae, which have spent the winter in pupae, to leave their winter abodes and commence crawling over the tree or plant on which they have hatched. In search of the tender parts, which are their most appropriate food. The instinct of the maternal parent guides her to deposit her eggs close to suitable food for the young larvae. Hence we learn that some of the most formidable insect enemies of the fruit and turrit—the bad worm, the case-bearer, the apple-leaf folder, the leaf-crumpler, and several others a little less destructive, are ready to enter the opening bud and commence eating before it is fully expanded, and those very formidable enemies, the tent-caterpillar and the canker-worm, soon follow. There is no period in the life of those insects when they can be so easily destroyed by arsenical poisons as when they first begin to feed. A weak mixture of arsenic will then destroy them while a much stronger mixture may fail to do so when they have attained to larger growth. It is evident, then, that apple-trees should be sprayed with Paris green, or other forms of arsenic, when the buds first begin to swell, certainly when the leaves begin to unfold. As many kinds of fruit are to grow with the warm days of spring, Bordeaux mixture can be profitably mixt with the arsenical poison.

A few years ago, from a mistaken idea of the time when the codling-moth first lays her eggs, orchardists, learn that if they waited until the apple-blossoms fell it would be too late to destroy the larvae, sprayed their trees while in blossom, and bee-keepers complained that their bees were poisoned, and prevailed upon our Legislature to pass a law forbidding spraying while trees are in blossom. Many orchardists felt greatly aggrieved by this law, asserting that they were forbidden to spray just when spraying would do the most good, and that they must sacrifice their apple-crop upon their own land, for the benefit of the bee-keeper who had no claim upon their orchard as a bee-pasture. More recently, a careful observation of the habits of the codling-moth led to the discovery that she does not deposit her eggs immediately after the blossom falls, but several days after the blossom, placing them in the calyx, or blossom end of the fruit, as had always been supposed, she lays them upon the side of the young apple, gluing them to the rind, and that when the egg hatches the larve crawl over the fruit in search of a place of concealment, which they generally find in the partially closed calyx. This seems to show that there is no occasion for haste in spraying immediately after the blossoms fall, but...
that any time before the early closes will answer, when the little cup may be filled with the poisoned water ready to give the worm an hospitable welcome to its first meal.

Still more recent investigations show that it is not only not necessary but actually harmful to spray the colling-worm when the trees are in blossom, because it is a positive detriment to the fruit to spray at such a time. At the late meeting of the Western New York Horticultural Society, Prof. S. H. Strong, of the New York State Experiment Station, at Geneva, detailed some experiments he had made in spraying apple-trees, when in bloom, with Paris green. He experimented in two orchards in Ontario County, and two in Niagara County. Had sprayed some trees in all of the orchards and left others contiguous without spraying. All the trees were full of blossoms. On the trees sprayed, but few apples set, while a very large proportion of the blossoms fell, apparently, before the fruit set in, while on those not sprayed a very large crop of fruit grew. To make the test still more conclusive, he selected trees very full of blossoms, on one side, and sprayed them through to the other side, leaving the other side unsprayed. The result was, on those sides sprayed, the fruit set very sparingly, while on the opposite side, not sprayed, the trees heavy with fruit. Prof. Strong came to the conclusion that where you fairly hit an apple blossoms with Paris green strong enough to kill insects, you will pretty certainly kill the blossom. The organs of reproduction in fruit-blossoms, when fully exposed, are very tender and easily killed. A slight frost, or a long, cold rain, will often leave an orchard covered with blossoms, with little or no fruit. If these experiments shall be confirmed we shall confess that the Legislature "builted better than it knew" that while protecting the lives of the bees it prevented fruit-growers from destroying their fruit.

The foregoing would seem to annul the dangerous advice given by a certain manufacturer of spraying outfits who advises—yes—urges—fruit-growers to spray while their trees are in full bloom. The fruit-growers and bee-keepers should in some way unite in order to prevent the spreading of such harmful instructions as to the spraying of fruit-trees, and do all in their power to have the quoted paragraphs from Green's Fruit-Grower given a wide reading. It is not only in the interest of bee-keepers, but as much for the benefit of the fruit-growers themselves. There should be unity of effort between these two classes of people in order that each may win the best results.

**Beginning Bee-Keeping.**—We have lately received quite a number of letters from people who are contemplating embarking in the bee-business. And the questions they are asking are simply bewildering to a busy man.

Now, we don't object to being helpful along the line of furnishing all the information we possibly can to all enquirers, but we must be allowed to object when it comes to expecting us to sit down and copy out several times a day all that is found in the "A B C of Bee-Culture" and "Adventures on the Honey-Bee," and "The Bee-Keepers Guide." The best we can do is to advise the purchase of one or all of those three books, in connection with a year's subscription to the American Bee Journal, and then let the "other fellow" sit down and "drink in" all he wants.

Every one who intends keeping bees should first get a good supply of the best bee-literature to be had, and then be able to answer many of his own questions. Self-help is the best help. Each should by his own efforts inform himself as far as possible, then when he has exhausted his own resources, call upon others. First get and read a good bee-book thoroughly, then get the bees. Then read your book again. Then you will be ready for a good bee-paper, and, very likely, more bees.

**Finding Queens.**—Very a difficult and annoying procedure. Mr. D. H. Cogshall's method is thus described in the Bee-Keepers' Review:

"Fill a hive with empty combs, set it upon the stand of the colony containing the queen that is to be found, setting the colony to one side. Put a queen-excluding honey-board upon the top of that. Now take the combs, one at a time, from the colony, and shake the bees into the empty hive. The bees will at once run down upon the empty combs below, and the queen is easily found upon the top of the queen-excluding honey-board.

**Sowing Clove Seed.**—We have had several enquiries as to the sowing and growing of clove, or Rocky Mountain bee-plant. We have not ourselves experimented with this in all its beauty, but kindly furnish the information asked for, especially giving the time of sowing, the preparation of the ground, etc. Does it grow on dry soil, in wet land, and in what part of the season does it bloom? Does frost kill it when it is young? We shall be pleased to publish an article covering all the points in connection with this subject.

**The Premiums offered this week are well worth working for.** Look at them.

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**The Weekly Budget.**

Mr. J. C. Wallenmeyer has been engaged to conduct the apiarist department of the Poultry, Bee and Fruit Journal.

Mr. C. P. Dadant was in attendance at the meeting of the Chi, cago Bee-Keepers' Association, held April 4th. It was one of the most successful meetings, both in numbers and interest, that the Association has yet had. And very much was due to the presence of Mr. Dadant. All united in the hope that he will come again.

Prof. J. C. York, principal of the high school at Girard, Ohio, writing us March 26th, said:

"I want to congratulate you upon the skill and taste you have displayed in adding improvement to improvement in the American Bee Journal. Personally, I think there is no magazine superior to the Journal of 1853 as the new Deering self-binders are superior to the old low-down that were in use about 18 years ago. I enjoy The Honey Circle."

Stenoo is accustomed to begin his department of "Pickings from Our Neighbors' Fields" in Gleanings in Bee-Culture with an original rhymical stanza. Lately he had this:

"Don't kill the pretty bumble-bees That hum around the barn; They'll bring the price of clover down, But ne'er a person harm!"

Stenoo certainly must have been sleeping in the barn on a cold night and suffered much harm from it, or he wouldn't be guilty of trying to make "barn" and "harm" rhyme. Now, if he'd had the bees humming around the barn it would have been all right—his stanza would have been less harmed.

We used to try to compose poetry, but it usually turned out to be such decomposed stuff that we long since have discontinued our efforts in that line. Shouldn't wonder if Stenoo would soon follow our good example, unless he reform, and treats the King's English more kindly than in the sample quoted above.

Mr. M. B. Holmes, of Ontario, Canada, is presented on our first page this week. Those of our readers who were present at the Buffalo convention in August, 1897, will recognize it as the picture of the eminent Canadian who contributed the valuable paper at that gathering, on "The Progress of Bee-Keeping in Canada."

Mr. Holmes, for many years, has been connected with the Ontario Bee-Keepers' Association, and that he enjoys the confidence and respect of the members of that great organization is proven by the fact that he has at times held the highest positions of honor within the gift of the Association. He takes a deep interest in all matters pertaining to bee-keepers, and readily responds to the demand of any project which will forward the interest of our industry.

The Ontario Bee-Keepers' Association made an exhibit of 48 tons of honey at the Colonial and Indian Exhibition in London, England, in 1896, Mr. Holmes' contribution to this exhibit being one and one-fourth tons.

Until a few years ago Mr. Holmes resided on his fine farm, but finding it not to be a very good place for a constitution not always the best, he rented his beautiful country home, and purchased a commodious brick residence in the beautiful and thriving village where he now resides, and has plenty of leisure time. He commenced bee-keeping in 1851.

It is always a pleasure to us to present to our readers portraits of the prominent bee-keepers among our Canadian cousins. They have some of the very best representatives of our pursuit over there. We shall never forget attending the National Convention held at Toronto, in 1885, where it was our good fortune to meet many of their number, such as J. B. Hall, Wm. McFoy, R. McKnight, F. A. Gouin, etc. They are all wide awake, and take a great interest in everything pertaining to the apicultural business.

On another page of this issue will be found the paper read by Mr. Holmes at the last meeting of the Ontario Bee-Keepers' Association.
Contributed Articles.

Saving Section-Combs From Foul-Brood Colonies.

BY WILLIAM M'EVOY.

LAST fall foul brood started in one of my out-apiaries. I had the affected colonies removed out of reach of the other bees, and then burned the frames and the hives. My apiaries are arranged for comb-honey production, and at the close of the season the superd, and all the supers were cut out and thrown away, and the foundation from the diseased apiary were piled in with the others, and now I don't know the one from the other.

I find that I have about 200 supers full of sections which contain empty combs, and combs partly filled with honey. Will you kindly tell me what to do with these supers, just as they have been taken off the hive, and ready for use, can be safely used the coming season without spreading the disease?—ILLINOIS, U. S.

In the honey season bees store honey in cells where foul-brood matter has dried down, just the same as they do in other empty cells, and when the bees, in making room for brood in times of honey-flows remove the unscaled honey out of the diseased cells, to partly filled with good honey in the sections above. It will mean as much at once.

If you had extracted the honey out of those sections and then placed them back on the foul-brood colonies, and left them there until the bees lick them out clean and dry, that would have made them perfectly safe to use on any colony of bees. But as the case now stands, you cannot place the sections that contain honey on your brood-chambers without spreading the disease, because some of the combs, when they are placed back in the hive, will have a little of the diseased honey in them, and the bees will feed some of it directly to the larvae as soon as you put them on.

It costs you something to buy these sections, and comb foundation, and it took some time to put the foundation into over 5,000 sections, and your bees added many dollars to their value when they drew out so much foundation into nice combs, and if you had to destroy the 200 supers and their honey, you will have lost a very fair share of your honey. Don't you need anything if you treat as follows: Take every section that has any honey in it, out of the supers, and bring them into a warm room, run the temperature up above summer heat, and leave them there until you can extract the honey out of them easily, then extract the honey out of every section, and after you have done this put all of these sections into supers by themselves. Then put frames with comb foundation starters into empty hives, and on these place queen cages and brood foundation sections, and in the honey season hive your swarms in these prepared empty hives with the extracted sections on where you will get them filled up and finish in the shortest possible time.

All the sections that you have with clean, dry combs in are perfectly safe to use on any of your old hives of bees. When the robbing season is over, and your bees are working nicely in fruit-bloom, take the combs out of the honey and store them in the apiary that was diseased, and hold them so the sun can shine into the bottom of the cells, and very carefully look for stain marks of foul brood on the lower side and bottom of the cells. Foul-brood matter glues itself fast to the lower side and bottom of the cells when it is drying down, and there it will remain just as long as the comb lasts, and such combs can not be made safe to use, but it is entirely different with clean, new, white combs that never had any brood in them. You may feel safe to use on any colony of bees after they have been licked out by the bees until they are clean and dry.

If you find a few cells with the stain marks of foul brood in any of your colonies (a thing you might easily overlook), treat supers, if they are from the honey-flow, but don't waste any time on empty hives that foul brood has been in, because they can not disease any colony of bees.

Woodburn, Ont., Canada.

Producing Extracted Honey—Getting More Of It.

BY G. DAVENPORT.

In order to understand how more surplus extracted honey, with less work and less swarming, can be secured here by the method I am about to describe, if only eight frames are allowed for a brood-nest, than can be when a larger number are used, it will be necessary for me briefly to describe a few things in regard to my locality, the most important of which is that in the spring, after the weather becomes warm enough for brood-rearing to progress rapidly, a queen is but from two to three weeks old when the white harvest commences. Eight frames are all or more than 90 percent of the queens can keep full of brood and eggs before clover bloom; afterwards thru June, July and August, a larger number of frames, with combs, are needed. It will be kept full of brood. But before this extra brood matures into field-bees, the battle has already been fought—like Blucher at Waterloo, they appear too late.

In a locality where the weather, or the time of the main flow, is such that a young queen can occupy a larger number of frames in time so that the brood will mature into field-bees to be of service during the harvest, it would, with many questions with their number of frames, not be necessary to put them to good use. Usually there is enough gathered from early spring until clover bloom to keep brood-rearing up. Strong colonies often secure more often than they can use for this purpose, but what is gathered for the table use, is needed. Now, with strong colonies run for extracted honey, instead of putting on the regular full-depth extracting combs, a set of shallow frames is given them to store this spring honey in, and what they do not use for brood-rearing, they will put into the frames that will collect and occupy these shallow combs almost as soon as they are placed on the hive. Often when the white flow commences these strong colonies will have hardly a pound of honey in the普通 storaged, the surplus will remain nearly full. But, as I have said, this is dark honey, and if it was in the regular extracting frames it would have to be extracted, or the first extracting of choice white clover honey would be so badly colored by it that it would sell for much if any more than half what pure clover would bring.

Now note this: By using this super of shallow combs, we save one extracting, and keep the brood-nest bare of stores. Here, just at or soon after the commencement of the main flow is the time strong colonies prepare to swarm, but when we remove this super containing all their stores, a full-depth story of empty combs is given. Zinc is placed between the two stories, or the wall is cut out, containing the most hatching brood are placed in the upper story, and a like number of empty combs from the upper story are placed in the center of the brood-nest below. A colony so treated will, with me, seldom offer to swarm, no matter how good the season is, provided they are given plenty of drawn comb to store all the nectar they can gather, for there is practically no honey in the brood-chamber at any time during the swarming season.

With 10-frame hives the case is different; the queen, as I have obtained, can never have more than eight of these frames, and the unoccupied space will always be filled with honey before the bees will store any in shallow frames overhead, and honey in the brood-chamber is a great factor to induce swarming. Frames taken out of the comb honey, can, of course, be removed to the upper story at the time it is set on. I have often done this, but it does not have the check on swarming that the entire removal of all old stores does. But I have found that each of these hives, even if the combs containing the most honey are entirely removed, swarming is more apt to occur than with 8 frames, for the reason that with 10 frames, storage in the brood-chamber is more apt to be commenced, or rather continued, if swarmed, and when it is a constant thing, the queen becomes crowded, then swarming is the natural outcome. Even when two full-depth stories are allowed for a brood-chamber, I have often found that the queen would come crowed enough to induce swarming unless a close watch was kept.

If one has time during the main flow to overhaul and extract from these large brood-chambers, swarming can be prevented. The queen is always left in the brood-chamber; the bees, if the queen is allowed access to all of them, but little swarming will take place. But when we come to extract from such at the end of the flow, the amount of surplus found after overhauling the whole outfit will be disappointing if compared with that is secured from colonies whose queens are confined to eight or ten frames.

By the use of these half-depth stories, I have been able to overcome most of the difficulties I found about producing extracted honey in a large way, first in regard to the dark surplus gathered in the spring. When the regular full-depth extracting frames were set on first, most of them had to be extracted before the white flow and with a large
number of colonies this would mean a good deal of work at a time when other important work connected with my research was going on. But the combs I have used, consisting of eight or ten frames, have been completed; and, besides, after extracting this dark honey there would enough remain in the combs to shade the first extracting of white honey so it would not be first-class. Then when the queens are confined to eight or ten frames I found that these colonies would almost always be too light in stores for winter, so that a good deal of feeding was necessary; but with the shallow frames I am able also largely to overcome the work of this, for my practice is to set these supers at the time they are removed, on colonies that are to be run for comb honey, then as soon as they get well started to storing in them, they are raised up and a super containing sections is put on next to the brood-chamber. While this is going on, the worker-combs, including the extracting frames is stored in the honey-house until after the white flow, when they are again, if not already full, placed on the colonies being run for extracted honey, in order to assist them full up during the fall flow. Then all the work about feeding these light colonies is to set on a super containing as many of these filled combs as seems necessary, and from experiments with feeding in this and a similar way with unfinish sections, I believe a colony will winter in a frame at a temperature of 45 or 50 degrees just as well with their stores in a super as they will if in the comb of the brood-chamber.

Through the spring I set some of these supers containing honey in the honey-house as soon as they were removed from the extracting colonies, the fore part of the season—but little of this was sealed, but it kept without grana- lations of nectar during the commencement of the fall flow.

The only trouble I have had about this plan is that the temperatures are liable to damage these shallow combs greatly during the time they are stored. In some manner the moth-eggs get in the combs while they are on the hives. Bi-sulphide of carbon will overcome this with but little work or expense, provided traces enough of the deadly fluid has not remain in the honey to make it unfit for winter stores. I expect to know something definite in regard to this soon, for last fall I subjected all the winter stores of five colonies to liquefying for four hours, which is, longer than is necessary to kill moth-worms and destroy the vitality of the eggs that may be in the combs at the time they are treated.

Southern Minnesota.

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No. 2.—Drone-Bees and Their Utility.

Can We, and Shall We, Control their Production?

BY C. P. DADANT.

We have seen in a former article, why Nature has decreed the rearing of so many drones in each hive. It is in order that each young queen may readily find a mate at her first nuptial flight. We now will consider why some colonies build more drone-combs than others.

When a queen is young and healthy she lays plenty of worker-eggs and seems to prefer it, so if there is any understanding between the queen and her bees, the bees will, to please her, build mostly worker-comb. Thus a new swarm, with a strong and healthy young queen, will naturally begin by building all worker-combs. But if there is a lull in the crop and some of the brood hatches out of the comb already built, the queen will have plenty of room already and the few remaining combs will naturally be the first they are built. For tho' the queen prefers the worker-comb, we must take notice that the workers prefer to build drone-comb, for it is more quickly built and is just as good as the other to contain honey. It is evident from this reason as well as because they need the drone, that a queenless colony will build almost nothing but drone-comb, if we supply a new swarm with a large quantity of worker-comb already built, saved from diseased colonies of the previous season, or give this swarm only one or two empty frames, the result will almost invariably be drone-comb in those frames, for the queen has plenty of room to lay and the bees do not see the need of worker-combs.

In the same manner, if the crop is already well on, and the queen is getting tired of incessant laying of worker-eggs, and seeks for drone-combs as a rest, all or most of the comb will be drone-comb. In such instances a much greater proportion of drone-comb will be built. In early spring, before the bees have begun the busy season, and the hive is only partly full of brood, if at that time we supply a new swarm with an empty frame in the middle of the brood-nest, in a short time the comb will be of worker-combs, because the queen needs worker-combs in this warm spot, even tho' there may be plenty of worker-combs unoccupied at the outer edges of the hive. If the drone-comb is supplied it will soon be filled, for what is done in the warm of the honey crop, the result will be the reverse. In the statement of the foregoing conditions I do not wish to be understood as laying an iron law of nature. No act of Providence is ever to be expected, but the propositions above will prove correct in most instances. So if we wish to have the greatest possi- bility of having the supers full of comb honey, using comb foundation as a guide, we must, as uniformly as practicable, have the combs built by natural swarms, with young queens, and these swarms must not be supplied with a portion of their combs already built. In short, we must either supply the swarm with all combs built or with none.

Since the number of drone-cells in a hive depends very much upon the conditions of the swarm at the time that to lay eggs, which perhaps at the same time cool weather has an approximate idea of the number of drones that will be reared in an average season by an average colony. By looking thru a number of works on apiculture, I find that the approximate number of drones in an average season, has been variously estimated from one-tenth to one-thirtieth. There is no doubt that it varies a great deal. There is no doubt also that the difference in results is in favor of the colony containing few drones, and yet Chesh- brough, in his 'Queen Beekeeping,' says that in the colonies rear the most drones which have the best chances of self-reproduction, since not only their queen stands a better chance of mating, but the queens of other colonies are also inclined to mate with drones of the most prolific colonies, as they are most numerous. Is it advisable for us to control the production of drones in a hive?

Is the drone in the hive of use for other purposes than for the fertilization of young queens? Are the drones of one colony as good for breeding purposes as those of any other colony? If we decide upon the necessity of controlling the drones, is it best to destroy them after they are hatch, or while they are hatchng, or is it best to prevent their production? The first two of these questions would better be considered together, for it is the greater or less usefulness of the drones which will cause us to decide whether it is desirable to control their numbers. It has been asserted over and over again that the drone industry would be greatly increased if we only could prevent drones from appearing in our colonies. The action of the drone is to produce heat and to keep the brood warm in spring. Dzierzon and his English translator, Abbott, disagree on this subject. Dzierzon says in his 'Elements of Apiculture,' that the sole object of the drone is to fertilize young queens. As in the vegetable kingdom, pollen, on the male part of the flower, is produced in abundance, so does Nature produce an abundance of males in a colony of bees, in order that the queen, upon which the well-being of the colony depends, may be fertilized the sooner. It is obvious that drones were not also intended to produce heat in the hive, as has often been attributed to them, for when the young queen has been successfully fertilized and begun laying worker-eggs, there is no longer any necessity of drone brood, and the drones are then eaten by the other bees. By this time the hive has become filled with worker-eggs, and the drones cease to appear in any great number. Hence drones are there for other purposes than to assist in the fertilization of young queens. We have already seen that drones increase the heat in the hive, to keep it warm for the young brood. Also they are needed to assist in the working of the honey, which is the main object of the hive. These drones are also necessary to assistance in the process of nectar conversion, and the formation of honey. All these are important objects of drones. Let us not, then, lose sight of the importance of drones, while we consider the question of drone control. Evidently neither of these writers lays any value upon the drone as a warmth-producer at the beginning or the end of a season, and with good cause, for, in order that the colony should produce its maximum of income, the bees should be reared with expenditure of both labor and heat on the part of the worker-bees at a time when they are not numerous. And if in the place of, say, 2,000 drones, we should secure the same space of worker-brood, say 3,000 worker-bees, it is clear that they will not require any more
heat to be produced, and will in their turn produce as much as the drones would have furnished. Therefore, the only contention between the two writers, that needs any consideration, is whether or not the drones that remain after a colony has cast a swarm are of more use in keeping the hive warm than workers would be.

The contention of Abbott is that if they had been workers, they would have gone with the swarm, while being drones they stay in the hive. This is not altogether correct, for a colony with many drones shows many drones in its swarm. But perhaps more of them return home than of the workers. Yet, Dzierzdn, we must remember, is a great observer; he it was who discovered parthenogenesis in the queen-bee and we must be sure that he does not make statements without good cause, but perhaps the difference in observations comes from the difference in location. Dzierzdn experimented in Germany, while Abbott experimented in England, and there is but little doubt that the summer nights are cooler in Germany than in England, so this would explain Abbott’s regard for the possible use of the drones. Keeping the brood warm for a day or two after the casting of the swarm. I say a day or two, because we all know that at that time the bees are constantly hatching in great numbers, and it takes only a short time to recuperate the loss enough to keep the hive warm. In a colony that swarms, the daily hatch of worker-bees is between two and three thousand, sometimes more, and but little time is needed to recuperate the strength of the colony so as to enable it to take care of itself. Then let us suppose a colony with a minimum of drones. Is it very likely that this colony will actually suffer? Are such instances on record? And in domesticity, is it not entirely practicable for the apiarist, if a hive is left too bare of its bees, by the swarm, to mend this defect by returning a number of the bees to the old hive, after the swarm is hived? Surely, this one item of a possible use of thousand of idlers for a day or two for the sake of warmth, is not sufficient to justify their presence. They are the very ones that help induce the bees to warm early, by their noise every warm day, and by their encumbering presence on the combs at all other times.

So my conclusion would be that we should give but little attention to the possible use of drones for any but fertilizing purposes. If we can avoid the breeding of them, we must surely be well repaid by the additional number of workers that we can rear in their stead.

I will next consider the different methods of getting rid of the drones, or of preventing their being produced, and of making a selection of them for breeding purposes.

Hancock Co., Ill.

To be continued.

Mediterranean Flour-Moth Infesting Honey-Combs.

BY PROF. C. P. GILLETTE.

In the American Bee Journal for March 29, 1900, under the caption, “No Wax-moth in Colorado,” I said:

"But there is a smaller moth that is generally distributed over the country, commonly known as the Mediterranean flour-moth, which I have repeatedly seen infesting honey-comb. The larvae of this insect do not seem to care for wax or honey, but feed upon pollen, and perhaps propolis as well; ... and I have seen them in crated sections of comb honey."

I do not wish to change a word of the short item referred to, but as some fear that my statements might lead a careless reader to think that this insect is common in crated sections of honey from Colorado, I should like to say further that such is not at all the case. As stated above, this insect seems to care only for pollen, and possibly propolis, but not for wax or honey. I do not suppose it would ever be found in sections of crated honey except where the sections are kept for a time in the same building or room with old honey-combs that are infested with this insect. It is only in two or three cases of this sort that I have seen the larvae on sections of comb honey in sections. On one occasion I saw them in considerable numbers over a small number of sections, and on some of the sections they seemed to be feeding upon propolis which the bees had deposited in the corners in considerable quantity.

So this insect would only be of rare occurrence, at most, in section honey, and could no more be looked for from Colorado than from other States, as it is a generally distributed and a well-known pest in flourishing mills in this country.

To enable bee-keepers to recognize this insect and distinguish it from the old "wax-moth," I will refer them to the accompanying illustration (Fig. 1) from Insect Life, Vol. II, U. S. Dep. of Agr. The moth is shown at a and b, the larva at c and at the extreme right, and the pupa or chrysalis at d—all enlarged. The lines at the sides of the figures give the real lengths.

That these larvae can infest old combs badly is illustrated in the reproduction of a photograph of a frame of old comb that is nearly covered with their cocoons, shown at Fig. 2. This engraving is from Bulletin 47 of the Colorado Experiment Station.

Larimer Co., Colo.

Queens—The Best None Too Good.

Read at the convention of the Ontario Bee-Keepers’ Association at Niagara Falls, in December, 1900.

BY M. B. HOLMES.

As stated in the program of this convention, I am to give an address on the subject of "Queens" and it may be presumed that the punster, as he scans the list, will see his opportunity. If he be a sporting man he will at once suggest "The Queen of the Turf," or if he be a society man his thoughts will immediately become centered on "The queen of the party," force of habit and influence of association acting as a matter of course, as the promter behind the scene in these and other similar flights of fancy.

To this class of individuals, if such there be present, I have only to say, that this Association of practical men has convened in this city for purely practical purposes; that it is composed of individuals who are not speculative
merely, but operative in the strictest sense of the term: and that the only queens eligible for consideration at this stage of this regularly organized meeting of Canadian and American bee-keepers, are the queens of our colonies, and mothers of our most wonderful pets—the honey-bees.

The practical man, contemplating the advisability of entering upon the study of bee culture, naturally refuses to be deterred by the appearance of difficulties. He gpns the situation from every point of view, and, when fully convinced of its desirability as a lucrative venture, compiles most assiduously with all the conditions necessary to the complete success of the undertaking.

That all business men are not thus in calculation and execution, goes without saying, and it is also perhaps safe to infer that bee-keepers as a class are not without their failings as business men.

But every bee-keeper knows, or thinks he knows, all about queens, and yet it would seem, if some—perhaps too many—bee-keepers are satisfied by merely knowing that the queen lives in the hive, without any consideration as to her qualifications or ability for the duty which she is to perform. The splendid hives and comb foundations of the day are certainly a boon which every true bee-keeper appreciates, but the great center on which success most largely depends—that "center" at which no "master" bee-keeper can err—is in securing "the good queen" for every colony.

What do I mean by "the good queen"? By the use of the term "good," I mean, a queen that will do the largest amount of work in a given time.

The late Lorenzo Lorain Langstroth, who has been justly styled the Father of American Apiculture, describes a bee "beautish queen" in marvelous terms of his and "The Honey-Bees," as one that will lay 3,500 eggs per day for several weeks in succession during the breeding season.

What bee-keeper of any considerable experience has not had occasion to note the difference between good, medium, and poor queens? The colony with a hundred of bees, so to speak, gaining so rapidly in numerical strength as in some cases to exceed the more populous colony in the next hive, in the actual amount of surplus honey secured for the bee-keeper, is a proof that the good queen was in the colony which had wintered poorly, whereas the well-favored colony had only a medium or poor queen.

Dzierzon, the great German bee-keeper and scientist, says "Queens differ much as to the degree of their fertility." Mr. Langstroth notes an observation made while transferring bees, by counting the eggs dropped on a black cloth in 40 minutes, as the queens of four different colonies. The first queen dropped 61 eggs, the second 58, the third 23, and the fourth 20 eggs, in the stated time. This observation was made in the middle of April, and on July 15th the colony of the first queen was very poor, the second very good, and the third, with the fourth queeners were very strong. Now let us apply the result of this observation to practice and see how it would figure out:

Take, for instance, an apiary of 100 colonies, the average strength of which is, say, 80 pounds of extracted honey per colony. Let the owners of 80 colonies be poor, 50 average, and 25 strong, and then try to solve the problem as to how the average yield of 80 pounds per colony is obtained. The poor colonies will gather about half as much surplus honey as the 50 of average strength, or say 40 pounds each; then in order to get the average of 80 pounds per colony for the whole apiary the 25 strong colonies must gather 120 pounds of surplus honey each! Now, if we can observe the deduction of Mr. Langstroth, as already noted, the difference between the poor, average, and strong colonies, is attributable solely to the difference of queens, then we are forced to admit the mere act of mating the 25 poor queens has incurred an expense of 1,000 pounds per annum when compared with the average colonies, and 3,000 pounds when compared with the strong colonies, either of the immediate expense to pay for all the good queens required, and have a better consideration to be looked into. You may change the figures as you desire and the result will always show that the poor queens are heavy debtors, with no prospect of paying, and should under no circumstances be treated.

Keep the best, and only the best—the very best are the cheapest in the end—and an economy that prohibits the employing of the best queens is certainly a false economy. The owners of Ayrshire, Jersey, Holstein, or other stock, do not stop at merely knowing that their animals are thoroughbred. Their ambition is that each individual member of their herds shall be the very best of its kind; and should not bee-keepers study their own interests by copying the example of the stockmen in this regard? Yes, by all means.

One point more in this connection, and one which many bee-keepers scattered over the Province will do well to stop and ponder carefully, and that is of finding out whether the stockmen that find it pay, I mean, the member of the Provincial Association, which is studying and advancing their interests.

Bee-keepers in the remote parts of the Province, into whose hands the Government Report may fall, will please make a note of this, and remember at the same time that the Ontario Bee-Keepers' Association is studying to advance your interests, and, like the stockmen, you will study your own interests by communicating with the secretary, Mr. Wm. Cousie, of Streetsville, and secure membership in the Association which is trying to do you good.

In conclusion, I would say to those who have come expecting to hear a flowery dissertation on scientific queen-rearing; and to those who may have wished that their favorite kind or race of queens would get an advance in the address—if such has been your anticipation, I can only tender you my sympathy in your disappointment. I said at the outset that we had met for practical purposes, and I have endeavored to give you a plain practical talk on the topic assigned to me, and I hope my address and the discussion which will follow may prove a practical benefit, not only to those gathered in convention here, but to many of our fellows who are not privileged to take part with us.

Ontario, Canada.

*SICKNESS IN THE HOME.*

Conducted by Prof. A. J. Cook, Glenmont, Calif.

Our readers will wonder why the break in "The Home Circle," The cause is not far to seek. One of the links in our circle—Mr. A. J. Cook—is a member of a family that has never been able to meet its payments. Strange what a difference it makes in the home when sickness lays her heavy hand upon one of its members. My stomach, which has always been my weak member, became very much worse, and I feared worse than I know. I was forced to give up all the work I was doing for the Home Circle. I am now recovered, and I am able to do some more work. I would like to see my home circle get together and have a meeting of the officers. I am very much interested in the Home Circle, and I am sure that if the "Home Circle" to-day is made a little somber by hints and suggestions regarding health and nursing, I will be more than pardoned.

There is no doubt that we are all agreed as to the importance of every member of "The Home Circle" working with both sleeves rolled to the elbow to cure the best health and vigor. How to keep well, and be at our best physically, is a most important question. Our nation and people are making gigantic strides in a material way. Our agricultural activities have taken a stupendous leap, and we are rapidly distancing all the other great nations of the world. Britain is alarmed, and even phlegmatic Germany is aroused at the threatening prospect. Is there not to-day to be a strong defense of trade last year exceeded Germany's entire export trade? There is still very cheering. But all this implies new, fear excitement, and if this is to keep on, as it surely is, it behooves every one of us to study how we may keep our health away to the top, that our health may be the bulwark of our trade, and that we may keep our health away to the top, that our health may be the bulwark of our trade.

*HINTS ON KEEPING WELL.*

I wish, now, to give some hints in regard to keeping well, which I am sure may well be observed by us all.

In the first place, we should remember the motto of the successful business man—"Ontario must always be the best income." We may well remember Macawber's words to David Copperfield: "Annual income, 20 pounds; annual expenditure, nineteen-six; result, happiness. Annual income, 20
AMERICAN FREE SOUTHERN ARE THINK first from regularity children. I never...
**The Afterthought.**

The "Old Reliable" seen thru New and Unrivalled Glasses.

By E. E. HASTY, Sta. B Rural, Toledo, O.

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**SWARMING ON TEN FRAMES.**

It is rather a surprising result to find more colonies on ten frames swarming than on eight frames; but I do not wish to cast any discredit on the experiment. Mr. Davenport does not claim it as a rule, to be found good in all years and all locations. The rationale of it seems to be that sometimes two more than an increase of population without which swarming would not have occurred. Page 150.

**MEASURING BEES' TONGUES.**

Wipe chap of beedom, don't you know you can not measure a man's tongue—not to mention the other half of animate nature, to which the bee belongs? A tongue is a thing with great capacity for rubbing round. Best understood not by what it measures, but by what it does. Thus we reflect on the words of Adrian Gotaz, page 140. Indeed it does seem to call for some explanation, how all the other members of the bee seem to be so unform, and tongues alone reported with such variation. I can very heartily second the suggestion that all measurements of a surgical character should be regarded as tentative to a certain extent—meaning dollars and cents, but not to be regarded as final, till confirmed by live bees of the same colony taking actual sweet out of an actual cavity. Something better than the old inclined plane and wire screen ought to heave in sight, to keep pace with the Twentieth Century. Too much depends upon keeping it level, and too many bees have to work at it, and work at it too long. Who'll give us a bunch of glass clover-tubes—or put two rectangular slips of glass together a twelfth of an inch apart holding honey between? The idea of the latter is that bees will quickly take the sweet out from all the edges as deep as they can reach, and leave things so as to be clearly measurable.

**THREE "AFTERTHINKLTS."**

A new edible for bees—and prohibition States—"cold water soux." Page 152.

Pretty bad score for house-apiary, 16 queens lost out of 26, and that in spite of vertical painting in strong colors. Page 153.

How about the bee-man who would let bumble蜂 into a wonder world 20,000 pounds of snowy sections from posies not in bloom yet? Counting unhatched? Chickens hardly "in it." Page 164.

A VERMONT COUNTY VS. CALIFORNIA.

And so in Vermont one county produces 3/4 of all the State product, and one forty-fourth as much as California produces. How much better to fish in a little brook where there are some fish than in a big, landscape-adorning river where there are next to none! Page 153.

**ANOTHER AFTERTHUGHT TRIPLET.**

Archer L. White's experiment indicates that the solar gets less than a third of the wax from old comb, in fact less than a third of what can be got by a better process. Page 159.

Two chrestomies sometimes better than one. When you trot out that aged honeycomb-honeycomb conversium tell 'em also that the man who isn't sold for once in his life is sold for his whole life. Page 153.

Spect the Vermonters mist it a little on the comb-building question. Plenty of fresh nectar from the fields is at least a little better for comb-building than it can ever be again after it is sealed once. Page 153.

**THREE QUEENS NEAR EACH OTHER.**

That three young queens should remain near each other some time without coming to a fight I do not consider so very strange. Perhaps they were cold. And I guess if Ginner's quaint bees (or the remains of them) did not consider themselves a colony at all—only as individuals, there because they knew not what else to do with themselves—and so paid no attention to the queens whatever. Page 156.

**CLIPPING SLIGHTLY FOR NEAR-BY MATING.**

I had supposed that clipping a young queen's wing slightly, to prevent her flying away so far to mate, was to some extent practical. Mr. J. M. Rankin's experience of 64 failures out of 65 is rather in the nature of an extinguisher on that way of controlling mating. Page 165.

**SCORING THE SCORE CARD.**

The score card on page 166 affords abundance to think of and talk about. I'd Carrie Nation the "honey-wine" the first thing. "Spects there is nothing else. All wines from fruit-juices. Name "honey-wine" would be used to cover vile inventions a grade below hard cider, and on a par with the barbarous drinks of the Philippines. They call their "honey-wine" in the Philippines. You must get drunk let's get drunk on something orthodox.

There seems to be a oversight in giving the single-case display the same pointing as the general display. We read, "Variety."

This is all right for the general display; but it is not at all desirable that a twelve-section case should contain twelve kinds of honey. Let "Variety" in that place be changed for "Uniformity," unless something more important is thought of.

I suppose "Purity" in the beeswax class means freedom from dirt. Any impurity of the adulteration sort ought to disqualify altogether. Might not a less ambiguous word than purity be found?

I doubt the propriety of putting in the style of observatory honey as a minor item toward a premium on a colony of bees. Let any style that shows the interior well suffice; and then let observatory hives have a premium all to themselves, if desirable.

Quietness of bees" is so point so important that we dislike to discard it yet at a fair. It is a very tough thing to judge with any sort of justice. One lot will be tolerably quiet, and another lot running wildly, from causes not much connected with the normal manners of the bees at home in the hive.

Personally, I should prefer to vice-versa the figures in "Quality 25, Attractiveness 50;" but perhaps the brethren will like it as well just as it is.

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**Questions and Answers.**

**CONDUCTED BY**

DR. C. C. MILLER, Marenco, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail—Eine.)

Swarming Management.

I have two colonies of bees that are very strong at this time, but I would like to increase only to three colonies the coming season. As I know that both will swarm, and that early, what do you think of this way of handling them? Say if No. 1 swarms, hive the swarm, then remove No. 2 to a new stand and set the swarm on the old stand of No. 2. I think if this is done in the middle of the day, when a great many field-bees of No. 2 are out, they will return to the old place and enter help the new swarm by this, and will reduce the colony of No. 2, and will this not prevent the swarming of No. 2? PENN.

Answer—It may prevent the swarming of No. 2, but not certainly. It will certainly make the swarming of No. 2 later, if it does not prevent it.

Italianizing—Other Questions.

1. Would it be profitable to Italianize, where there are black bees within half a mile of my apiary?
2. Would you advise the use of full sheets of foundation?
3. Is light-brood foundation as good as the medium to use on wired frames?
4. Is the Simplicity hive as good as the dovetailed, in the production of comb honey?
5. Would you advise larger than an eight-frame hive for comb honey?
6. Would you advise the use of an observatory hive?
I have one which I made this winter, but I did not know whether it would pay me to buy the glass for it.

IOWA.

Answers.—1. Yes, even if they were only an eighth of a mile away. Even if you have nothing but hybrids it will be profitable.
2. Yes.
3. Yes, if the wiring is close enough. Try it a little carefully at first if you are not sure about it.
4. You would be likely to find no difference in the amount of honey, but the Simplicity is hardly so simple as the dovetailed. If you try the two side by side you will be likely to prefer the dovetailed.
5. For some the 8-frame may be best, and for some the larger. The 8-frame requires closer attention, and even with good attention you will be likely to have some colonies start their stores this winter.
6. There is no particular profit in an observatory hive, but it is a pleasant thing to be able to see the bees at work in one.

Seems to be Paralysis.

I mail you a box containing some dead bees. I have three colonies that are dying off very fast from some cause, and I think you can tell me what is the trouble. You will see some are shiny and black. One colony is dying, and is all shades and colors. They are misnamed queenless bees. I think the worst. The honey they wintered on wasn't the best, but I have five or six other colonies that seem all right. Would you better destroy the diseased colonies, or will they be all right when warm weather sets in? Do you think it is paralysis?

The bees of the colony from which I send you specimens do something like this: They will catch or bite all around certain ones of their number, and finally the one that receives such treatment will roll off the entrance-board on the ground, kick around and die; and at evening they will crowd upon the end of the hive and expire, from 15 to 25 and sometimes more a day. It doesn't seem to make any difference whether the days are warm or cold, and they will lift the wing and try to fly, but can't do it. On mashing them there is a thick yellow substance that washes out of the body. The ones that are well are carrying in pollen.

KANSAS.

Answer.—It seems to be a case of paralysis. Altho many cures have been offered, unfortunately nothing seems reliable. Fortunately it is not contagious, and it is quite possible that it will disappear of itself. The most you can do is to take good care of your bees, seeing that they are well furnish'd with stores and not allowed to become weak without uniting; and then hope for the best.

Wants to Start Again With Bees.

My bees all died with the cold last winter. I have a patent hive and the frames of comb in it are all right. If I had a queen would she live and hatch in it? How many bees would she need?

ONTARIO.

Answer.—A queen alone would be of no value, as she would hardly live 24 hours. With bees enough to cover two combs, she should make a fair start. You will find queens advertised in this journal.

Moving and Feeding Bees.

I bought an apiary, or a wreck of one, and wish to move it one mile. In that yard I find other empty hives not in use, and they are full of moths. Several colonies fail. This is a two-story house, and it is too high, and at other hives the bees grompt in heaps around the entrance. Others died of starvation and I think the balance are short in stores. They are pack'd, and I can not examine them at the present place, nor can I get to them to feed in the hives, neither can I use entrance-feeders.
1. Will I have to build them up before I can move them?
2. Is it safe to move them in their present condition?
3. Are they likely to consume what little honey they have during the excitement caused by moving?
4. How would you like this way of feeding? I would feed them in or near the yard, by taking a large wooden tray and laying gunny sacks in them. Over this I would pour enough feed so that they can sip all day. The next day I would do the same, but add more water, the next day still more water, and so on until it will all be well

ILLINOIS.

Answers.—1. The only trouble is that moving will excite them so as to make them consume more stores, in which case the moving would be the worse for a colony on the point of starvation; but if a colony is alive at all it will probably last long enough to be fed after moving.
2. I don't think it is, the weather is at all favorable. In freezing weather a very weak colony might be so demoralized by moving as to hasten its death.
3. That has already been hinted at; but even if they do take it all into their honey-sacs it will last them for a time long enough.
4. The plan will work very well if the weather is warm enough for bees to fly, and we ought to have that kind of weather now. But don't bring them down to pure water too rapidly.

Overboiling Sugar Candy for Winter Feeding.

On page 201 "Iowa" gives his experience with cakes of candy made of granulated sugar as winter feed for bees. My experience with candy as a winter feed is similar to his. Only a short time ago I examined some colonies with candy about a foot below the cluster; one colony was so nearly destitute of honey that none could be seen, and the bees had begun to die, and yet there was a large cake of candy on the frames, but the bees had not touch'd it. I melted the candy and gave to the bees of the hive to which it was attached. The bees had been so cold for the bees to take it, in this form I should have poured some quite warm water all over the cake of candy. Warm water will penetrate and soften the hardest candy very readily, and so makes it available for the use of the bees.

SUBSCRIBER.

Answer.—This suggests that such cases may not be so rare as I had supposed. Here is something that may throw a little light on the case. In the British Bee Journal I find the following: "The sample of candy sent is quite useless as bee-food, being hard as a stone. It has been over cooked, and may be truly described as a "hard-cake." May not overboiling be the solution of the problem?

Candied Honey in Brood-Combs—Spraying While in Bloom.

1. I have about 500 brood-frames full of combs and honey, that are in good shape, smooth and square. There is 1,000 or 1,200 pounds of honey in them. The trouble is they are three and four years old, and the honey cann'd be used. Will they do to use this season or will they be damaged? If not, what is the best way to dispose of them? They are all built on comb foundation.
2. Would you advise keeping bees in an orchard? It is about two-thirds grown. They do not get the sun much until about nine o'clock in the morning. They have plenty the rest of the time. I could give them the morning sun, but it would bring them within about five rods of the road. Would I be likely to have trouble?
3. I am in an apple section, and some orchardists are bound to spray when the trees are in full bloom. They did so last year within ten rods of my apiary. I talk with them, and they said they could spray when they liked, and that I could keep my bees at home. I brought the question of spraying before the farmers' institute, and proved to them that they injured their fruit, and that they laid themselves liable; but they have been told that before. I am a farmer myself, but at present I am in the bee-business.

NEW YORK.

Answers.—1. Sprinkle them with water and give them to the bees. If necessary, repeat the sprinkling.
2. It is not likely the shade will do any harm.
3. Send a dollar to the editor of this paper or to the general manager of the National Bee-Keepers' Association, so as to become a member of the Association, and the manager will furnish you information by which you can instruct your neighbor, and give you any assistance needed. Of course you may get along without joining the Association, but you'll get along better with it, and be helping others as well as yourself.
**FOR SALE**

100 COLONIES OF BLACK AND ITALIAN BEES at Rahmainn self-spacing frames, all in divided hives, full worker brood combs, and two supers with each hive—$2.00 per colony for the first, or $2.50 for 22 colonies. Address, F. GENT, Rockford, Minnesota.

**WANTED**

A woman, position as assistant to a apiary in Northern Illinois preferred. Address, ANNIE C. McNEAL, CRETE, ILL.

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10 COLONIES OF BEES in eight-frame divided hives, at $1.25 per colony. My bees are healthy, there never having been any disease among them. Address, CHAS. SECKMAN, Shipping-point, LINCOLN, Salkill, Nebr.

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**BULL-STONG!**

**PIG-TIGHT!**

An Illinois farmer said that after he had nailed 200 pieces of loose oak on the ground that he could not sweep any benefit from, because the fence around the field would not turn pigs. Figure the loss for yourself. He also said all this would have been saved if he had used the Griswold Wire Coiled Spring Fence, and the value could have been raised a long way towards paying out of the fence. With the Griswold Machine, my farmer and myself made it himself at the amount of the fence. Cattlefree for the asking. Address, W. G. GRISWOLD, box 20, Muncie, Ind.

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white, snowy blossoms before the leaves appear, thus making itself very conspicuous even from quite a distance. The blossoms appear in April or May, depending upon the season and latitude and the purple, edible berries, in June. It is an indifferent honey-producing flower."—C. L. WALTON.

Wintere on the Summer Stands.

Last year was a poor year for honey in this locality, but we have a few colonies that the winter all right, on the summer stands.

We have an abundance of white clover, but there are very few bees kept in it. I can do without the American Bee Journal, as I have learned from it all that I know about bees. —Alnozo Grant.

Clark Co., Wash., March 18.

Report from a Young Bee-Keeper.

Our bees have wintered well and are in good condition for spring work. My father used to think this bee, he had the best of bees, but he has found that they can be improved upon. He bought three queens from a prominent queen dealer, and all have proved to be very good ones. The one of them was especially so, and that he had selected that one from which to raise queens and have over 70 queens, and all of one's was poor.

We secured a very poor honey-crop last season, but we are watching and hoping for a good crop this season. —Emma Barker (age 14).


Better Prices for Honey.

Will some one please tell me, as well as the rest of the readers of the Bee-Journal, how we can bring about a speedy combination of the bee-keepers so as to get a better price for our honey here in California, where honey is produced by the car-load—yes, even by the train-load? The population is not so great as in the East, where from 2 to 100 colonies of bees are kept, and where honey enough to supply the demand can not be secured. We are at the mercy of the jobbers, who are not disposed to "live and let live," but want all.

If joining the National Bee-Keepers' Association will help to rectify matters, I would like to know it; and, if so, I will do all in my power to promote the good of the National or any other association that will help us out.

Would it not be well for the National Association to have a set of by-laws printed and sent to all bee-keepers, and advocate combination. We see, and hear of, combinations formed every day with immense capital, and they succeed, so why couldn't we? If every bee-keeper would contribute $2.50 it is hard to estimate what the amount of capital would be. —C. C. Horne.

If you want the Bee-Book.

That covers the whole Agricultural Field more completely than any other publisher, send $1.25 to Prof. A. J. Cook, Claremont, Cal., owner of "Bee-Keeper's Guide."

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April 18, 1901

QUEENS!

Improved Golden and Leather-colored Italian Queens.

We have one of Root’s best long-tongued Red-Headed Beekeepers’ Queens, at $2.00 each. We are the only one in the South offering Queens (both Black and Red-Headed) for this price. The above breeders have been added to our already improved and tested wintering season. J. L. Gandy, of Humboldt, N.E., wrote us on Aug. 25th, 1901, saying that the colony having one of our queens had already stored over 400 pounds of honey (mostly comb), he states that he has reason to feel that our bees work on Red Clover, as they were the only kind in his locality and applied for the above breeders’ Queens.

A. J. Root’s folks say that our queens are extra fine, while the editor of the American Bee Journal tells us that he has good reports from our queens from time to time. We have files upon files of testimonials on our Queens.

After considering the above evidence, send us your order and we will forward them to you, postage prepaid.

H. G. QUIRIN, Parkertown, Ohio.

Please mention Bee Journal when writing.

We want *

To sell you BEE-SUPPLIES! Our line is all new and complete. Send for our Catalogue and it will convince you that our Dovetail Hive is the best on the market. Our prices are right, and our service is prompt.

Fred W. Muth & Co.

S. W. Cor. Forest & Walnut Sts., CINCINNATI, O. Please mention Bee Journal when writing.

Do you want a High Grade of Italian Queens or a CHOICE STRAWBERRY?

CHICAGO, ILL., Jan. 28, 1901.

D. J. BLOCHER, Esq., Pearl City, Ill.

Please send us 80 of your best untested Italian Queens, ready for delivery by May 18, 1901. We want to be able to judge the merits of these bees for our foremen who are to be sent out on various experiments. We will give you a careful notice when we have any new suggestions for wintering bees.

D. J. BLOCHER.

Bee-Keepers’ Supplies.

Just received a consignment of the finest up-to-date HIVES and SECTIONS we’ve had. They are the latest in style and are the best prices. Bee-Keepers’ Supplies on hand. Bees and Queens. Catalog free.

THE A. I. ROOT CO.

H. G. ACKLIN, Manager.

1024 Miss. Street, St. Paul, Minn.

Please mention the Bee Journal.

be, but I suppose at least $1,000,000. That would make a neat little "compleat." Our prospects are very fair for a partial crop of honey this year. C. F. STEVENS.

San Diego Co., Calif., March 23.

Drone of Ye Olden Time.

The practice of cutting out drone-combs is a new thing. Plato, who was born some 400 years before the Christian Era, in his "Republic," says: "A likely opportunity to the body—breed in every commonwealth disturbance. Therefore, a skillful physician and legislator, knowing the great importance of keeping bees, must take measures in advance, if possible, to prevent their presence, but should they make their appearance, he must have them cut out, as quickly as possible, along with the combs themselves.

The usage is interesting because it serves to show that the Greek bee-keepers of Plato’s day must have had some sort of a hive which enabled them to handle the combs. It also indicates that they knew a thing or two about keeping bees. Mr. Daudat, in his articles in the "Bee-Keeping and the cutting out of drone-combs, has the satisfaction of knowing that he is in line with ancient example and practice.

The winter has been favorable here for bees. All colonies, so far as heard from, have come through the winter in perfect condition. Likewise wintered my bees in Cincinnati. & Ohio, for they are on the summer stands for four years now, and have yet to lose my first colony. I fill the super with some golden honey for the winter north and west.

FRANK PARKER.


Better Prospects Than for Years.

Bees in this valley were rather backward at the beginning of the year, but now they are coming up very fast, and the prospects for a honey crop are better than they have been for years.

W. W. ROSS.

San Bernardino Co., Calif., March 19.

Flowers and Fruit-Trees Blooming in Florida.

In Florida it is not the "Hum of the Bees" which tells us that the flowers are open, but the hum of the bees in the yellow jasmine bloom. It is a very pretty vine, and I have seen the tops of young pines bending with the weight of its golden bloom. Lately I saw a beautiful vine clinging to the corbeille of a two-story house, and winding around it so as to shed its fragrant bloom on the surrounding air.

The titi is now in bloom, and its long, white racemes of tiny flowers are also very fragrant, and yield a honey so handsome to look at. Pachy and plum-trees are also beginning to bloom—the plum-trees are very white, and the peaches are a deep pink. While the weather is favorable they are alive with busy workers. Many pear-pearcees in this vicinity have died off this season, and all report it as the worst year for the pear—some of the most beautiful varieties are lost by it. The clusters of blooms on good pear-trees resemble those on the magnolias. I have counted 45 blossoms in one cluster. Bees gathered much pollen from pies and cedars.

The past winter has been cold, yet there has been no severe freezing. The tender growth of orange-trees was nip by frost on March 6th, but now the little blossoms show prettily among the shiny green leaves.

I saw a bee-keeper to-day who said that he’s bees were not doing well, as he had had too many cold winds. He had swarms last year on Feb. 20th, but he thinks it will be a

Belgian Hares

PEDIGREED AND COMMON STOCK.

Having bought a Job Lot of a neighbor and added to what I had, I must dispose of to make room for my income. I have 9 young—3 months and over—with a few bred Does, ALSO

Italian Queens of last season’s rearing, ready as soon as the weather is warm enough to send thru the mail. Write for prices.

J. L. STRONG.

Claraud, Page Co., Iowa.

Bee-Supplies.

WE CARRY, for ROOT’S GOODS AT THEIR PRICES.

IOWA, INDIANA, ILLINOIS, KENTUCKY, AND THE SOUTH.

MUTH’S SQUARE PASS HONEY-JARS.

LOWEST FREIGHT COSTS IN THE COUNTRY.

Send for Catalog.

C. H. W. WEBSTER.

Successor to C. F. MUTH & SON.

214 & 216 Central Ave., CINCINNATI, O.

FREE FOR A MONTH....

If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper published in the United States;

WOOL MARKETS AND SHEEP, CHICAGO, ILL.

Please mention Bee Journal when writing.

ALBINO QUEENS if you want the most prolific Bees—If you want the best honey gatherers you ever saw—try my Albino Utested Queens in April, $1.00; Tested, $1.50. J. D. GIVENS, LIBSON, TEX.

Dittmer’s Foundation!

Retail—Wholesale—Jobbign.

I use a PROCESS that produces EVERLASTING ESSENTIALS to make it the BEST AND MOST desirable all around. My PROCESS AND AUTOMATIC MACHINES are my own inventions, which enable me to SELL FOUNDATION and Wax at the lowest prices.

Full Line of Supplies, with prompt despatch, free on application.

BEE-SWAX WANTED.

GUS. DITTMER, Augusta, Wis.

Please mention Bee Journal when writing.

BEE, HIVES, SECTIONS AND ALL BEE-KEEPERS’ SUPPLIES.

Big Catalog Free, Write now. Louisy McG. Co., 214 E. 30th St., NEW YORK.

BEE-SWAX WANTED.

Ala. L. S., Alta, S., Louis, Ill.

Please mention Bee Journal when writing.
Good Report from Colorado.

Seven years ago I started in the bee-business with 2 colonies, which I bought for $10. Last spring those colonies were purchased by a friend for $4 per colony for them, but I refused it. My honey crop last year was 2,400 pounds of extracted honey and 2,300 pounds of comb. I sold the extracted honey at 75c per pound, or $180, and the comb honey for 11c, or $270.50, making a total of $457.50.

My increase last season was 30 colonies, but I lost 2 of these during the winter, so have only 28 now. The lowest average of honey secured, spring count, has been 40 pounds per colony, or 288 pounds of honey in the winter, the latter being the average last season.

A. WADDINGTON.

Otero Co., Colo., March 27.

Report from Minnesota.

Our bees have weathered well, with a loss of only one colony out of 124. Last year we got no honey and had to feed our bees, but we hope for better things this coming season.

My father is going to give me a colony this year, and I hope they will store plenty of honey so that I will not have to feed them. We use the Langstroth hives.

We wintered some of our bees outdoors past winter. We had 10 of these bees larger on the sides than the hives, and 4 inches higher, and raised the backs of the hives so that the moisture can run out. We have 20 colonies in the cellar which seem to be all right, but when we take them out they may be all wrong.

FRED BANKER (age 12).

Poor Prospects for the Coming Season.

I put 11 colonies into the cellar, and I think there are a great many of the bees dead.

I am very much interested in the American Bee Journal, but I think it is about all we will have to comfort us this summer in the bee line. If the spring is late there won't be a much change.

DURLEY WINNEBEGO Co., Wis., March 25.

Bees Wintered in Good Condition.

My 34 colonies of bees seem to be in good condition, and if we have warm weather for a week or two we can take them out of the cellar.

We had a good horse killed by lightning on March 21, and another horse killed on May 21, 1910. The luck we feel that we must have the American Bee Journal in order to carry on bee-keeping successfully.

W. H. HARTWELL.
St. Croix Co., Wis., March 25.

Bees Short of Winter Stores.

The roads here are in very bad condition, and the farmers are very short of the hay. The rain is a foot deep, and there is snow on top of that.

In February I look at some of my bees, and find that we have 57 colonies and 1 will be short of stores. Maple is in full bloom, but no bees are working.

I am afraid no comb honey in our market for a month. I keep the extracted on hand. Poult brood has cut my number down to 30 colonies.

NOLAN CO., Mo., March 28.

CONVENTION NOTICE.

Illinois—The spring meeting of the eastern division of the Northern Illinois Bee-Keepers' Association will be held at the residence of B. Kennedy, 7 miles southeast of Rockford, Ill., on Rural Route No. 5, and 1 mile north of New Market, near Rockford, Ill., on March 21, 1910.

The interested in bees are cordially invited to attend.

B. KENNEDY, Sec.

factured by the M. KUMPEL Co., of LaPorte, Ind. These honeycomb prices are the result of the rapid rise in prices of honey this season. These prices are for the combination of honey and comb, and the rates are:

1. Light, 76c per pound, or $7.96 per 100 pounds.
2. Medium, 78c per pound, or $8.16 per 100 pounds.
3. Dark, 80c per pound, or $8.36 per 100 pounds.
4. Extra dark, 82c per pound, or $8.56 per 100 pounds.

The prices for comb alone are:

1. Light, 60c per pound, or $6.30 per 100 pounds.
2. Medium, 62c per pound, or $6.50 per 100 pounds.
3. Dark, 64c per pound, or $6.70 per 100 pounds.
4. Extra dark, 66c per pound, or $6.90 per 100 pounds.

These prices are subject to change, and will be paid for honey by the M. KUMPEL Co., of LaPorte, Ind., and will be paid at the rate of 3 cents per pound for zero comb, and 6 cents per pound for comb with honey.

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We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR Hives, Extractors OR ANYTHING YOU WANT IN THE BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of THE AMERICAN BEE-KEEPER free. Address, THE W. T. FALGONER MFG. CO., JAMESTOWN, N. Y.

We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR HIVES.

Exhibitors or anything you want in the bee-keeping line.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of THE AMERICAN BEE-KEEPER free. Address, THE W. T. FALGONER MFG. CO., JAMESTOWN, N. Y.

24th Year Dadant’s Foundation. 24th Year

We guarantee satisfaction. ☞ ☞

What more can anybody do? BEAUTY PURITY, FIRMINESS, No SAGGING, No LOSS.
PATENT WEED-PROCESS SHEETING.

Why does it sell so well? ☞ ☞

Because it has always given better satisfaction than any other. Because in 23 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material.

BEE-KEEPERS’ SUPPLIES OF ALL KINDS.

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

LANGSTROTH on the HONEY-BEE—Revised

The classic in Bee-Culture—Price, $1.25, by mail.

Bees wax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co, Ill.

$15.00 and $25.00 Queens

Having a Measured Tongue Reach.

The call for queens of our celebrated $200 imported mother has been so great that we have decided, in addition to the $2.00, $4.00, and $6.00 grades of this stock, to offer some $10.00, $15.00, and even $25.00 of this same blood. But these prices are for tested queens, the tongues of whose bees have been measured.

The $10.00 queen is guaranteed to produce bees with a tongue-measurement of 19-100.
The $15.00 queen, 20-100.
The $25.00 queen, 21-100.

These last are very rare and with one exception this (21-100) is the longest tongue reach yet secured. We reserve the right, when we do not have the stock with the tongue reach called for, either to return the money or to send the next lower, remitting the balance. It would be well for our friends to put in their orders at once, and as soon as we get the grades we will send notice. When the money is sent, the queens will be forwarded. These will be put up in the very best manner possible; and while we guarantee safe arrival in good order to any point in the United States, on any railroad line, we will not guarantee safe introduction. Such valuable queens should be releas on hatching brood.

N. B.—It seems as if it ought not to be necessary to say that no one but a queen-breeder or a large honey-producer should order these high-priced queens; but it is a fact according to our experience that beginners with only a few colonies will order our highest-priced imported queens. Such bee-keepers have no more use for such queens than a pig has for a wheel-barrow.

THE A. I. ROOT CO., Medina, Ohio.

GEORGE W. YORK & CO. 144 & 146 Erie Street, CHICAGO, ILL. are headquarters for ROOT’S BEE-KEEPERS’ SUPPLIES IN CHICAGO. Send to them for their free Catalog.
MR. GHENNAJ KANDRATIEFF,
Editor of the Russian bee-paper,
"Wiestnik Inostrannoii Literatury Ptehlovodstva."
(See page 205.)
Weekly Budget.

T. F. Bingham, of Clare Co., Mich., wrote us April 18th that the bees in his region had wintered fairly well, his own having been in the cellar just five months.

****

Dr. C. C. Miller gave us a short call on Saturday, April 14th. He is looking and feeling much better, and after all my past worries, he said, "I feel 15 years younger than I did three months ago!" The good Doctor's many friends will join in the hope that he may continue to improve, and be spared many years to help make easier the paths of questioning bee-keepers, and if need be say, "I don't know.

****

Dr. A. B. Mason, writing us April 12th, had this to say about himself and his bees:

FRIEND YORK—It is four weeks this morning since I had a fall and broke two of my ribs below the left shoulder; the latter bruised my hip, and am still wearing "corsets." They do not allow me to lift as much as a palm of the ground. At times I have to "bully" time doing nothing. I will be ready for business again in a few days.

Our bees are well settled in the cellar, and in splendid condition. It has been too cold to put them out, but early this morning, with the mercury fifteen degrees, it looked as if they might be put out to-day, but now at 7 o'clock a.m., it is clouding up, and prospects are for a cool day. Yours very truly,

A. B. MASON.

We regret very much to learn of the Doctor's fall, but are not surprised that it should have resulted in broken bones, as he is "no small affair." When a "boy" of his size begins to drop, something has to give way when he strikes bottom. But all will hope for his speedy and complete recovery.

FIXED FOR CREDIBILITY TO A BOY IS

Fixed for Credibility to a Boy is an heading of an item dated at Washington, April 13th, in the Chicago Record-Herald, which reads as follows:

Prof. Frank Benton, of the Agricultural Department, was fined $10 by Police Judge Scott yesterday for his inhuman treatment of Frederick Hahn, an 8-year-old.

For some time Prof. Benton, who is in charge of the apiary at the Department of Agriculture, has been annoyed by boys throwing sticks and stones at the bees-hives. On last Friday he made a raid on the boys and caught young Hahn. Taking him by one arm and one leg, the Professor carried and dragged the struggling, screaming child to the hives.

"I'll give you enough bees," said the Professor, as he held the boy in front of one of the hives, "and I'll give him, if necessary, another stinger severely about the face and on the legs. As soon as he could get away the boy ran home, where he was treated by Dr. Richardson, under whose care he still remains. John Hahn, the boy's father, procured a warrant for the arrest of Prof. Benton, charging him with assault.

The boy still shows the effects of the stings. His face is badly swollen, and both is eyes are red, and he is still incapacitated from work for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to have the name of the Journal on the cover of the Journal, as fast as they are received. If you have this "Emerson"—so further binding is necessary.

GEORGE W. YORK & CO.,
144 & 146 Erie St., CHICAGO, ILL.

The Emerson Binder.

This Emerson still-board Binder with cloth back and gold edges will bind from $1.00 to $2.00 for 200 sets; or we will send it with the Bee Journal for one year—both for only $1.40.

GEORGE W. YORK & CO.,
144 & 146 Erie Street,
CHICAGO, ILL.
“The Man Who Reads” is the man who succeeds,” is the first sentence of an editorial paragraph in the Bee-Keeper’s Review. To illustrate it, Mr. W. L. Cogswell, of New York State, is referred to. He employs quite a number of young men every season in his bee-keeping work with nearly 1,500 colonies, and he says that “the young man who did not read never amounted to much in his employ.” It was a true statement, and will apply in practically every calling in life.

The man who would succeed certainly must read. He must inform himself concerning every detail of his business. He must find out the principles by which others have won success, and then adapt them to his own use. No man lives unto himself,” as said. And that is also a hard fact. We are all dependent upon one another. Each needs the other’s help and encouragement, in order to do the best work. And by reading we gain not only helpful information, but a necessary enthusiasm. We thus learn how others have done successfully, and we feel that we can do as well if we make the effort.

Honey by the Pailful.—Mr. Thomas Slack, of Canada, tells in Gleanings in Bee-Culture, how he disposes of his crop of honey by the use of tin pails, selling direct to families. His price is $1.00 for eight pounds. He thinks that when a family buys a pailful of honey at a time they will not use it so sparingly as when getting only a single section or a small glass jar of it. That sounds reasonable. And he says he can sell more honey at eight pounds for $1.00 than at 10 cents a pound. No one would want to try to push the 10-cent price if the other is a success. He allows 10 cents for a returned pail.

Mr. Slack covers with his market wagon 31 miles in three directions each week in the summer. Liquid honey sells as ten to one for him as compared with candied.

“Keep More Bees” is the advice some of the leaders are giving “without charge” to those who have not made very much success at bee-keeping. The idea is that most bee-keepers have not been in the business in a sufficiently extensive way to make it pay. This may be true in many instances; in others, if the locality is not suitable for successful bee-keeping, it would simply be folly to “keep more bees.”

As a sample of what at least one bee-keeper is expecting to do in the expansion business the coming season, we may say that he has already contracted to furnish 12,000 pounds of comb honey at 16 cents per pound. He will send them by rail to a hundred miles from Chicago. We are not at liberty to mention his name, as we are not certain that he cares to have it published. However, what we have given will do no harm. He is buying bees “to beat the band,” and expects to have about 250 colonies, and all in one yard. He will have an expert bee-keeper take full charge of the bees, while he attends to other business that requires his attention.

Last year, we believe, this same bee-keeper averaged 100 pounds of comb honey to the colony, and had over 50 colonies in the yard. We will be able to report next fall how it has paid him to “keep more bees” this year.

There is quite a good demand for bees this spring, at least in this locality, and if any of our readers have them for sale at right prices, they should do well by offering them the advertising columns of the American Bee Journal.

Spring Care of Bees.—Editor Hill gives this paragraph in the April American Bee-Keeper, which should be read, and its suggestions followed, by every one who desires to make bee-keeping a success:

At no time of the year does skillful treatment and care of the bees yield so great a reward as that bestowed during the spring months. Avoid handling unnecessarily at all times, and under circumstances to do which the weather is cold. See that all colonies are provided with queens and ample stores. From the time the bees are in the hives the winter has left them, they will need the stores which they may have. Protect the hives in every possible way against the loss of heat. Under the number of cells laid by the queen up to the 15th day preceding the opening of the bloom from which the nectar is to be gathered, depends the bee-keeper’s success. All laid thereafter are at a loss to the honey-producer. Give the queen the benefit of every advantage you are able to bestow, in order that she may meet the honey-flow with an ample force of workers.

Testing Barrels for Honey.—In all probability wooden barrels will be used for holding honey, for many years to come. Altogether the tin can is fast becoming the more generally adopted package for shipping extracted honey, still there are localities and purposes which demand the barrel. So we say, every man to his liking or preference. Pres. N. E. France, of the Wisconsin State Bee-Keeper’s Association, is perhaps one of the best authorities for holding the name. He is a very candid man, and cannot be induced to use a can for honey. But he knows how to test a barrel before putting honey into it. At the convention in February he gave his method as follows, the Bee-Keeper’s Review furnishing the paragraph:

“Barrels may be tested as to whether they will leak by blowing or forcing air into a hole in the head; but there is a peculiar knack in doing this. One breath alone will not test the matter. Put the lips or mouth close upon the apertures, and blow in all the air that can be expelled from the lungs; draw in another breath thru the nostrils, still holding with the lips the pressure obtained by the first breath; blow in another breath; hold this and draw in another. Perhaps a part of the third breath may be forced into the barrel, but that is all about. Hold the pressure. If there is a leak, the pressure will soon run down, and the car may defeat the sound of the escaping air. If there is no leak, the pressure will remain: and upon removing the mouth the air will come out of the opening with quite a decided explosion.”

Done at the Right Time.—G. M. Doolittle, in the Progressive Bee-keeper, about doing things in the apiary at the right time:

Upon their being done at the right time depends the success of many of the operations necessary. Frequently the necessity is evident that all bee-keepers do not realize this. The wise man said in the Scriptures, “If a man write under inspiration, he is not to say anything that is not true.” Here is a season, and a time to every purpose under the heaven; and the bee was a preacher instead of an apologist, he could have done little better had he been the latter; for unless the manipulations and operations in the apiary are done at the right time, all will be lost in the proper season, our purposes, no matter how good, will fail of the desired success.

Weak Colonies in the Spring.—In the April Bee-Keeper’s Review Editor Hutchinson has this to say about the treatment of weak colonies in the spring:

Weak colonies are something that, it is almost universally agreed, are not worth fussing with in the spring. Ulling them does not seem to help matters much. Several times have I united two or three weak colonies into one in early spring, taking out the extra queens and selling them, only to find, a few days later, the newly formed colony no more populous than was one of the colonies that were used in its composition. I, then, would again unite two or three of these made-up-and-run-down again colonies, only to see them again reduced in numbers. I believe that once, when warm weather came, and the bees finally began to build up, I had the remains of eleven colonies all in one hive. There is something about this matter that I don’t exactly understand. Here are three weak colonies. We unite two of them. A week later it is difficult to say which is the colony that was made up from the two, and which is the one left to itself. See that your weak colonies have sufficient food, task them up snug and warm, and then let them alone—and that is good advice to follow with strong colonies.

The Necessary Bee-Supplies.—Have them on hand, all ready for use when wanted? It is very aggravating to be compelled to wait for the arrival of supplies when the bees are suffering on account of their delay.
GHENNADJ KANDRATIEFF.

As the present ambitious strides of Russia towards aggrandizement are drawing the attention of the civilized world, it may not be amiss to show what is being done by some of its inhabitants in more peaceable lines. War is surely not a sign of progress, but the quiet pursuit of gainful application to the cultivation of the growing science, which are followed only by civilized men. So on the first page we give the photograph of a leading Russian apiarist.

Mr. Gennadj Kandratieff was born February 8, 1834, on the serdentine estate of Szakino, ten versts (being 3,500 feet) from the city of Vrineschma, in the province of Kostroma. His father, a retired colonel, was then living at Szakino and was the "noble marshall" of the place. After an old soldier's time of suffering, he desired his son to embrace the same career, and sent him, at the age of only seven, to the military Corps Alexander, for children. From this, in 1844, little Kandratieff was sent to the Corps Paul, of the Cadets. In 1853 he was transferred to the Regiment Model for the study of cavalry service, and lastly, in 1854, he obtained the epaulet of an officer in the regiment of Cuirassiers of the Grand Duchess Helen Pavlovna.

During the Crimean campaign, Russia was short of officers, and a call was made for volunteers; among these Mr. Kandratieff was placed as a cavalry officer at Sebastopol; at the end of this campaign, after the close of the war, when it became possible for him to quit the military service, he obtained his discharge and gave himself up to his favorite occupation—music.

His talent, his exceptional ability, and his passion for music, had shown during his earliest infancy, and during his military education, while still a boy, he already led the choirs of the cadets in the church.

At length, after numerous difficulties, he succeeded in leaving Russia to go to Italy, the country of music and fine arts. There, during the first four years of his sojourn, he studied with zeal the Italian language, the Italian song, declamation, everything, in fact, which has any relation with scenic art. In 1856 he made his first appearance on the Italian stage, as a baritone, in the opera of Rossini—Semiramide. This "debut" was very brilliant, and showed that he was for four years engaged in twelve of the leading Italian theaters, upon whose stages he filled with great success several roles of his profuse repertoire.

His artistic career was triumphal, and on the first of September, 1864, he was called back to Russia, for an engagement with the Imperial theater of St. Petersburg. He remained there as a singer until 1872, after which time he was appointed general manager of the Imperial Opera, which he managed until September 1, 1900. While he was occupying this position, which required great knowledge, strength of character, coolness and presence of mind, these occupations disturbed his nervous system to such an extent that the doctors advised him to seek for a summer occupa-

tion that would compel him to remain all day in the air and sunshine. He had become a member of the Free Economic Imperial Society, and had made the acquaintance of the celebrated professor of chemistry of the University of St. Petersburg, the great apiarist, A. M. Boutleroff. The latter induced him to go into apiculture, and Kandratieff took such a taste for this pursuit that now a life without bees seems to him a life without aim and without interest.

In 1878, Kandratieff and Prof. Boutleroff, who had thus become quite intimate, being both members of the Apiarist Commission of the above-mentioned Imperial Society, were jointly possessed of a large apiary, on the shores of the Black Sea, not far from Souhomou-Cale, for the rearing and cultivation of bees after rational methods. They then began regular visits to this distant apiary. Mr. Kandratieff even now remembers when going on these trips which the Calé was seen in the Black Sea during the first three months of April and May, the best time of the year in Caucasus. They would go by rail to Sebastopol (still in ruins since the Crimean War), from there in a carriage to Salta, and thence on a steamer which stopped at all the ports on its way to Batum, whence they took another steamer for Souhomou-Cale. These voyages left with them interesting reminiscences and happy impressions.

After these pleasant and prosperous times the apiary was closed, and, in the same year Kandratieff lost his only son, who was feeble in health, and for whom he had hoped to create at Souhomou an earthly paradise; this section of the estate was therefore sold. After the boy's death the sale of the apiary was decided upon.

In 1886, Mr. A. Boutleroff founded the first Russian bee-

journal. After his death it was continued for many years by the celebrated Russian apiarist Zobareff, and later the editor's chair was offered to Mr. Kandratieff, who was able to accept for want of leisure.

In 1891 Kandratieff lost his only remaining child, a daughter. This was a heavy blow, and he completely lost his nightly sleep, finding rest only towards morning each day. To somewhat fill up the terrible vacancy in his life, he undertook, with his friend Izergine, the translation into Russian of the French edition of "The Hive and Honey-Bee," of Langstroth-Dadant. At the same time he elaborated a program for a new bee-journal. During each summer he took a trip to foreign countries and became acquainted with Metelli, Dubini, Visconti, Paglia, Barbieri, and Lambertenghi, in Italy; and returning by way of Switzerland he regularly visited Edward Bertrand, with whom he always found a hearty reception and many new ideas on bee-culture. Bertrand approved the idea of this third Russian bee-journal, and in 1892 they issued the first number of the "Messenger of Foreign Apiarian Literature"—Wiesnik Inostranny Lliteratury Pchelowodstva.

As is often the case when something new appears, the Messenger met many ill-disposed people who affirmed that foreign ideas are of no value to Russia, and that special methods must be created for that country, as if the Russian bees were not the same insect as the bees of other countries. But this was smoothed over everything; the idea of publishing the paper at the low price of one rouble (about 51 cents) and of printing it in all things that were new and worthy of notice in Europe in apiculture, proved to be excellent. The journal had great success; it is now very much read, and it has propagated the knowledge of bee-culture. Many pleasant acknowledgments are received from all parts of the Russian empire. Those letters written mostly by persons who have followed the advice given in that journal, express the hearty thanks of their writers for their leader and guide.

It is especially the Dadant hive and system which Kandratieff recommends in his magazine, showing its advantages over some of the so-called Russian systems of beekeepers who have their own systems. The result of his constant and indefatigable propaganda concerning this hive, and of the success obtained with it, has been its establishment as the hive the best liked and the most in vogue in Russia.

Kandratieff has put into the hands of his devoted friend, Izergine, for three years past, the management of the Messenger. He, however, continues to support the journal with his contributions. He has also translated into Russian the "Conduite Du Rucher" of Bertrand, and the pamphlet entitled "The Modified Dadant Hive," also by Bertrand, which is now in its third edition. He has in addition translated the "Memorandum" of the Italian Dubini, and the unedited "Letters of Huber." He has also published the Dubini pamphlet "Honey as Food and Medicine" [20,000 copies], and Prof. Zubarsky's, "The Medical Properties of Honey," the latter to the extent of 90,000 copies. Owing to the many displays of these two pamphlets they have been so scattered all over Russia that some honey-dealers give them away with the honey they sell.

It is all that has been said concerning this worthy bee-master. It goes without saying that the name of Kandratieff will remain connected with the transformation of bee-culture in Russia and its development by rational methods, and who we may mention that it is only recently that the Russian beekeepers have reached to the magnitude it used to have in ancient times when that country exported its bee-products to all countries of occidental Europe.

Queenie Jeanette is the title of a pretty song in short music size, written by J. C. Wallenstein and published by Mr. B. H. Ollendorff, keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.

Better order at once, if you want a copy of this song.
Contributed Articles.

No. 3. - Practical Lessons for Beginners in Bee-Culture.

BY J. D. GEHRING.

(Continued from page 230.)

"WELL, Mr. Bond," I continued, "you notice there is a piece of heavy, strong muslin as a cover on the top of the super resting on the frames of the hive. That cover must be removed, and it will be necessary to get out into the space under the hive-cover and around the super. Of course, you understand, when there are two or more supers on a hive we put the cover on the topmost. I use muslin instead of oilecloth, because muslin lets the moisture and some of the surplus heat escape, and oilecloth does not."

"Now, before we can do anything inside the hive this super must be removed. I have seen bee-keepers who would first remove the supers cluster by cluster, I think, instead of getting to the super."

"I make the bees go down into the hive, but I don't do that because when driven down they are in the way."

"Well, I declare, if there isn't a swarm coming out yonder!"

With this exclamation I started on the run toward the hive casting the swarm, bidding Mr. Bond to follow me.

Arriving at the hive I stooped over and shoved the entrance-blocks toward each other, thus contracting the entrance-space, as Mr. Bond was of course curious to know why I did this, and I explained thus:"

"I do this in this case because I don't want the swarm to get out so fast—they were rolling out by the pint, you noticed. The object is this: As there is only a small space for the bees to come out thru, it makes the swarm a long time to get out, and those that are out first get tired flying around. The queen is usually out with the first Queen is usually out with the first swarm, so she gets down with the bees that are out, but, as she isn't used to much exercise, she is sooner tired out than the others, and, indeed, instead of waiting for the rest of the swarm, alights on a convenient branch of a bush or tree to rest, and the swarm clusters there, completely covering the queen. Thus then there is a large bee-space, however, the bees will all get out in about two minutes, and, being fresh on the wing, and excited, they will fly off in a body, sometimes quite a distance away, and then cluster away from the hive. There you need a long ladder and a rope and a saw, or an ax, to get them.

"Now, watch this swarm," I said to Mr. Bond. "You see they are flying around near the hive as tho they didn't know what to do. They do that because they are waiting for the rest of the swarm to join them. There they are, settling on that apple-tree, on a limb low down. Now, I'll show you how I hive a swarm of bees," I said to Mr. Bond, pronouncing the personal pronoun with strong emphasis, to remind him of his way.

"Now, Mr. Bond," I continued, "the first thing in order in this case is to move this brood-chamber far enough away to make room for the hive I'm going to put in its place. First, however, I open it and take the super off. It is nearly full of honey, so I would leave it on. You see I don't want the swarm to get out so fast, and when the bees come in from the field, would enter the old hive. But I don't want them there, but in the hive the swarm is in."

"But we must now hasten to get the new hive in order and provide in position where the old one stood. We can never know how long a swarm will stay where they settle. You see, this is not the usual time of day for bees to swarm. A swarm that will do one thing out of the usual order can't be trusted not to do something else that is unusual."

"Now," I said, when the new hive had been placed, "we will take a look inside and see that everything is in working order. This hive has eight frames in it, you see, every alternate one filled with three-quarter sheets of comb foundation. The others are empty, because, when the swarm is very large, like the one we are now dealing with, it completely fills the hive. In a short time it becomes so hot inside that, when there are such quantities of comb in each frame, and, of course, all of them, get so soft that they collapse to the bottom of the hive. But when only half of the frames are filled with foundation sheets the bees have more room and more air, and the accident mentioned doesn't happen. But now we will get that swarm."

The swarm was secured by standing upon a box, taking a firm hold of the small limb at the end of which most of the bees are. I then carefully held my little forked frame over the center of the cluster, and then cutting the limb off carefully with a large and very sharp pocket-knife. Great care had to be taken, of course, not to jar the limb in the act of cutting, and thus dislodge the cluster."

"I said to Mr. Bond, as I was yet standing upon the box with the limb in my hand, "as you are taking practical lessons in bee-keeping, suppose you take hold as near my hand as you can and carry these bees over to the hive. You needn't be afraid if they crawl on your hand, they won't sting you."

Mr. Bond did as requested, a little timidly, to be sure, but successfully. "Now just lay the limb down carefully in front of the close entrance to the entrance, and then watch them run in," I said.

"And do you suppose, that is all there is to it?" asked Mr. Bond, looking surprised, and, I thought, a little disappointed.

"By that you mean, I suppose, that there is much more to it. I'll show you how a cluster can be handled."

"Well, I have a much more simple and easy way than even this. But I will tell you about it some other time."

"There is an important secret, however, about this swarm which you may want to know before you can ever hive any more swarms in the way you learned of your father. I think if you examine all the hives standing around under trees and hedge fences on your farm you will discover that some of them can be handled in this way."

"When a swarm of bees issues from a hive, and the queen has selected a place, or location, for it to cluster, a lot of bees which we call a 'scouting party,' composed of a hundred or more, immediately leave the cluster to find a new home. This adventure is on a piece of timber-land where they look for, and usually find, a suitable cavity in a tree, which they examine and probe to clean out, if found large enough. This is known as a fact, because bee-hunters have been misled by such proceedings into believing that a bee-tree had been found.

"One such case occurred in the bee-hunting experience of a brother of mine. On looking up into a tree for signs of bees, he saw a large number flying in and out at a hole near the trunk, as the bees had gone into the hole of a colony. He then set to work to mark the tree as his property—or the bees, rather—by cutting the initials of his name and the date of the discovery in the bark of the tree. While thus engaged he suddenly heard a great noise of humming, as of a swarm of bees above him, and looking up he saw a large swarm in the act of entering the hollow in the tree.

"This, and like observations by experienced bee-men, has led to the theory of the 'scouting party,' and also to the belief that when these pioneers have the selected home about ready for occupation they either return to the swarm in a body, or else a detachment only goes back, to escort them to the new location. This is the opinion of some. Why a clustered swarm will sometimes very suddenly depart for the woods while the bee-keeper is actually engaged in hiving it. And, sometimes, such a swarm will leave a beautiful and well-furnished hive soon after being put there. I know this for a fact, because such a thing resembles a 'false entrance.'"

"But I can give you substantiating facts from my own experience:

"The day last year a neighbor a few blocks away sent word that a swarm of bees had settled on the limb of a peach-tree standing near his woodsland in the back yard, and that if I wanted it I should come and get it. Taking my bee-box, spade to pry out the wooden hive, and carry the bees home in, I went over to my neighbor's yard. The swarm was a large one, and hung over the wood-shed roof within easy reach. I took my box and climbed upon the roof, and, holding the open end to the shelter, I reached up to give the limb a shake when I heard, directly above my head, a loud buzzing noise as of a small swarm of bees."

April 25, 1901.

AMERICAN BEE JOURNAL
I was for the moment greatly puzzled, for the clustering bees had, up to this time, been very quiet, and none had taken wing. I was sure; but, looking upward, I saw flying about the top of the tree in an excited manner, what looked like a small swarm of bees.

“Well, sir, in much less time than it takes to tell it, that swarm of clustering bees detach themselves from the limb and were off, going like a cyclone toward the woods down your way.”

(To be continued.)

Criticisms and Suggestions about the Score-Card.

By Friedemann Greiner.

I HAVE had some anxiety in regard to what the score-card committee would hatch out, and I am pleased now to find the work of our worthy committee in the shape of the proposed score-card in all its details publish'd on page 160. I suppose the committee was aware how impossible it is to suit the notions of every one, and probably expected their work to be criticised. If I point out some features wherein a change might be an improvement I do so with due respect to the gentlemen of the committee.

On the “General Display” I find nothing whatever to change. It is all right.

In the “Single-case” entry, it seems to me too much importance is attached to “attractiveness,” giving it 50 points. This would be all right in the General display, but for single cases this entry is not necessary, and might at least be placed on an equal footing with “quality” and “quantity,” if not placed below them in importance. A display we expect to be as attractive as possible, but in a single-case exhibition the superiority of the honey itself should be the governing feature.

The “Bee-entry” paragraph needs, according to my ideas, the greatest modification of any. The committee has overlooked the fact that a colony of bees can not be considered of two or more other bees for exhibition, without it contains not only queen and workers, but also drones. The latter have, however, not received any consideration at all. The reason for this is not apparent. The drone is the largest, makes the most noise. He is not very modest, by any means, nor do I see how he is not wanted at all. I wonder the committee could overlook him. Can it be possible the committee gives him the slip purposely? Is not the drone of sufficient importance to deserve consideration? If two drones are offered for exhibition, without it contains not only queen and workers, but also drones. The latter have, however, not received any consideration at all.

In regard to beeswax there is some uncertainty as to color. It is not fully settled what the color of the wax should be, and it is left to the one acting as judge whether he would give preference to yellow wax or white. As the bees manufacture it, its color either be white; as we manufacture it, it is kind of creamy-yellow at its best; it would be in favor of yellow as the standard color.

Wax should also have a peculiar aromatic odor. Aroma should be taken into account when judging, and so should have a place on the score-card. I would reduce “color” and “purity” “—or a score-card—by five each, and place the gained 10 to the credit of “aroma.” True, a judge may act upon his own ideas, but it seems it would be advisable to take this point into consideration.

The Premium offered this week are well worth working for. Look at them.

Are Bees Necessary to the Complete Fertilization of the Bloom of Fruit-Trees?

By Thaddeus Smith.

The part that bees play in pollinating fruit-bloom is a subject that has been discussed at various times in the past, and is still made a prominent theme in some bee-papers, and in some of the discussions of bee-keepers' conventions. Claims are made to the effect that bees are necessary in order to insure a full crop of fruit but such claims are not substantiated by facts or any positive evidence to sustain them. Bees visit fruit-tree bloom for honey and pollen, and in so doing go from one flower to another and are rewarded by spreading the pollen which fertilizes the flower. It is a very pretty theory. Bees and flowers! Sounds somewhat poetical, you know. But it lacks the facts to sustain it. It has been asserted so often that the persons who assert it have developed minds that have not been without investigation, and the cry has been taken up and repeated by writers who know nothing practically about it. But some of our experiment stations and professors of a more scientific mind feel the necessity of having some positive proof of these often repeated assertions, and are making experiments to see if they can find that proof. A report of some of these experiments was recently made by Prof. Lowe to a New York convention of bee-keepers, and an account was given in an editorial in Cleary in Bee-Culture. Further I wish to refer to these experiments more in detail.

There has been some contention between fruit-growers and bee-keepers; the former having produced an ill-feeling between them, the fruit-growers contending that bees destroy grapes and other fruit by biting holes, and sucking out the juice, leaving the fruit to rot; while bee-keepers claimed that fruit-growers brought the bees away from their crops, that they are in bloom, thus poisoning their bees. These charges and countercharges have produced a bad feeling between the two classes in some sections, when in reality there is no conflicting interest. The fruit-growers are certain that their fruit-blooms, and particularly the area of bee-pasture that supplies the bees with more honey and pollen. Bee-keepers, with less show of reason, are now trying to convince the fruit-men that bees are of great benefit to them, by claiming that a full crop of fruit will not be had without the aid of bees to pollinate the bloom.

I have been both a bee-keeper and a fruit-grower for over 40 years, and have been an enthusiast in both occupations, and have given these matters of contention of the two classes a thorough and impartial investigation, and arrived at conclusions that I believe are just to both parties.

Some 15 or 20 years before the case of Utter vs. Utter was brought for trial in court, I had settled the matter by the process of spraying crops. I even overcame the objection of the bee-keepers. I had 30 acres of grapes, and over 40 colonies of bees, and the time came that I found the bees working upon the Delaware and other early grapes in great numbers. I approached the beekeeper and told him I was greatly perplexed and did not know what to do, and if they were the real culprits I would be compelled to give them up. I did not act hastily in the matter, but set about thoroughly to investigate the subject, and after two or three years I had solved the mystery. I discovered that birds— one bird in particular, the beautiful Baltimore oriole—first punctured the grapes, and the bees gathered only the wast- ing juices; and further experiments that bees accept perfectly ripe grapes or other fruits. I also find myself on the side of the bees in the case of spraying fruit-trees while in bloom. It is necessary to spray while in bloom; and not only that, but it is an injury to the blooming fruit. But when it comes to the claims of my bee-keeping friends, that no complete pollinating of fruit-bloom can take place without the intervention of bees, and conse- quently of a full crop of fruit, I must respectfully differ from them, because I see, year after year, both large and fine crops of fruit, of many varieties, raised without the intervention of bees, in fact where bees are entirely excluded from the bloom. It would be unfair to take the facts in me to doubt my own senses of sight and taste to believe that there was anything in such claims of bee-keepers. From my view the claim looks absurd, and I take the position that bees are not necessary to the complete pollinating of any kind of fruit, and I think I can prove it. Now “to the law and the testimony,” or rather to the facts that ought to convince any unprejudiced mind.

But first I wish to notice the experiments made by Prof.
Lowe and heretofore alluded to. These were made by enveloping trees and parts of trees in a hood made of sheeting, and then removing them while the trees were in bloom. The trees so sheeted were found to set much less fruit than those left in their natural condition. It would have been very unreasonable to have expected any other result from this experiment, for it was plain that the trees so sheeted were in a vitiated condition. The free circulation of the air was excluded. The vivifying rays of the sun, so necessary to the growth and development of the average plant life, was excluded, and light, the needful food for plants, was kept away, making the experiment an unnatural one. Nature provides most bountifully for the perfect normal development of fruit. The unnatural heat in that hood which, when the sun was shining upon it, without the circulation of air, was allowed to suffuse the tiny particles that destroys the delicate germ of reproduction, or prevented the grains of pollen from ripening sufficiently to perform its functions. The sun shining upon the outside of this hollow island-air in circulation within it, would produce an unnatural heat intense enough to injure the anodevelop pollens and pistils; and these conditions would render the experiment abortive. In keeping the bees and other insects out, the wind was also kept out, and this is the main cause of the unreliability of this experiment. No one will deny that the wind plays a most important part in pollening flowers not only of fruit-trees, but of all the vegetable kingdom, many of which are never visited by insects and are at the mercy of the wind. To keep the wind from these flowers and sets it in motion, and the invisible particles are wafted hither and thither by every breeze that blows, bringing some of these particles in contact with the pistils of the flowers. They are wonderfully invisible ways of causing them to produce fruit until the proper ripening of the species. The wind is Nature’s agent to disseminate pollen, and every experiment that excludes it is unreliable.

The All-wise God who made all things and provided for them on earth, and said that there should be seed-time and harvest as long as the world stands, did not leave the fulfillment of this promise to depend upon the uncertainty of bees and other insects, but chose a more universal and sure provision, important to the continuance of keeping up the vegetable kingdom—of producing fruit.

In some countries there are no bees, as in North America before the white men came, and there are now places in this country where there are no bees, and in many of the southern states circumstancse and surroundings are such that other insects can not do this work. It is in some of these places where there are no bees, to which I wish to call attention, and give some facts that will sustain my position.

There was an island in Lake Erie, and near by me are several smaller islands upon which no bees are kept, and they being six to ten miles by water from any place where there are bees, no bees ever visit them. These islands are all of different species of trees, and Middle Bass Island is just across the international boundary line between Canada and the United States, and is one of the largest of these islands where there are no bees, and the whole is devoted to successful fruit-culture. Upon this island lives a friend, George M. High, one of the most successful fruit-growers in the State of Ohio, who excels both in quality and quantity of his fruit; growing successfully nearly every variety of fruit that can be grown in this latitude. Several years ago I asked Mr. High to join me in investigations by making daily observations when his trees were in bloom, to see if they were visited by honey-bees and other insects, and to what extent by other insects, and we continued these observations with the deepest interest in the matter himself. His reports were that he had never seen a honey-bee in his orchard, saw a few bumble-bees but they were not enough to visit one fruit-tree in ten thousand; also saw a few small "other insects" on the bloom.

These observations have continued for several years with the same result. I visit Mr. High about twice a year—when fruit-trees are in bloom and when the fruit is ripe and gathered. I am always surprised at his results in the fruit-line. Their trees set fruit so abundantly that peaches and plums have always to be thinned out, and they have sure annual crops than any other place that I know of—all zoned trees. These facts are to me somewhat skeptical, and those who are most anxiously interested, to establish the contrary that bees are not necessary to pollinize the bloom of fruit-trees.

I am aware that I may be confronted with the assertion, or argument, if you choose so to call it, that other insects were or might have been the means of pollinating these island fruit-trees so perfectly. For argument’s sake I grant you that other insects did, but the abundant fruit and results prove that bees are unnecessary, as other insects can insure good crops of fruit without bees. So the advocates of the importance of bees do not get much comfort from this, but I deny that other insects did it, and I propose to prove it.

The first witness that I shall introduce is Mr. O. L. Hershoner, one of the witnesses who gave his evidence at the convention of the New York State Association of Bee-Keepers on the side of those who say that I propose to prove that bees were necessary to pollination, etc. I quote from the proceedings of that New York convention as reported in an editorial in Gleanings in Bee-Culture.

"When the professor [Lowe] was asked how much of this pollination was attributable to bees, he could not tell; but Mr. O. L. Hershoner in referring to a similar set of experiments made some years ago at the Michigan Agricultural College showed the same results, the bees were altogether unnecessary; he stated that the average fruit-tree was almost completely covered with bees; that at the time the average fruit-tree is in bloom it is too early in the spring for other insects to be of any value; in his opinion the covering of the limbs or the covering of the whole tree, as explained by Prof. Lowe, showed clearly that the bees, and they alone, did the mixing of the pollen."

Notice Mr. H’s evidence as to the fact that "it is too early in the spring for other insects to be of any value;" and this corresponds exactly with my observation when I visited Middle Bass Island, and with my own, made repeatedly, here on Pelee Island. When these three witnesses agree so well in their evidence, that "there are no insects except bees at the time of covering the limbs of Michigan fruit-tree in October and November" in pollination, then it ought to be sufficient to establish that fact beyond question, and put a quietus to the "other insect" theory.

As to Mr. H’s "opinion," or his conclusion from Mr. Lowe’s experiments on the island, and they alone, did the mixing of the pollen," I am willing to leave it for what it is worth, as from the facts already given it can not be worth much. He reminds me of some other evidence and conclusions that I read on this subject. This writer said that he knew the bees were of great benefit to fruit-growers because he had some pear-trees near his apiary, and the sides of the trees next to his bees bore a good crop of fruit while the opposite side bore scarcely any. Comparatively an unaccustomed amount of fruit.

There are a number of other points on this subject that I would like to notice, but fear that I am already too long. But I will say, if there are experimenters and professors who really desire to give this matter an impartial investigation, I should be pleased to have them come here, and I will take pleasure in doing all I can to aid them.

Pelee Island, Ontario, Canada.

Queens Only One Year Old for Comb Honey.

BY C. M. DOOLITTLE.

A correspondent writes as follows: I have decided that every colony that is intended to be run for comb honey during 1902 must contain a queen of this year’s rearing. I desire good queens, that is, those with unexceptionable qualities, and to keep up a reasonably high standard. Can I follow in order to produce the best results for a series of years? Please tell me the columns of the American Bee Journal.

In answering this, I must say I can not conceive what line of argument could have been used to bring the question to a decision that he would not allow a queen over a year old in his apiary, which was to be run for comb honey, and can not help thinking that when his experience accumulates he will be disposed to consider that the queen which are in their second year do fully as good work as younger ones, where the colony is worked for comb honey, and often are equally, good the third and fourth year. Those who have read the Canadian Bee Journal for February, 1901, and treasured up what is found there about queens, will have "a feast of good things" to revel in for some time to come, along this matter of queen-rearing. There, Mr. J. B. Hall, than whom are wiser and better informed on the subject, gives the figures for 1900 and 1901, and amongst a thousand results he gives this in February, 1901, and treasured up what is found there about queens, will have "a feast of good things" to revel in for some time to come, along this matter of queen-rearing. There, Mr. J. B. Hall, than whom are wiser and better informed on the subject, gives the figures for 1900 and 1901, and amongst a thousand results he gives this

"I want longevity in my bees; I want that first and foremost; that is why I don’t want to replace my queens every year, because if I do I must kill them, and I don’t know what to kill, if I keep them two or four years, and they have done good work for four years, wintered well
Questions and Answers.

CONDUCTED BY
DR. C. C. MILLER, Marengo, Ill.
(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail. — Editor.)

Getting Increase—Kind of Bees.

1. What is the best way to increase rapidly the number of colonies for a beginner? I have six strong and one weak colony that I shall have to feed. I am giving partly filled sections to this one now. I would like to increase to 60, but do not count on getting any surplus honey to sell. This is a fair location for honey. I had one strong colony that put 66 pounds of honey in sections; the other one did not do much but young mated queen and got natural swarms from it. The 4 will winter well. The honey bees are well balanced, but the queen is a cotton, soft maple, sugar maple, basswood, red and black raspberries in abundance, gooseberry, plum, apple, peach, cherry, and wild blackberries. The fall bloom is where we get most of our surplus, such as a bee collection, and made a surplus of our honey. You see I have a steady flow most of the summer, which is necessary for you to know in order to give your opinion.

I do not know what my bees are. I will Italianize the whole in a little while, or as soon as they begin flying well. I bought 3 queens released September 10th. I have 2, and I don't know which to keep. They have 5 bands, and one colony is the result of a hybrid. I have the others as daughters of a bee from the same source. The queen is the result of a hybrid. She is from a large flock of bees and has the same result.

2. Why is this kind of bees or honey bees so much better than the wild bees?

3. Could you tell me what breed mine are? They have 5 bands, are larger than Italians, and longer, are ugly, and rush about the hive as soon as opened, and sting anything that comes along quickly, and will only retreat before a cloud of smoke. In handling supers it keeps one using the smoker to do anything with them. They are good workers, and if they were gentle I would not change.

Michigan.

Answers.—1. If you do anything in the way of rapid increase the first thing is to get a text-book familiar with general principles and with the different ways of increasing thereein. My advice to a beginner desirous of increasing from 7 to 60 would be—don't. You might without such a great deal of trouble get 60 started, and then you might with less trouble have them dead before Christmas. The wiser plan will be not to set any such limit, but to work on safe ground and increase just what you can safely, whether it be to 16 or 60. Take the nucleus plan, and having done one or two of your original nuclei, draw from the others to build them up, but do not allow yourself in any case to draw from a colony so as to reduce it to less than four frames of brood. Then you can start others, and as fast as a nucleus becomes strong to try, or it can do its part toward helping, only keep in mind all the time that in drawing you must not reduce to less than four frames of brood. In this way you will not be caught with a lot of weaklings, but can close up any time when the weather threatens to close up. Of course, with such a long season as you seem to have you may be able to reach the goal you have set, but don't count on going beyond just what you can safely do.

2. Some colonies of one kind are best, and again some of another kind?

3. Very likely they are Italians, and very likely if you compare carefully with other bees of the same age, you will find them of the same size as other Italians. Some of the 5-banded Italians are reported as cross, and others as gentle.

Queen-Rearing in March.

March 24th my bees had a fine flight, it being the first warm day since the holidays. While watching them just at noon I saw a queen come out and fly away, but return in 15 or 20 minutes. This was repeated three or four times while I was watching them. The colony is strong in bees, and was working nicely carrying in pollen. Now, was that a young queen trying to mate? If so, why did the bees supercede the old queen so early when there are no drones? If the colony became queenless in the winter where did they get the egg to rear the queen? It has been so cold since that I can't look thrue the hive. It has been too cold for bees to fly ever since. I have been keeping bees since the spring of 1881, but this is something new to me.

Indiana.

Answer.—It may be that the young queen was reared last winter and failed to replace the mother, and she may yet be all right. At any rate such cases have been reported in which the queens turned out well.

Alfalfa Not Recommended for South Carolina.

I have about 30 colonies of bees at home, and an other farm 3 miles away, 5 to 6 colonies. The best clover for hay and also for bees. A friend of mine tells me that while he was in the distant West he noticed bees doing well on alfalfa, and says its hay quality surpasses all he knows of. But, of course, he knows nothing as to its being adapted to our climate. Will it do well here? Is it used to any extent by bees? How much per acre, and at what season can I with reasonable certainty sow the seed? Will the alfalfa grow wild? I think I have heard that bees may not look for help from alfalfa for two or three years after sowing.

South Carolina.

Answer.—As far cast as Illinois alfalfa will grow, but seems to be of no value for bees, altho in the States farther west it is one of the best honey-plants. It is not likely that it would be of any value in South Carolina. Sweet clover, alfalfa, and crimson clover, are the things for you to try.

When and How to Form Nuclei.

1. I have studied three bee-papers all the winter, besides several bee-books, but so many plans only confuse me. What time (please give month) and how shall I form nuclei for increase, so as not to increase with some surplus honey?

2. Will taking two frames of brood and bees before time for white clover weaken the colony so they will not store any honey?

1. I opened a hive the other day, and very much to my
Feeding Sorghum Molasses.

What would you say about feeding bees sorghum molasses (that is, molasses made from cane)? Do you think it is injurious to the bees?

I am keeping bees for another man, on shares. I just began last fall, but I have kept from one to five colonies of honey bees for five years. I have kept the honey bees for winter, but no clover at all, but the prospects are good for this year. Clover is coming on in fine shape. Bees are flying nearly every day, and are working on clover. I don't know what they get.

Missouri.

Answer.—It would not do to feed sorghum molasses for winter food, but when bees are flying daily in the spring they may be fed sorghum or anything else they will take that is not actually poisonous.

Inverting to Destroy Queen-Cells.

I have nearly decided to adopt the Heddon hive in my future plans for increase in the apiary, and I have seen it stated by Mr. Heddon that a sure way of destroying queen-cells in that hive is simply to invert the section and the bees will destroy all queen-cells. Can you tell me if it is a fact? Have you ever given the Heddon hive a trial? As hunting for queen-cells forms no inconsiderable part of a day's work in the apiary, a plan that will destroy those we do not want as easily as reported, is very desirable, if true. And as it is scarcely practicable with the suspended frame, I am ready to adopt an invertible hive if it will do for our business.

"RIP VAN WINKLE.

Answer.—A few years ago it was thought by some that inverting queen-cells would lead to their destruction by the bees, but after further trial the plan has been found to be altogether unreliable. I have never tried the Heddon hive.

Swarming.

1. When a prime swarm issues does the queen always come out about the last of all, and first when an after-swarm issues?

2. In swarming-time, when a colony seems to be about ready to swarm, how would it work to place a cage in front of the hive with a bee-escape from hive to cage, and another from the cage to another hive standing at one side with full sheets of foundation? And about the second day put a queen in the new hive, and leave them arranged in that way for several days? Would I succeed in running most of the workers from the old hive into the new? If so, would you accept the new queen and go to work all right? Would the queen and bees left in the old hive give up the idea of swarming?

Iowa.

Answer.—1. No fixed rule about it. The queen may be among the first or among the last in either case; but she is more likely to be among the last in a prime swarm and among the first in an after-swarm. I have had very little chance for observation, and am ready to be corrected.

2. Sorry to say I don't believe it would work at all; but having never tried it I may be mistaken. My guess would be that it would fail in each particular.

Beet-Sugar Factory's Effect on Bees.

I attended a beet-sugar meeting the other night, and in discussing the matter a man from Rockyford said that beekeepers would have to move their bees a mile or so from the factory, as acids and chemicals were used there that would kill the bees. It was not a bee-meeting, so I could not discuss this subject, but I would like to have you tell us thru the columns of the American Bee Journal whether or not this is true. It seems to me of great importance to beekeepers to go West.

Colorado.

Answer.—I don't know whether a beet-sugar factory is a bad thing for bees or not. Some beekeepers must be living within a mile of one of these factories; will they please tell us?

The "Old Reliable" Seen thru New and Unreliable Glasses.

By E. E. HASTY, Sta. B Rural, Tokoyo, O.

Extracting Honey.

Yes, sir-ee, Mr. Ailkin, propolis will go to the bottom where it can do no harm, but when it is burned. Burr and all sorts of scrapings with propolis in should go thru the solar extractor the first thing. Then, as after transactions, remelt the wax, if necessary, and re-treat the waste cake. And—another yes, sir—-the stubbornness with which cold comb honey refuses to take heat is quite incomprehensible to the beginner in bee-practice.

Sometimes when in a hurry one can run the combs thru the extractor and throw out part of the honey, then hang them up in a warm atmosphere and pour or two, then run them thru again. But don't hang the combs very close together, even if three-fourths empty. The idea of a large gravitating tank with chance to heat it underneath is an important idea. Two such tanks, so one could be undisturbed while the other was being filled, would seem to be the ideal arrangement. And the whole article on page 167 is one of the very best Mr. Ailkin has given us.

Quelling Robber-Bees with Gunpowder.

And sometimes civilization does get forward.

Upon way,

We know that; but most of us never thought of civilizing robber-bees with gunpowder. No doubt it would "hiss 'em" if the charge was big enough. And any very offensive smell may discourage them if they are only fussing around and not getting much. Some brother who has a too-closeted hat, present it to Peacemaker as a premium for his contribution. Page 175.

That Generous Dog and Bee-Things.

That was an all-right and head-level sort of dog, on page 175, that wanted to share with his young master the bliss of communion withumble-bees. Masters like the aforesaid should not object to tasting of dishes which they have cooked.

Dollar-A-Pound Honey—Excluding Bees.

Honey at a dollar a pound is rather dear. But health and fun at a dollar a pound—well, most of us would fain purchase a little occasionally. So let Mr. Metcalf go on hunting the dollar-a-pound wild honey. Page 180.

So Chicago can get along nicely without a bee-exclusion.
The Home Circle.

Conducted by Prof. A. J. Cook, Claremont, Calif.

SUNSHINE IN THE HOME.

How few of us understand what sunshine has done for the world. Except for the blessed beams which come with their warmth of light, we could have no vegetable growth. The plants need the sunlight to change the carbon dioxide which they inhale from the air, and the water which comes up to them from the roots into the starch, sugar and oils which are to nourish them and to feed their tissues. Indeed, we owe to the sunshine the great coal-beds which make us so rich as a nation, and which, of themselves, contribute so largely to the comfort of so many of our home circles.

Sunshine in the home is as great a factor in supplying its best fruits as it is in the world about us in building up the great plant portion of the earth. Some years since, a man by the name of Alexis St. Martin, received a wound which over the upper part of his abdomen. The healing was imperfect and left a flap which opened into the stomach. Thus, there was formed a sort of a door so that any observer could not only look into the stomach and see its condition but could also reach in and withdraw the injesta so as to note any time the just condition of digestion. Some very interesting facts were observed. St. Martin was taken around to various of the medical colleges that the students might have the benefit of direct observation regarding digestion. Students are not always considerate and thus St. Martin was often vexed by them. At times he became very irritable and peevish. With an irritable temper outward impressions that it was very easy to affect his temper. He would either angry or happy at the will of those who held him in charge. It was found that if he was seriously irritated, immediately after eating a full meal, that the stomach remained pallid, showing that the circulation was held in abeyance, the gastric juice or digestive fluid failed to appear in the stomach, and thus there was an almost total failure of the food to digest. On the other hand, if he was in merry mood, the stomach flushed up as the blood coursthr up the capillary circulation, the digestive juices were poured out generously, and the food was soon liquified, absorbed into the blood, and hastened on to the tissues to help in the work of assimilation.

Here, then, we had a very graphic illustration of what many of us have proved in our own experience. How often has the letter bearing sad tidings, or the evil news told to us just after meal-taking, seemed to stop entirely the wheels of digestion. Often the stomach is said to be of the stomach, to be a machine as to give a fatal shock to the system. It is now a well-known physiological fact that anything which disturbs the mind is a serious break upon all the bodily functions. When the digestive system is made to work more slowly, the lungs fill less frequently, all the secretions are poured out with languor, and the whole body seems to call a halt. It is no wonder, then, that so important a part of our functional activities as that of digestion should be made by one of the most ready respondents to this evil effect of bad news.

We see, then, how important it is, if we would maintain health, that we should bring great floods of sunshine into the home, and should keep from it everything that incites worry or brings displeasure.

It is specially desirable that this matter of sunshine should never be lost sight of at meal-time. Anything that makes the table look more beautiful, as the neat and orderly arrangement of dishes and viands, or the vase of flowers, contributes not only to good digestion but as surely to good health. A long life and a full life in which the victuals may be more thoroly masticated and digestion hastened. This is certainly excellent advice. But the long sitting at the table, and the happy disposition of each person in an atmosphere of sunshine, which is the result of a happy hour of meal-taking, an hour so full of glee that it will brighten all the other hours of the day, is doing more than they know to keep dread disease from the household. It is shaming to see how this is neglected in the name of some thing to that effect. I wish I could say something in these talks on the home circle to brighten all the homes of the land, for I would in so doing add not only greatly to the health and vigor of all our readers, but would also do very much to make the world's life much more effective.

There is another consideration in reference to this matter which is well worth our thought. Discomfort in itself is very apt to breed the sullen disposition and the irritable temper. From what I have said above, these induce dyspepsia and ill-health of the house further the sickness of the sick, and it is again to impede digestion, and thus we have a fearful compound interest which will almost require a miracle to prevent serious disaster.

We have here it said that worry hurts worse and kills more than does work. This is certainly true, and is easily explained from what has been said above. Surely, then, if we do not make our own to flood the home circle with sunshine, brighten the sunshine, they are not only losing a full act, and the owing sympathy, but not only take a forecast of heaven in our homes, but they tend more than anything else to fence off disease and sickness, and to carry youth into old age. If we could do anything to secure such homes everywhere in our country, we would do that which would be greater with promise for the future of our good land than does even the wondrous prosperity which I referred to in my last article. A country full of bright, sunny homes would also be great in patriotism, and would ever be invincible against any foe that might dare to cross its borders.

NURSING IN THE HOME.

I am also minded to say a few words regarding nursing. One has only to be sick and in bed a few days to appreciate the kind of indications of the loving hands and hearts that do so much to rob even sickness of its terrors, and so much to drive the unwelcome visitor away. It is often said, and I am sure with entire truth, that of the, of the two, the good nurse is of more importance than any part of the medical care. For a certainty that medicine at the best is only a minor aid in the work of recovering lost health. Very likely many times the medicine does more harm than good. We cannot say the same of the good, thoughtful nurse. I have often thought that were it a girl or young woman, and time would permit, she should take the training necessary to make a first-class nurse even tho I might never wish to make nursing a profession. It is certainly well for every young woman to be fortified by having some business in which case of need would make her independent. There are a few things that woman is preeminently qualified to do. She alone can make the beautiful home; she alone can attain highest excellence in teaching children; she alone can make the hospital a place of rest for the sick. The good musician, so, too, the good nurse, wherever her lot may be cast, will never find her skill and ability beggining opportunities to make themselves felt and useful.

The first thing the good nurse will look to is such thoughtful and pleasant attention that the patient will have even the slightest worry over the closing of a window, the neatness of the room, the taking of medicine, etc. Every need and requirement will be foreseen and met with such promptness that the patient will have no worry at all and below the house generally in case where the nerves are involved, will be insisted upon by the good nurse. Inquiring friends will be courteously thanked for their thoughtfulness in calling and the hope express that the sick one will be able very soon to see them. There is no question but the sick one in the highest degree comfortable. Shaking up of the pillows, frequent arrangement of the bed-clothes, and the off-repeated bathing of the face and hands, especially in the case of fevers, will never be omitted. Perhaps the most important thing of all, and we may say the hardest thing, for the nurse is apt to become very tired and sleepy, is that she
Langstroth on... 
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—BY—

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Bringing in Pollen—White Clover.

My bees are still packing as for winter, but I think I shall unpack them soon. They were bringing in pollen on Easter Sunday for the first time in the new colony. White Clover has come thru the winter in fine condition, and I look for a good honey-year. 

J. J. STALNAKER.
Hardin Co., Iowa, April 10.

Cause of Bees Dying.

In the answer to West Virginia on page 201 Dr. Miller says, "It is painful to say I don't know." I would like to suggest that the variable temperature combined with inferior stores and the long confinement may have something to do with the matter. The mercury ranged from zero to 40 degrees above, several times within one week during the past winter. My bees completed the hives and the tops of the frames the worst I have ever known them to do in my 20 years of bee-keeping.

Braxton Co., W. Va., April 5.

Loss 15 per Cent—Death of a War Veteran.

My bees are not wintering in good condition. My loss will be about 15 percent, all owing to the fact that I was not thorough in preparing them for winter. We had sickness in our stock at the time, and the bees were not long hived as well as they should have been. We laid my father away to rest on March 25th, after having suffered for over a year with progressive paralysis. He was a war veteran, belonging to Company B, 73d New York Volunteers.

CARSON VA. BLAUCHUM.

Wintered Well.

I took my bees out of the cellar yesterday morning and they had a good flight of put 41 colonies into the cellar last fall, and was lucky enough to take out 40 yesterday, which beats my record the two years previous. Maybe I have made a mistake in expecting the bees to be there when winter is over in that time. Perhaps it is a new season. However, I have always lost some in the spring after they were placed on the summer stand, and I think the present season will be no exception to the rule.

Cook Co., III., April 2. C. H. McNEIL.

A Report from Canada.

I put 116 colonies into the cellar early last November, and they are there yet. Swarming is still fairly good, so I do not know when I will be able to put them out, nor what my luck will be when I do. We have had every variety that I had set to one side are in fine condition, and will come thru in good shape, so I am hoping for the rest of the season.

A. BOOMER.
Ontario, Canada, April 5.

Wintered In the Cellar.

The bees are still in the cellar, and "roaring" to get out, but the weather is unfit. Cold and high winds, with steady alternating, make it unsafe. They were put into the cellar Nov. 8th. Ten of the colonies have been removed and put in the worst (26 colonies) were given a flight in February. Up to March 7th none showed any signs of swarming. March 13th three of these colonies that had not been taken out were spotting the hive-entrances and crawling about it, and perhaps a gallon and a half of dead bees were on the cellar-bottom. A week later all 10 of the hives were spotted, and to-day about half of those that were given a flight yesterday were having their hives spotted and the cellar-floor is covered with dead bees, making fully a half bushel from the 30 colonies since Nov. 8th. The temperate to make cows pay, we Sharples Cream Separators. Book "Business Drifting." A Cat. 21, free. W. Chester, Pa.
Belgian Hares **CHEAP.**

PEDIGREED AND COMMON STOCK.

Having bought a Job Lot of a neighbor and added to what I had, I must dispose of some to make room for new. The pack mostly young—3 months and over—with a few bred Does. Also

Italian Queens of last season's bearing, ready as soon as the weather is warm enough to send thru the mail. Write for prices. Address

J. L. STRONG, Clarinda, Page Co., Iowa.

American Bee Journal

114af

1900 a Dry Year—Prospects Fair.

My bees began carrying in pollen about April 5th. It is cold and windy, and we have just had 4 days of rain, so the bees have not been out.

The wind on March 20th was in the northwest, and it raised a little on that day; old settlers say that is the sign of a wet summer. I hope it is, for 1900 was the driest year I have ever seen. We had plenty of rain in April, 1900, to raise the wheat, but, for the most part, we did not have any more to amount to anything until March, 1901, and the wells and springs were nearly all dry, but we have plenty of water to draw on.

I hope this season will be a good one, for we have had two poor ones in succession.

Sussex Co., N. J., April 8.

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11A34 J. D. GIVENS, Llston, Tex.

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6A1f Mention the American Bee Journal.

temperature has not been lower than 45 degrees or more than 88 degrees all winter. The covers are sealed down, bottoms the deep side. Thunbergia's in native colonies and other bees. They are clustered below the bottom-bars, some being on the floor of the hive, and others hanging out of the entrance, as if preparing to swarm.

I would venture to guess that a pretty good-sized swarm was in the air during the few minutes that I was there. We took a survey of matters, and "closed up," concluding to give them their liberty the first day the weather would permit.

We used the last section of our 1900 crop of honey at dinner today. It is a regular dish at our house, and no unpleasant results have come of it as yet.

Success to the American Bee Journal.

SIOUX, IOWA, April 1. F. W. HALL.

A California Lady Bee-Keeper's Experience—Dark Beeswax.

I have kept bees for the last 5 years, and the first year were very good, honey-years, but I know very little about the business. The year 1900 being a very poor year, I rented the bees to a man who claimed to be a scientific bee-keeper, and he divided them as long as there was any honey to be had; after that he did not rent them to any one, and when I first started (1899) they were not wanted for the demand was not great, and I was supposed to do nothing but build up the colonies. The bees wintered all right, and are doing well. I will attend to my colonies this season, hiring help when necessary. I never wear a veil or gloves, and I am very rarely get stung. I treat them as I do people—never go into their house without rapping, then wait for them to come up to me before I raise the cover. I then give them a little smoke, but not enough to make them think that their house has turned into a smoke-house.

Some people seem to have a great deal of trouble with dark beeswax. I think the amount needed to melt it is hard to manage. I have some very dark beeswax made from starters, I had about 200 frames containing starters about 2 inches wide; I wanted full sheets of foundation, so last fall I exchanged them. I put the starters into an iron kettle to

Red Clover Queens

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Orders for these fine, "long-reach" queens will be filled in rotation—first come, first served—beginning about June 10th. It is expected that orders can be filled quite promptly, as a large number of nuclei will be run. All queens will be guaranteed to arrive in good condition, and they will be clipped and well marked.

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melt, and they were nice and yellow before I put them in, but after they were melted into wax I never saw such black stuff. A bee-keeper told me that he thought it was the iron kettle that did it. My apiary is in the orchard. I had 110 colonies, and the apricot trees were in full bloom when the picture shown herewith was taken. The people in the picture are the two young men who had rented the apiary, and a young woman who was working for us. I don't care for long-tongued bees. I have no use for long-tongued women, and I am afraid they might be like them—using their tongues where they have no business to.

APRIL

FRUIT TREES ARE IN FULL BLOOM, AND THE BEES ARE HUMMING.

I like the American Bee Journal very much.

(A. P.) Arte Bowen, Merced Co., Calif., March 5.

POOR LOCALITY FOR BEES.

This is a bad country for bees; most of them have started to death this winter. I will have to feed mine as soon as the weather is warm enough. I have not lost any colonies yet. It is snowing every day.

John Berk.

Polk Co., Neb., April 2.

FEEDING SUGAR-CANDY TO BEES.

On page 201 Dr. Miller asks for the experience of those who have fed candy. One winter I fed a number of colonies with candy made as per directions given in "ABC of Bee Culture," and I am sorry to say that it was a dead failure. The candy seemed to be all right, but the bees were put out by the winter experience is enough for me. I have a suspicion that the cheapest and best way to feed in winter is to give them comb—bees would do, of course. I fed it to some of my colonies during the past winter.

Hennepin Co., Minn. WM. Russell.

TAXING BEES IN IOWA.

I notice on page 211 you discuss the question of taxing bees. In this State the list of exemptions includes 10 colonies of bees, all poultry, and various other articles, and then says that all other personal property is taxable, which includes all bees over 10 colonies. Now, that there is a hardship—exempting 10 colonies. How would it seem to exempt 10 acres of land, 10 cows, 10 hogs, etc. all turn the list of personal property? Isn't it the same principle? Why shouldn't I pay taxes on 10 colonies as well as my neighbor on 40 or 50? And don't you suppose 15 will be about the usual number owned by the average man of beekeepers in February or March, which is the time our assessors generally call? And who will pay under this law? Only those who have worked up so large a business that they can stand the loss, including the assessing, which would make it.

GROVE CITY RABBITRY!

Prince Leopold, Ivanhoe, Donovan Boy, and other high-bred Belgian stock. Youngsters, 3 months, $3.00, or 2 for $5.00. For pedigree, write.

W. M. Whitney, Kankakee Ill.

15a24 Please mention the Bee Journal.

BEE-SUPPLIES!

Root's Goods
AT Root's Prices.

Everything used by bee-keepers.
POULDER'S HONEY JARS, Prompt service. Low Freight Rates. NEW CATALOG FREE.

WALTER S. POULDER.
148 S. Mass. Ave., Indianapolis, Ind.

If you want the Bee-Book

That covers the whole Agricultural Field more completely than any other publisher, send 37.25 to

Prof. A. J. Cook, Claremont, Cal. FOR HIS

"Bee-Keeper's Guide.

Liberal Discounts to the Trade.
they had a large number of bees. Then there is poultry—all poultry is exempt from taxation in Iowa, and there are probably a hundred dollars worth of poultry to one dozen bees; and no doubt the annual cash returns from poultry are as much, or more, in favor of the poultry tribe. So if there are any tax on property having a fixt value, and are a more or less certain source of income, then by all means let poultry pay.

It is evident that there are reasons for exempting property from taxation—two very good ones, and probably others. But I am not encouraged to encourage any industry that is a benefit to the country in general. Now, why have not bees the very best claim on both of these grounds? They are the ideal property for a poor man—not that he can make money rapidly and easily thereby, but they require little capital for a start, many successful bee-men starting on nothing, even catching their first swarm as strays. And as it is generally admitted that bees are necessary to the cross-fertilization of our fruits and flowers, and thereby the increase of the people in general, we can claim exemption on that ground that any class of property can.

We are not claiming that bees are not tax-able, for we believe they are in this State, but we think they ought to be exempted for the same reasons.

Personally, I have never paid any tax on bees, as our assessor never asked me to list my bees once, and then I told him (and I think truthfully) that I did not know how many colonies I had at that time, as it was in February or March. I told him if he would call again he should find that I had added nearly all that I had. So he said he would let it go. I have no idea that there ever was a dollar tax paid on bees in this county.

E. M. Smith.
Crawford Co., Iowa.

Weather Too Bad to Put Bees Out.
I put 5 colonies of bees into winter quarters, but lost one. I wish that we might have pleasant weather so that I could put them out. It rains or snows nearly every day, but we are hoping that it will soon change.

Lavina N., York County, in this vicinity. The bees did not do much of anything, and the colony that I lost was a young swarm which stored very little honey. I gave it 4 combs of sealed honey and thought that would bring it thru the winter all right, but about a month ago I found it dead. There was a little honey left in the hive, and also some sealed brood, so I do not know what was the trouble.


david st. david
Herkimer, N. Y., April 1.

CONVENTION NOTICE.
Illinois.—The spring meeting of the eastern division of the Illinois Beekeepers Association will be held at the residence of B. Kennedy, 7 miles southeast of Rockford, Ill., on Rural Route No. 5, and 3 miles northeast of New Milford, Ill., Tuesday, May 21, 1901. All interested in bees are cordially invited to attend.

B. KENNEDY, Sec.

1901—Beekeepers’ Supplies!

We are continuing our series of beekeeping goods at wholesale or retail at their prices. We can supply you with any kind of beekeeping goods ever paid for beewise. Send for our list catalog.


Queen-Clipping Device Free...

The MONETTE Queen-Clipping Device is a fine thing for use in any serious queen raising. It is made cheaply and will be sent Post free with any order.

GERTRUDE G. W. YORK & CO., Chicago, Ill.

Please mention Bee Journal when writing Advertisers
We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR

Hives, Extractors
OR ANYTHING YOU WANT IN THE
'BEE-KEEPING LINE'.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of THE AMERICAN BEE-KEEPER free. Address,

THE W. T. FALGONER MFG. CO., JAMESTOWN, N. Y.

**W. M. GERRISH**, East Noltingham, N. H., carries a full line of our goods at catalog prices, Order of him and save freight.

LEARN TO SING

A HOME by my thorough method of training. With my complete course I guarantee to train and cultivate your voice or refund your money. The best musical knowledge arranged especially for home study, His Highest Endorsement, Beautiful composition and lessons free. Address, Prof. G. M. Whaley, Kalamazoo, Mich.

Please mention Bee Journal when writing.

SWEET CLOVER
And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed from our Gardens of Sweet Clover by freight or express, at the following prices, cash with the order:

<table>
<thead>
<tr>
<th>Type</th>
<th>$1 lb</th>
<th>$2 lb</th>
<th>$5 lb</th>
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<tr>
<td>Sweet Clover</td>
<td></td>
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<tr>
<td>white</td>
<td>1.10</td>
<td>2.20</td>
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<tr>
<td>Sweet Clover</td>
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<tr>
<td>yellow</td>
<td>1.50</td>
<td>3.00</td>
<td>7.50</td>
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<tr>
<td>Alsike Clover</td>
<td>1.20</td>
<td>2.40</td>
<td>6.00</td>
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<tr>
<td>Alfalfa Clover</td>
<td>1.40</td>
<td>2.80</td>
<td>7.00</td>
</tr>
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Prices subject to market changes. Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and packing. Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street, CHICAGO, ILL.

200-Egg Incubator
for $12.00

Perfect in construction and action. Hatches every fertile egg, Write for catalogues to-day. GEO. M. STAIR, Quincy, III.


I ARISE

To say to the readers of the BEE JOURNAL that

DOOLITTLE

has concluded to sell

QUEENS in their season during 1901, at the following prices:

<table>
<thead>
<tr>
<th>Type</th>
<th>1 Unstained</th>
<th>2 Unstained</th>
<th>3 Unstained</th>
<th>4 Unstained</th>
<th>5 Unstained</th>
<th>6 Unstained</th>
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<tr>
<td>Quality</td>
<td>$1.00</td>
<td>$2.00</td>
<td>$3.00</td>
<td>$4.00</td>
<td>$5.00</td>
<td>$6.00</td>
<td>$8.00</td>
<td>$10.00</td>
</tr>
</tbody>
</table>

Select Queen, $1.25

These last are very rare and with one exception this (21-100) is the longest tongue reach yet secured. We reserve the right, when we do not have the stock with the tongue reach called for, either to return the money or to send the next lower, remitting the balance. It would be well for our friends to put in their orders at once, and as soon as we get the grades we will send notice. When the money is sent, the queens will be forwarded. These will be put up in the very best manner possible; and while we guarantee safe arrival in good order to any point in the United States, on every railway line, we will not guarantee safe introduction. Such valuable queens should be releast on hatching brood.

N. B.—It seems as if it ought not to be necessary to say that no one but a queen-breeder or a large honey-producer should order these high-priced queens but it is a fact according to our experience that beginners with only a few colonies will order our highest-priced imported queens. Such beekeepers have no more use for such queens than a pig has for a wheel-barrow.

THE A. L. ROOT CO., Medina, Ohio.

U. S. A.

GEORGE W. YORK & CO. 144 & 146 Erie Street, CHICAGO, ILL., are headquarters for ROOT'S BEE-KEEPERS SUPPLIES IN CHICAGO. Send to them for their free Catalog.

$15.00 and $25.00 Queens

Having a Measured Tongue Reach.

The call for queens of our celebrated $200 imported mother has been so great that we have decided, in addition to the $2, $4.00, and $6.00 grades of this stock, to offer some $10.00, $15.00, and even $25.00 of this same blood. But these prices are for tested queens, the tongues of whose bees have been measured.

The $10.00 queen is guaranteed to produce bees with a tongue-measurement of 19-100.

The $15.00 queen, 20-100.

The $25.00 queen, 21-100.

These last are very rare and with one exception this (21-100) is the longest tongue reach yet secured. We reserve the right, when we do not have the stock with the tongue reach called for, either to return the money or to send the next lower, remitting the balance. It would be well for our friends to put in their orders at once, and as soon as we get the grades we will send notice. When the money is sent, the queens will be forwarded. These will be put up in the very best manner possible; and while we guarantee safe arrival in good order to any point in the United States, on every railway line, we will not guarantee safe introduction. Such valuable queens should be releast on hatching brood.

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AMERICAN
BEE JOURNAL

GEORGE W. YORK,
Editor.

CHICAGO, ILL., MAY 2, 1901.

FORTY-FIRST YEAR
No. 18.

WEEKLY

MAY

BY EUGENE SECOR.

One day
I past an orchard where the bloom
Seemed coaxing honey-bees
To stop and sip its tempting wine
And pack their basket-knees
With pollen-bread on which to dine—
Both laden with perfume—
And it was May.

In May
The dandelions ply their art
To spread a honey-feast;
They fling their yellow banners out
Against the beaming East
As if to say to bees about,
"We yield our inmost heart—
Kiss us, we pray."

In May
The birds are busy building nests
Or guarding pregnant eggs;
King Corn, the buried out of sight,
Is soon upon his legs
To prove the crown is placed aright—
For all the loyal West's
Corn-men so say.

Survey
The clover-fields, the grazing herds,
The dogwood in full flower,
The trees that stretch an inch each day
With quick'ning shine and shower.
Survey, and tell me, need I say
In stronger, ampler words,
That this is May?
WE WANT
1,000 NEW Subscribers
During May and June.

We want
We want
We want

500 of our present regular subscribers, whose subscriptions are now paid in advance, to help us get the 1,000 NEW SUBSCRIBERS.

each one of you to get just TWO new subscribers, and the job will be done! See?

to ask you to get them only for the rest of this year—to the end of 1901. And the price will be but FIFTY CENTS EACH—or $1.00 for the two new subscriptions.

We want to offer to each H. one who sends us 2 new subscribers on the above condition, a copy of

DOOLITTLE'S

"Scientific Queen-Rearing," free.

We have just issued a New Premium Edition of this fine book, bound in leatherette cover, with round corners. It is in every way (excepting just the cover) the same as the cloth-bound edition. This is

A MAGNIFICENT OFFER,
and every one of our paid-in-advance subscribers who has not already a copy of Doolittle's "SCIENTIFIC QUEEN-REARING," ought to jump at this generous offer.

Remember, it is only for May and June that we are making the above offer, so you'd better be quick about it if you want a copy on the easy terms mentioned—for sending us only two new subscribers to the Bee Journal at 50 cents each, for the balance of this year, beginning as soon as their subscriptions are received here with the $1.00 to pay for them.

Doolittle's "SCIENTIFIC QUEEN-REARING" has 128 pages, and describes the "method by which the best of queen-bees are reared in perfect accord with Nature's way. For the amateur and veteran in bee-keeping." It also contains Mr. Doolittle's management of bees for the production and care of comb honey. Every bee-keeper should have a copy of this book.

The Books are Now Ready to Fail.

Will you be one of the 500 to have a copy of it on the above premium offer? If so, your answer will come soon with the $1.00 and the names of two new subscribers.

If you have Doolittle's book, you can choose one of the following instead as a premium (postpaid) for sending the two 50-cent subscriptions:

1. Two Porter Bee-Escapes,
2. A No. 3 Bee-Veil (made of all cotton canvas)
3. Parker Foundation fastener for sections
4. Spur Wire Imbedder & Cogshall Bee-Brush
5. Cogshall Bee-Brush and Carlisle Comb-Foundation Cutter
6. Carlisle Cutter and Spur Imbedder

The foregoing offers will not appear again. They will be in force only during May and June—this month and next.

Now for the 1,000 New Subscribers!

Address, GEORGE W. YORK & CO., 144 & 146 Erie Street, CHICAGO, ILL.
Next National Convention.—It seems from the following, sent us by Secretary Mason, the next meeting of the National Bee-keepers’ Association will be held at Buffalo, N. Y., Sept. 10, 11 and 12, 1901:

Editor American Bee Journal:
Many inquiries have been received by the Executive Committee of the National Bee-keepers’ Association regarding the place for holding the next convention. The reply has generally been that Buffalo, N. Y., would be the most suitable place for holding the next convention. It has been decided to hold the meeting at Buffalo, N. Y., during the morning (April 17th) the date of meeting had not been settled upon.

The President of the American Pomological Society wrote President Root in part as follows:

"As bee-keepers and fruit-growers have many interests in common which could be considered and discuss with mutual profit, our Executive Committee has instructed me to extend to your Association a cordial invitation to hold a joint meeting at some time during our session, the exact time to be decided later by correspondence.

"At this meeting we would suggest that the subjects of discussion center round the general value of the mutual relations of bee-keeping and fruit-growing—....which can be briefly treated by speakers selected in advance from among prominent bee-men and fruit-men...in order that a better understanding of these mutual relations may be reached.

It has been suggested that a considerable portion of fruit-growers do not yet appreciate the preponderance of the benefit derived. It is felt that a full public discussion of the subject will, therefore, result in good to both industries."

Realizing, as the Executive Committee did, that this was a golden opportunity for presenting the bee-keepers’ side of the subject to the representative men of the fruit-growing industry, the invitation of the Pomological Society was accepted by the committee in behalf of the Association.

We have had to delay the fixing of the date for the convention until the Pomological Society had fixed their time of meeting. Our convention will be held on the 10th, 11th, and 12th of September next, commencing on Tuesday evening the 10th.

We were at first undecided as to place of meeting, hoping that the t., A. R. B., held at Denver, Colo., but when it decided to meet at Cleveland, and we received the invitation of the Pomological Society, we felt that we ought not to miss such a splendid chance to enlighten some of them on the relation of bees to horticulture, and by meeting at Buffalo, the York State and Canadian bee-keepers would be within easy reach of the place of meeting; so we at once fixed on Buffalo as the most desirable place.

It has been decided not to have any papers or essays, but to rely wholly on the question-box to bring out the best and most important matters for discussion; so any one not being able to be at the convention, having any question or questions that he may wish to discuss, can send them to the Secretary at any time.

The executive committee has taken the liberty to request the Secretary of the Ottawa Bee-Keepers’ Association to ask the members of that association who may attend the meeting at Buffalo, to bring their badges with them, and wear them at our sessions, whether they are members of our Association or not, so that we may find more men, and know who our progressive neighbors are.

Information regarding place of meeting, entertainment, and railroad rates, will be given as soon as decided upon. Don’t be in a hurry about securing a sleeping-place during the convention. There is plenty of time, and, later on, better rates can be secured; but if you are in a hurry, write to the Young Men’s Christian Association, and they will be lied by “sharks.”

A. R. Mason, Sec.
Sta. B, Toledo, Ohio.

We trust that all who can possibly arrange to do so will endeavor to be at the Buffalo convention next September. It ought to be a bigger and better one than was the Chicago convention last August—tho, of course, that hardly could be expected even at Buffalo! (Now, see Mr. Hershiser buckle down to the job of trying to outdo Chicago.)

"There is Always Plenty of honey," said a honey commission dealer to us several years ago. That seemed a strange remark to make, especially in view of what have commonly been termed “poor honey-years,” which have been somewhat frequent in appearance during the past ten or fifteen years. But Mr. Dealer knew what he was talking about.

The year 1900 was said by some, not by the "oldest (bee-keeping) inhabitant," to be a most barren year for honey in thirty years. And yet what do we find? Why, more honey in the hands of dealers to be carried over, we believe, than for a number of years past. One dealer, about two months ago, had eight or ten car-loads of white extracted honey on hand yet. We know some others who also have quite a quantity left on their hands. Likely all of them will have to wait until next fall before it can be moved off; and then, if there should be a large new crop, it will have to be sold at a loss.

"There is always plenty of honey" comes pretty near being the truth. But it would not be true if there were anything like a more even distribution of the honey crop each year. Why, there wouldn’t begin to be enough to go half way around if that were the case. The great trouble is, so much of it is shipped to the large centers, thus glutting those markets, causing a demoralization of prices, while many near-by, the smaller markets, are entirely bereft of honey. And often in such local markets the very highest prices are realized.

In a city of about 2,500 population, not quite a hundred miles away from Chicago, a leading grocer agreed to take as high as five car-loads of strawberries grown within 15 miles of his store, at 10 cents a quart! Think of it! And yet, in Chicago strawberries are often sold at four quarts for 25 cents! Why is it? Simply because nearly every straw-berry-grower in the country thinks he must dump his crop on the Chicago market. It is all wrong. And it is the same way with honey.

Far better prices would be secured if much of the stuff that is sent to Chicago, or to other large centers, were sold nearer home. This is a subject worth careful investigation.

Short-Tubed Clover is nowadays discussed along with long-tongued bees, and it is reasonable to believe that the seed saved from the first crop of red clover will have in it a larger percent of the short-tubed kind than that from the second crop. A little explanation will help to an understanding. At present it is only the second crop of red clover that is a seed crop. That is because the fertilization of the blossoms is effected almost entirely by bumble-bees, and at the time of the first crop there are not enough bumble-bees to fertilize more than a very small number of blossoms. For unlike bumble-bees, a single bumble-bee starts a nest in spring, and only later on do bumble-bees appear in numbers.

So it happens that the proportion of bumble-bees to bumble-bees found working on the first crop should be many times greater than on the second. It will be only the short-tubed kind that the bumble-bees will visit, of course, and the seed from that will be likely to reproduce itself. It will be easily understood that at first only a small amount of seed would be secured on any given surface, but the proportion ought rapidly to increase from year to year. It may be well to speculate a little on what might be the outcome. Suppose we take a plot of ground from which a bushel of seed of the second crop might be secured. Save the seed from the first crop, which may be a pint or less. But in that pint half the seed may be of the short-tubed kind, whereas in the second crop there would not be one in a thousand. Now sow this pint the next year in a plot by itself. It is reasonable to expect that at least half the plants will have short tubes, and so half the seed will be of the improved kind. Continuing in this way, it would be not a matter of many years to have seed in unlimited quantity, half of which would be of the short-tubed kind.

But another factor comes into the problem, which greatly hastens the result. As soon as the amount of ground covered by clover from this half and half seed assumes tolerable proportions, the seed fertilized by bumble-bees
will no longer hold the same proportion as at first. For the number of bumble-bees is a limited quantity, and they can only fertilize a fixed number of flowers. For the sake of illustration, suppose there are enough bumble-bees to produce a bushel of seed within a given area. A small field will suffice them, if the field be ten times as large they can fertilize no more seed. Now suppose enough of our half-and-half seed is sown in that area to produce two bushels of half-crop seed. This will be a half-and-half just so long as we do not go beyond that amount. But whenever we go beyond the crop of two bushels, then not only a proportion of the increase, but all the increase should be short- 
tubed.

If a peck of seed is sown to the acre, and the crop harvested is three bushels to the acre, there is a twelve-fold increase. So when our bushel of half-and-half seed produces a crop of 12 bushels, 11 bushels of it ought to be of the short-tubed kind, and this 12 bushels sown ought to produce 144 bushels having only one bushel of long-tubed seed in it, or 99.3 percent pure. It is the fact that we have not to cut this out in each kind the difficult thing is to get the first bushel of half-and-half seed.

After that the way is easy. Indeed the way ought not be very hard after the first pound is secured.

Of course, all this is only speculative, and like many another thing in bee-keeping, may not “pan out” at all as anticipated; but the great importance of the matter warrants some speculation, and this may serve at least to arrest the thought of some wild-awake bee-keeping farmer, and to secure from him some effort toward the desired end.

---

**Weekly Budget.**

**Good Advice** (For Missouri).

"Pray, what is good for chaffy checks?"

Wrote Molly to the editor,

And in due time—about two weeks—

She got the answer written for.

To other ears by chance it leaves,

A little birdie told, perhaps;

Thus: "If you wish not chaffy checks,

You must avoid the cheeky chaps."

—William Mitchell

---

**Shipping Combs for Wagon-Hauling**

The right way to load combs, either brood- 
combs or sections, has been a matter of some difference of opinion. When loaded on cars, all seem to agree that the edges of the combs should point toward the engine, as the bumpting is from front to back; but some say that they should be divided as to loading on a wagon. Perhaps all will agree that on a smooth road on a very steep hill the loading should be the same as on a car, but ordinary roads are not so very smooth, and the hills are not so very steep.

The editor of the Bee-Keeper's Review champions loading the same as on a car, and gives reasons why he thinks that ought to be the better way. A few have given the result of actual experiment, one of which is given in a Straw in Gleanings in Bee-Culture as follows:

March 25th the roads were muddy and rough. I drove down town, putting in the wagon from the car, setting them in the skid. The front one ran across the wagon and the other lengthwise. The one running lengthwise fell down. Then I put the front one lengthwise and the other crosswise. As often as we fell I set them up again, constantly changing to whatever level they fell in. That was a hard job, but going down the steepest hills 60 miles in 1 day.

It seems when loaded with combs the way which seemed best seems to go best. I have been having combs on that trip, don't you believe they should be divided always? It is a matter of report how the same thing works on your road.—[This is an interesting and valuable experiment. It is so easily tried that wonder none of us had thought of it before, would suggest that those of our readers who have "drive to town" pretty often over map roads, try the same experiment and report. From the results above given it is very clear that the edges of the combs should point toward the wheels and not toward the horse.—Editor.]

---

**Bees Attack Mountain-Climbers.**

A correspondent from Honolulu, sandwich islands, states that a peculiar occurrence in that country in which a mountain-climbing party was attacked by a colony of wild bees, and came near losing their lives. They had climbed Komahnhui, the highest peak near the city, and decided to descend on the Nuuan Valley side, which had been considered impossible. They stumbled down precipitously cliffs 50 feet high, clinging to the rocks with hands and feet. When part way down they were attacked by the bees, which stung them while they were helpless to ward them off. For nearly a mile the bees followed them until they reached a point where they were safe.

---

**Mr. John Zwarlen, of Emery Co., Utah,**

gives the following report for 1900, in the Rocky Mountain Bee Journal, being as average of 292 pounds of extracted honey per colony.

I see it stated that Olliver Foster produced 86,000 pounds of honey last year from 500 colonies. I have done better than that. I secured 169,000 pounds from 65 colonies; and Christian Ottensen, 23 miles farther north, in this county, did even better, but I cant say just how much.

---

**Editor Mitchell,** who undertook part of the editorship of this paper last autumn, has been compelled to abandon the undertaking. His eyes for the past year or two have been of more or less trouble, and of consequent great distress—to one who has to use his eyes almost, continuously, as does a printer and editor.

This paragraph is taken from the April Progressive Bee-keeper. We regret very much to learn that Mr. Mitchell's ailment has compelled him to relinquish some of his undertakings, and trust that the enforced rest and recuperation may soon bring him out all right.

---

**President E. S. Lovest, of the Utah Bee-keepers' Association,** writing us from Salt Lake Co., March 12th, has this to say:

"Friend York:—Spring appears to be with us as usual; the old honey bee trees, and the birds, in fact all Nature seems to be putting on new life. Our bees were carrying in pollen March 1st—something they don't often do so early. And we are having a great deal of snow and rain, which is pretty generally distributed over the state, thus insuring a good supply of irrigating water, which in turn will insure good crops and a good honey-flow. If the weather keeps up as it may expect to see our bees and bee-keepers in 'cllover' once again. The bees that went into winter quarters in good condition appear to have wintered fairly well, while a few smothered for lack of ventilation. The smelter smoke here in Salt Lake City has been the cause of our principal losses."

Again on April 14th Mr. Lovey wrote us as follows:

"The prospects are excellent in Utah this season for a good honey crop... While the bees are in fairly good condition, barring any accident that we know not of, they will give a good account of themselves."

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**Editor Leahy,** of the Progressive Bee-keeper, it seems, there is a "harm break" made by Stonem in Gleanings in Bee-Culture, where he tried to make "harm" rhyme with "barn." After copying the questionable stanza (see page 234), Mr. Leahy follows with this comment:

"It's rather a stretch of poetic license, and tho we are quite willing the price of clever be brought down, we are not prepared to sacrifice the harmony of "harm" and "barn." The following from the pencil of a dependable Ohio yokel is more jingle and rhyme, and is more to the point:

"Oh, bury me deep, deep in the ground.

Where the humming-birds can't get at me.

And the straddle-bag straddles around."

We must confess that Mr. Leahy's cultivated choice of poetry does have a clear-cut kind of jingle that no one can mistake or fail to appreciate. In the "harm" and the "barn" of the thing there is no humbug pretty, even if there is in some measure that "straddles around" with so much importance.

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**Mr. W. F. Ordetz, of Cuba, under date of Jan. 224, says that the present season has been the poorest ever known in that section, and concludes the information with this paragraph: I started with 8 colonies in December, and now have 50. They will soon be ready to divide again." No doubt that report is rather discouraging to the bee-keepers. He would be surprised to learn how very little sympathy it will elicit in these United States of America, where so many of us should consider ourselves very fortunate to accomplish in two whole years what he has done in two months."

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**Mr. A. E. Willett, of Hampshire Co., Mass.,** sent us a clipping some time ago telling about a "happening" down in Hampshire last fall. It says: "Some of the families in a small village set in a fire was kindled in a fireplace in one of the houses in that city, that had not been occupied for some time. When the fire had been burning for about half an hour, the man of the house, upon coming into the room, found the floor covered with a sticky subst- change, more of which was running out of the fireplace. It was found that a swarm of bees had taken up their abode in the long unused chimney, and had there stored a large quantity of honey. The heat from the fire caused it to run down in a stream into the room, overing the carpet. The householder said he got 40 pounds of honey out of his carpet. He probably did not feel like singing that part of the chorus of the song, "Busy, Buzzing Bees," where it refers to "honey everywhere."
Contributed Articles.

No. 3. - Drone-Bees and Their Utility.

BY C. F. DADANT.

SINCE writing the two previous articles on this subject, I have met with some private arguments. I have been told that it is a mistake to try to change Nature, that even if I can reasonably argue that it is best to prevent the rearing of drones in most circumstances, it is an error to change natural conditions. I cannot agree with this.

When we breed any kind of animals in domesticity, their natural conditions are already changed. No one thinks of trying to prevent the free breeding of wild fowls in the proportions which Nature has dictated. Where is the breeder of domestic fowls who will allow all the roosters to live? Where is the farmer who will keep all his male calves as bulls? And do we not succeed best by artifical selection? See with what care the farmer's wife picks out the finest roosters for the following season's use. And if she were careless, and killed or sent to market the finest of them, would you think she stood any chance of improving the breed? What is done with chickens or with cattle—can it not be done with our bees, in the measure of our power? Why do we not see a few days passed since the reproduction, owing to the peculiar habits of the bees in their mating, but we can, in a great measure, direct the greater or less rearing of good or bad stock, and if we would succeed, we must do all that can possibly be done.

In natural conditions, a colony may be several miles from its food or breeding place, and may as well be divided as it may produce. On the other hand, in domesticity, we may keep a hundred or more colonies in one spot. In that case, we have, if we leave it to the nature of the bees, a hundred or more times as many drones as will be needed for all young queens that we may rear. We are therefore feeding, if we leave the bees alone, hundreds of thousands of drones that cost both food and heat to be reared, and whose problematic usefulness is in the possibility of their keeping open the hives, or in a few days, on the introduction of some other bee species that will increase the honey-production. In an apiary of one hundred colonies, we may have had hundreds of thousands of drones, which will yield twice or three times as much honey as the average of the entire apiary, and at the same time we have a few colonies that will produce little if any more than enough for their own consumption. Now may I ask how can they be reared in the same hive if we do not encourage in all possible ways the breeding of the best, we must also try to breed the greatest number of drones from some of those preferable colonies. Yet, to avoid in-and-in breeding, which Nature so abhors, we should not breed both queens and drones from the same colonies.

These propositions being well established, it remains for us to decide not only how to get the greatest possible number of drones from the best colonies, but also how to prevent the propagation of the queenless and inferior drones.

Let me here open a parenthesis. I see that the question of the fertilization of queens in confinement is again agitated. If this were a success the fertilization of queens would be comparatively easy. But these things have been tried many times before, many sensible men have shouted "Victory!" only to find a little later on that they had allowed themselves to be deceived by appearances. Time will settle the question, but even a satisfactory solution would not affect the question of rearing valuable drones, and doing away with the valueless ones. I will now return to the matter on hand.

To secure a great number of drones from a colony is not difficult, especially if the queen is prolific. We need but to place drone-combs, one at a time, in the rear of the broodnest. Althou the queen dislikes to lay eggs in these cells, until after she has bred a large number of workers, the situation of these combs will induce her to lay in them earlier in the season than she would have done otherwise, and we will readily secure a large number of valuable drones early. As to the hive from which no reproduction is desirable, we must confine the drones to the hive, and rear them from drone-combs of days, or by keeping the workers in the cells before they hatch, or simply prevent their being produced by removing the drone-comb before the laying has begun, and replacing it with worker-combs.

The first of these methods is certainly the worst. Many aplanists use the well-known drone-guard in front of the hive. This is a sort of "yard" made of perforated zinc placed at the entrance of the broodnest, and throu which the worker-bees alone can pass. The drones and the queen are compelled to stay in. It is also used to prevent swarming. Tho it answers the purpose, it is not practical because when the drones are induced to take flight by the warmth of the sun, it is impossible to segregate with the guard bees in the way of the bees. Some people open the guard to let the drones out, and close it again to keep them from coming back. It would serve the purpose in compelling them to stay on the outside, and starve if they short life is too much drone-comb or drone-reared, but thou they are going and coming, and no satisfaction can be had out of such a method. The drone-trap is much better, for as the drones get into it they are caught and can not return, and are out of the way, but it must be attended to with regularity, or they will die there and crete a pestilence.

The third method, of beheading the sealed drones with a hone-knife, before they hatch, is efficient, tho it also has faults. It is the only method that has allowed the expense of rearing those drones almost to the perfect insect, without any returns. Then the comb in which they have been reared is very soon again filled with eggs, and the colony must be done over. The method of getting rid of the drones satisfactorily is to prevent their being reared, by removing the drone-comb before any drone-eggs are laid, very early in the spring, and replacing this comb with worker-combs, or from extracting supers. This replacing of the comb is a necessity, for the same reason that has caused the bees to build the drone-comb in the first place will cause them to rebuild the same kind in the same spot, if we do not do so. By this method we can be able to remove every cell of drone-comb. In nearly every hive there are quite a number of little patches of drone-cells scattered here and there, and many of these pass unnoticed even in the closest examination, unless they are readily full of brood, in which case the peculiar rounding shape of the capping of the drones will make them noticeable. But the production of a few drones in any hive is not objectionable, for in the hosts of drones, since the comb contains 36 of them to the square inch.

In my estimation, the prevention of drone-rearing is of importance especially because of the cost of breeding them. I have always been of the opinion that it is cheaper to keep them after they have hatch. Yet, they certainly consume considerable honey after they have emerged from their cell, but I would be inclined to think that nearly half of the total cost of the beekeeping during the entire year is in the cell. It so happens to me of the greatest importance, on this score alone, to prevent their being hatch.

I am told that the bees will not accept the removal of the drone-comb, and that they will cut down worker-cells, to change them to drone-comb, when all the drone-comb has been removed. This I disbelieve, as it is contrary to my experience. They will rebuild drone-comb. If there has been much drone-reared, the bees will feel the need of it enough to tear down good worker-comb. In order to convince me that this has ever been done by bees, it would require a very thoror experiment, made on old apiaries where too much drone-comb had existed, and in the case of the Droy experiment, mentioned by me in a former article, when a colony had been furnish with nothing but drone-comb, they certainly would have torn down some of this comb to replace it with worker-comb, while
Prof. Cook's Review of the "A B C" Book.

By ENRY K. ROOT.

In the columns of the American Bee Journal Prof. Cook has given a review of "Dadant's Langstroth" and "Cowman's Honey-Bees," and now follows with a review of the "A B C of Bee-Culture." In his usual kindly manner, for one expects extreme carefulness on the part of one who has exerted a wider influence upon the bee-keeping world than any others ever written. Even its rivals can only be joyous in its extensive sale, as they know that, wherever it goes, "honey, and bees," remaining as those words do from one who is himself the author, and who has been through rival work, the publishers of the "A B C" would be hardly human if they did not feel a warming of the heart at their utterance.

First, it is proper to call attention to the fact that the criticisms are not based on the edition issued last January, as one would suppose, but on the old edition—the one put out nearly two years ago. As it is, much of Prof. Cook criticisms is not in the new book at all, such matter having been re-written or stricken out altogether.

As to the first error pointed out, there is no error in the book, but the error consists in very careless reading on the part of the reviewer—a carelessness that is hardly excusable, for one expects extreme carefulness on the part of one who has pointed out the errors of others. The "A B C" page 2, in discussing what is to be done with second swarms that issue, says in effect that they must be watched, climbed after, and hived. This sentence is immediately followed by the statement, "Prof. Cook says, 'I don't think this too much trouble, he should prevent having after-swarm as I advise under that head.'" He ignores the fact that the watching and climbing refers only to swarms that have issued, to say nothing of those that may be hatched out from the combs. It is possible for a bumble-bee to prevent the issuing of a swarm after the swarm has actually issued. He goes on to give the Heddon as the best method of preventing second swarms. In the edition just out of the press the very next sentence refers to the Heddon plan. Among other methods of preventing after-swarms, the Heddon plan gives more fully and correctly than it is given by the reviewer. If careless reading is inexcusable on the part of a critic, still less is careless quotation when the exact words are pretended to be given inside quotation marks. In answer to the question as to what shall be done with a second swarm that has issued, the "A B C" says, "Candidly, I don't know of any better way than, etc." etc. Candidly, I don't know of any better way to prevent second swarms than," etc., is the way Prof. Cook quotes it. We feel sure that he will say there is no sufficient excuse for interjecting the words "to prevent second swarms" in a direct quotation where they were neither written nor thought by the author of the book.

Prof. Cook objects to the statement that alfalfa honey is probably superior in quality to any other. He claims to be something of a judge of honey, and thinks alfalfa no better than clover, linden, sage, and perhaps more. It is a matter, not of judgment, but of taste. The best butter might prefer a flavor that no one else would fancy. The criticism, however, is a valid one. In matters which appeal entirely to taste, it is unwise to make sweeping statements.

Speaking of alfalfa the "A B C" says it takes about three years to get it to its best yield. Prof. Cook makes the pleasant correction that in California the maximum yield is often got the very first year in the later cuttings. The reviewer thinks it is putting it too strong to hint that it is always early in the gathering from the dry hay. The simple truth is told that "one man reports so much sweet in it that he has seen bees by the thousand working on the dry hay in the spring." Speaking of this matter, Prof. Cook says, "This is putting it altogether too strong. Still, I do not think that too much can be said in favor of alfalfa, for it is a marvelous crop." The good Professor will probably indulge in a quiet laugh when he sees this. "You are saying altogether too much for alfalfa," and "You can not say too much for alfalfa," Which is one to believe? Prof. Cook objects to the definitions of digestion given by the author, saying, "This is given as a question [what can be meant by that] by a man who has a degree of authority of the organization of authority. Not all will agree as to this, seeing the authority selected was no less than the able and careful T. W. Cowman. Prof. Cook teaches that 'digestion is rendering the food usable by the animal.'

Our reviewer says "malphygian" should be "malpighian." So it is in the latest edition, and one would hardly suppose an older edition should be the one reviewed. But his correction needs further correction, neither the book nor the critic being right, for "malpighian" should be "Malpighian."

The "A B C" says, "The blacks are also easier to shake off combs in extracting time, and for that reason alone, should be preferred." The author thinks this too much can hardly be shaken off. Prof. Cook says, "I have very little trouble to fell at one shake every Italian bee from the comb if the latter fully fills the frame." If Prof. Cook can shake every bee from the comb at one shake, he has not yet acknowledged a lasting favor on some of the veterans if he will make the process known. In spite of their shaking off so easily, he considers they stick tighter than the blacks, and prefers giving that account, for the best men stick them in their homes. There are times when one wants bees to stick by their comb, and then he will prefer the tighter grip of the Italians; but at times when one wants bees to shake off, as in the case mentioned, will one not prefer that the bees he is try to shake off shall shake off rather than stick? Prof. Cook says, instead of Mr. Benton spending years in India, he "was in India only a few days." In relation to this point I have a letter from Mr. Benton, who says, "I left Cyprus for India in December, 1880; returned to Cyprus in May of the following year—absent just five months." While the statement in the "A B C" was not strictly correct, Prof. Cook is no nearer the truth, for he has gone clear to the other extreme.

Prof. Cook thinks it unfortunate that the "A B C" uses the term "worn" and "grab" as synonymous with larva. That criticism is worth considering, at least so far as to avoid calling a bee a worm during its early life. Whether more than one than the author means by this we do not know. To his credit be it said that Prof. Cook is consistent in that he does not speak of wax-worms, he calls them larvae or caterpillars. It is feared that, if a bee-keeper were to say that caterpillars had eaten up his combs, he might be laughed at. It is very likely, too, that for many years to come good scholars will say that wormy apples have worms in them. Moreover, when no entomologists are around, an insect-larva is a worm, for so the dictionary says. So is a larva of any insect a grub, by the same authority.

Instead of pollen and honey partially digested being fed to larvae, Prof. Cook says it is pollen perfectly digested, with or without the addition of honey. When doctors disagree, one shall decide.

Prof. Cook objects to calling "viper's bugloss" blue thistle. He says it belongs to the borage family, is no thistle at all, and is like borage in being no serious pest—all of which he should have noticed is already told in "A B C." Blue thistle is one of its popular names, so given in the dictionary.

He thinks drones from laying-workers are as large as any, and it is likely that is true when they are reared in drones.

"It is very doubtful indeed that unimpregnated eggs will ever produce workers," says the reviewer. It is not said in "A B C" that they ever will.

The author thinks the impregnated should be used rather than fertilize. According to the dictionary, either is right.

Referring to feeding at night, Prof. Cook says, "Our author recommends this night work to prevent robbing."

If he will read carefully, he will see that it is not recom-
Advantages of Bee-Keeping for Women.

BY FRANCES ELLEN WHEELER.

In the effort to encourage and lead women into rural occupations, there is a tendency to extravagantly exploit the advantages and minimize the difficulties; that is misleading and unfair. This is especially true regarding apiculture. Probably no industry has been more frequently and enthusiastically recommended to our sex than the care of bees. Certainly no outdoor work, in some respects, is so well adapted to our general make-up, or more thoroughly fascinating and congenial. Thus far, our advisers are correct. Their mistakes arise from conveying to the novice an impression that the labor involved is of a light, superficial character, and that the profits are an assured fact, and to be confidently reckoned on. Some writers go still further, and state how many colonies the average woman can take care of alone, for an entire season, and what the returns will be for each colony.

Statistics look well on paper. Any one contemplating a new employment would feel better to know at the start just how much and how hard they must work, and what they will make at it. Some people are lost to undertake this enterprise unless they see in black and white the financial side of the question; which would be perfectly reasonable could the figures be relied upon. But in point of fact, there is scarcely any occupation where the unexpected is sure to happen, and the "unknown quantity" is so often to be reckoned with, as it is in an apiary; both as regards the labor involved and the profits received.

A little common-sense thought on the subject will show very plainly that no two women with the same amount of work in an apiary (and more than they will anywhere else), or obtain the same results. And that in our country, where the climate and the local flora are so varied, the quality and quantity of the crop must also vary. Still more important, the home markets range in prices according to locality for comb honey, all the way from 7 to 20 cents per pound; which affords quite a margin for speculation on returns. Moreover, is it fair to exact from this business what is not exacted from any other?

That an immense number of successful apiaries are scattered throughout our country is proof that bee-keeping pays. How near the "top-notch" can be reached, each individual must demonstrate by practical experience. A good instruction book, a periodical, and a few colonies, at the start, will speedily tell the tale as to qualifications.

After a few experiences alone in the yard, our novice may decide (as I did) that it pays best, in the long run, to have a good, strong helper, and that to secure this when needed, some other industry must be combined with the apiary, which will give full occupation to both, and relieve the woman of the heavy parts; affording her leisure to oversee the important details, and attend carefully to her market.

Again, tho we have sections where the climate admits of an apiary being worked almost the entire year, it is not so in our northern and middle States. Also, our pastureage is such that there are many localities where apiaries of 80 to 100 colonies only can be worked, year in and year out, to good advantage. Yards of this size will not, of course, furnish an income sufficient for a comfortable living; but, with a comparatively small outlay of time and money, they will add very materially to it.

Something might also be considered of our returns which are not reckoned in dollars and cents. I refer to the growth in physical and moral health gained by the pure air and loveliness about us; the development of spiritual and intellectual perceptions; and, above all, the sense of helpfulness and fellowship with these wonderful little creatures; and commendation,

"Whatsoever thing thou doest,
   To the least of Mine and lowest,
   That thou doest unto Me."

Clinton Co., N. Y.

Something More About Bees Being Necessary to Pollenize Fruit-Tree Bloom.

BY THADDEUS SMITH.

The advocates of the theory that bees are necessary for the complete pollination of the bloom of fruit-trees lay great stress upon the necessity of cross-pollinating and seem to think that bees are the only agents to accomplish this. By cross-pollination is meant that there are some varieties of fruit-bloom deficient in pollen, and the pollen necessary to fructify them must come from some other variety of the same fruit that produces more pollen. That there
are a few varieties of fruit deficient in pollen, is well known to all intelligent fruit growers, and they know equally as well that it is not necessary to have bees to accomplish the fertilization of the flowers from which they obtain their fruit, but successfully manage it in another way. It is found that all that is necessary is, to plant these trees deficient in pollen, near some variety that produces pollen abundantly, and to secure pollination by either of the following the different varieties in alternate strips of several rows each, and thus complete pollination is obtained without the intervention of bees.

An illustration of where cross-fertilization is sometimes necessary is found in the strawberry. Everyone who has planted a strawberry-bed knows that there are bearing and non-bearing kinds—pistillate and staminate varieties. The pistillate varieties do not bear pollen, and in order to make the strawberries fruit, they must be planted with staminate or pollen-bearing varieties. By planting the two kinds in rows from four to six feet apart, the pistillate those without pollen—are made to bear fruit abundantly. These pistillate blossoms do not produce honey on account of their being non-flowering, and consequently are not visited by bees or other insects; therefore they are not fertilized by them. But suppose the bees did visit them—they could carry the pollen from one to the other as easily if they were six rods apart instead of six feet. But they are barren or nearly so, if planted rods apart. But proof positive that they do not owe their fruitfulness to bees is that both varieties have made fine crops in the islands where there are no bees. Such a fact is worth a thousand words, as anything can be done by the air from one to the other of these lowly plants that creep upon the ground, to the distance of six feet or more, and with this fact fertile the bloom, could it not be carried a greater distance? and thus, more successfully from the elevated position on fruit-trees.

Growers of vegetables in greenhouses have found that for want of circulation of air, some varieties of vegetables did not bear fruit. A friend of mine has been induced to try putting a colony of bees in with their plants, and has found some benefit from it. The benefit was not, primarily, caused by the bees carrying pollen from one flower to another, but by the pollens that have been blown by the wings of the bees while gathering and transferring pollen to the little receptacles on their hind legs, that lodged the pollen and set it in motion to be borne in the air, to the flowers in the plants. In feeding flour to bees, an increase in the size of the bee-house, and the number of bees. 

Up-to-date growers of vegetables under glass have been since discovered that the dissolving of the pollen and setting in motion could be accomplished without bees, and was equally as successful. They simply go thru the house with a long tube, and give each flower a little shake, and the work of pollinizing is accomplished! This completely substantiates my statement, that the benefit from the bees was because they put the pollen in motion.

The ways of the propagation of species in the vegetable kingdom are wonderful and past finding out,” but it affords a theme for interesting investigation which should be conducted in an impartial manner for the purpose of arriving at the truth. It is possible and I maintain that there may be some occult affinity or attraction between the pollen and the flower of the same species of flowers by means of which the infinitesimal particles of pollen that are always floating in the air during fruit-bloom, are drawn as by a magnet, to the stigma when a short distance apart, and this is the case when my bees have not experienced any failures even under adverse circumstances—it seems there must be something of the kind. But this is speculation, and I am set for the defense of facts.

It is a fact that bees are seen in flowers with pollen on their feet and in their baskets, and they are seen to leave one flower and go to another with their pollen; but who knows it to be a fact that some of this pollen deposited in the first flower is not carried over to the second? Is there any way of finding out? And if it were left, do we know that this flower would not have produced fruit without the visit from this bee? I have known millions of flowers to be pollinated in this way, and I am sure, if allowed a run of six miles of them. If they will produce fruit in one place without bees, why not in other places? This claim is all conjecture based upon preconceived theory without a knowledge of sufficient facts to establish it as a truth; and when confronted with such a statement, it is necessary to turn your attention to growing fruit in maximum quantities and qualities without bees, it shows its weakness.

Since writing the foregoing, the American Bee Journal of March 14th has come to hand, containing an article on the same subject from Mr. Doolittle, who solves himself as discussing this subject with a neighbor who claimed that Mr. D.’s bees had injured his fruit crop by taking the honey from the bloom, and he wanted some nice money to pay for the damage. Mr. D. tells how he met this claim by proving to his neighbor that his bees were of great benefit to his fruit, instead of being an injury; and here is a sample of his proof:

“Going back to the creation of all things, all fruit or grain, any kind was not pollinated, but created to visit the flowers which secreted nectar, while those that did not secrete nectar bore fruit as perfect then as to-day.”

This certainly is a new revelation as to the creation of things. But Mr. D. explains that “thus far all is a matter of conjecture.” But nevertheless he represents himself as telling it to his neighbor, supposed to be less informed about such matters, as a matter of fact. With his explanation the statement is most absurd, even as a conjecture.

“So far,” he says, “is conjecture,” and then he proceeds to make some other assertions in this very remarkable article, that are in keeping with his way of stating things. He is thru with his “conjectures,” and has made no further explanation. “From this I go on to explain how that the first object of nectar in the flowers was not for the perfecting of the fruit, or to be used as a food or luxury for man, nor even to sustain the life of the bees, but as a means to an end, and this end was that insects of all kinds might be drawn to the flowers so secreting, that the fruit or female blossoms of plants which could not possibly be fertilized in any other way, might be fertilized thru the agency of insects, etc. Another new revelation—seed and fruit bearing plants and trees were made, but they could not possibly be fertilized so as to bring forth seed, nor fertilized with their own kind. It is only the flowers and then bees made to go after this honey in order to fructify the flowers. In the quotation given, Mr. D. places “insects of all kinds” in italics, in order to emphasize the assertion. If language means anything this is a false assertion. This is the following lines, the night prowling bedbug, et id genus omne. This is too ridiculous to require further comment.

I have great respect for Mr. Doolittle as one of our most reliable teachers and writers on bee-keeping, and I have read his articles in the bee-papers for the last quarter of a century with great interest; but when Mr. D. leaves the subject with which he is familiar, and gives us such crude speculation as this article contains, for matter of fact, we want a more reliable teacher.”

Peele Island, Ont., Canada.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

Now for the reader writes: “I have every reason to believe that it would be a very good idea for every bee-keeper to wear one of these buttons as it will serve to give the conversation which started would wind up with the sale of the articles.” I have had many conversations with the people when they would say that they would have been fortified to make a purchase for a long time. It has a pin on the underside to fasten to the coat. Price, by mail, 6 cents each; two for 10 cents or six for 25 cents. Send all orders to the office of the American Bee Journal.
Questions and Answers.

CONDUCTED BY DR. C. C. MILLER, Marengo, Ill.

The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, with assurance that he will answer them here promptly. Please address the Doctor to send answers by mail.—Edtors.

Italianizing—Transferring—Painting Hives.

1. I have six colonies of black bees that did not swarm last season, but stored a little surplus honey, and have wintered very well. The hives were of the hive made by the queen with untested Italian queens? If so, at what time in the season should it be done? I do not wish to prevent them from swarming.

2. I have four colonies that are on frames that have thin top-bars that sag with the weight of the combs, and some of the combs are not built straight so they can be handled easily. Will it pay to transfer them to Hoffman frames with full sheets of foundation? If so, at what time in the season should it be done? There have been bees in the combs for 10 or 12 years. I wish to secure comb honey altogether.

3. Would it do any harm to paint hives with the bees in them?

Ohio.

Answers.—1. Almost certainly it would be a decided advantage to make the change. The only reason for putting in that "almost" is that it is a bare possibility that you have black bees that are unusually good, and that you would get Italians that are unusually bad. But that is very unlikely to be the case. The new queens can be given at any time when it best suits your convenience.

2. Most likely it would pay well to transfer to more satisfactory frames, whether Hoffman or something else is a question. If propolis is as plentiful with you as with us we will hardly want Hoffmans, but you can have frames that are self-spacing like the Hoffman without so much surface for propolis. But instead of changing the combs for foundation, why not transfer the combs into better frames? The age of the combs is nothing against them. The straight combs would be transferred very easily—do it in fruit-bloom— and it is possible that at least some of the crooked ones could be straightened, or put in piece-meal.

3. No, It will be all right, providing you make an arrangement with the bees that they will not sting the painter.

Clipping Queens—Other Management.

I expect to have about 40 queens to clip this spring. They are mostly in standard hives, but there was no brood foundation used. Will you expect the combs are not in very good shape to hunt for queens?

1. How would it work, to place a hive filled with foundation under a colony of bees (or perhaps have one frame of brood and a queen), place a bee-escape between the two hives, and below the escape have a cage of perforated zinc? Would the bees go down and accept the lower queen, and the upper queen attempt to go down and get caught in the cage?

2. You have the danger of draining the upper hive so thoroughly that the brood would be left to chill?

3. If this plan would work, how long do you think it would take to trap the queen from the time the escape was placed, in warm weather?

Iowa.

Answers.—Instead of answering your questions in order, please allow me to bunch them. In the first place, unless you have queens "to burn," you may as well dismiss the idea of having a queen below. Your idea, no doubt, is to have the frame of brood and the queen there as a sort of attraction, and not use the bees outside an extent an attraction, a strange queen would not. The probability, if not the certainty, is that she would be promptly balled and killed. Even if the bees should be friendly to the queen below, she would do no good. When there is a general shortage of foundation, the bees go with the colony goes with them. But in your scheme there is nothing of the kind. A bee leaves the hive in the regular course of its duties, and in doing so passes down thru the escape, and is unable to return. There is nothing about that to make the queen want to go down. Neither is there when two bees or several thousand have gone down. All that she knows is that there seems to getting to be a scarcity of bees, and that's no reason why she should desert her post in the brood-nest. So you may about as well give up the scheme as impracticable.

You do not say whether your object is merely to clip the queen, or to get the bees to move their brood-nest below. In either case, you can drum or smoke out the bees, hunt out the queen and clip her, then return. If you want the brood-nest to be moved below, put the queen in the lower story, with an excluder on it, then put the bees. If you don't want to move out the bees, you might try a new idea. Build a "brood-house" or set foundation (all the better if you can give it a frame of brood), with no excluder between the two stories, and allow the bees to work down of their own accord. As soon as the queen becomes crowded for room above, she will move down, and when you find eggs there you may find her. Possibly you may not find her, for until about all the space upstairs is filled with honey she will keep going from one hive to the other. But your chances of finding her below will be constantly on the increase, and after you find her, if you want the brood-nest to be below, you must use an excluder.

Before doing anything else, it will be well to make a thorough search, at night, and you cannot find one, two, or three frames that can be taken out, and then the rest might be cut out and transferred correctly into the frames.

The Afterthought.

The "Old Reliable" seen thru New and Unreliable Glasses.

By E. E. HASTY, Sta. B Rural, Toledo, O.

MATING OF QUEENS IN CONFINEMENT.

The front picture on No. 12 resuscitates an old enthusiasm, or fad, or "image of something in heaven above," at the shrine of which we all did vainly worship in time past—until the missionaries of common sense gently led us away. Possibly they were misguided in doing so. "Go in," Mr. Hutchinson says, to everyone who can't be entirely "asy" in mind about our present breeding! I feel quite strongly that the power to mate the individual drone to one individual queen would do us more harm than good; but the present scheme of mating to a mass of individuals or a mass of queens, including the mass of drones, is no better. The old queen is wanting a select mass of drones, and she may find one, or a hundred, but she can't find them. Yes, that's the way it is—best to be she is what she calls her "natural" queen of a "natural" colony, and she wants to breed her bees as nature selected them, and in the most favorable way. Mr. Hutchinson says that "he who is in command of one queen, in the best of the colonies, can command a fair supply of drones."

I think, providing success could be had. As Mr. Hutchinson suggests, success must be theoretically possible, providing someone is willing to spend effort enough, and cash enough, in building big enough. But let me also revive a related idea. Those who live near great plains on which there is no tree or hollow crevice, and no bees, can perhaps have the same thing cheaper. Take your queen and drive out a few miles upon the plain, carrying your drone colony and your nuclei with virgins. Little islands are apt to be abnormally cool just when you want them to be hot; and at such stations queens drown, but plains include the best of the world.

Possibly I can suggest some improvements on the tent shown in the picture. Suppose we abandon the gasometer shape, and let the starting model of shape be that of a race-track roofed in—track only, center circle not occupied. Then flying around and around insects can go as many times as they wish in a course that will not require any halting and turning back. Suppose we abandon the netting and use cheap cotton cloth. Abundance of light will come thru it; and it may mout off of the tent to catch bees as they get out. Cheaper, much stronger, makes up on the sewing-machine much more kindly, holes which may develop will be visible instead of invisible—better every way (except perhaps the deadly didn't think-of-it one), and excepting the obvious objection that a drone must take a short cut to escape, when bees are imported. But with cloth cover and race-track shape I don't believe it will need to be more than 16 feet high. Presumably it will be possible to fly young queens and drones in such a course in ignorance of the fact that there is any
more to the world. Before you bulge, and after you have got this crude idea of shape well in your mind, you can push in two opposite sides of it until it is dumb-bell shaped instead of circular—hives to be at one of the bulbs. This modification will save one wall, save very greatly in the ground area required, and give the flies a perfect chance to twist wings. Each side at the sides can be arranged to pull up and tie at the top when not in use and thus offer little salt to a storm.

It will require considerable grace to do so, but I trust Mr. Davitte will be able to take it meekly if there is still “Thomas’s” in days lost and not for preparatory exercise strikes one as rather a big chunk cut out of the drone’s life. The words, “the queen and drone fall nearly to the ground,” are provocative of suspicion. They sound so dreadfully like there were “cut out without causing a little sensation.” To literature, the whole fall of less than 30 feet seems very inadequate to give time for twisting off a strong ligament by rotation. Page 181.

**BEE-KEEPING AND PIANO-PLAYING.**

Easier to learn apiculture than piano-playing, eh? Well perhaps. There’s this about it—if you learn bees you suffer the torments yourself mostly; if piano is your choice the agony falls to the neighbors. Page 182.

**ADULTERATION OF SUGAR COMMON.**

Referring to Mr. Cowen’s letter on page 211, I guess I shall have to admit that the adulteration of granulated sugar is getting to be common. Am using some now very pleasant to the taste, but nevertheless as theh there might be an awful amount of it. The good men and the straight-out sweet and nothing else do not seem to be there.

**BUCKWHEAT BLOOM EARLY.**

West Virginia, on page 185—what does he want buckwheat to bloom July 1st for? Perhaps it might be well to tell him that buckwheat made to bloom abnormally early is pretty sure not to yield honey to amount to anything—pretty sure not to produce very much grain, either.

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**The Home Circle.**

Conducted by Prof. A. J. Cook, Claremont, Calif.

**"THE BEST CROP."**

At one of our recent farmers’ institutes, a lady had a paper on the subject of “The Best Crop.” Of course no one could know whether she was to treat of beans, barley, or beets. We should find in any of these, if any at all, was to be devoted to the children. And surely she was right. The boys and girls do certainly form the best crop, not only of the farm, but of any home be it in city or country. I wonder if any of us realize this fact as we should. How many of the children use tobacco; how many smoke the harmful, not to say deadly, cigarette; how many seek amusement in the saloon; how many use profane language; how many tell or listen to the vulgar story, and often demean themselves by telling it themselves. Oh, how happy we are if we can keep our dear ones from all these de-basing habits! We engage men to spend days, and keep a close watch of them all of the time as they break a favorite coat. Yet do we all give time to the children, and agree that as they are being formed? Do we give an hour or two on each Sunday, perchance walking in the field, park, or woodland, and calling their attention to the many beauties that are scattered so thickly all about us? The father and mother who have not had these pleasures have mist one of the rarest sweets of life. The children who have not in their early, tender years enjoyed this rich fellowship, have had a most valuable part of their life left out.

I do not think there is any one thing in my whole life that I recall with more satisfaction and genuine pleasure than I do the Sunday walks with the dear wife and children. I found, it so easy to beget in the children a love even for the creeping, crawling insects generally admired and even the snakes, the frogs, and the caterpillars. Who has not admired the stanza from the poet?

"He prayseth best who loveth best,
All things both great and small;
For the dear Lord who loveth us,
He madeth and loveth all."

Can we help our children more than to lead them to love and admire God’s handiwork at the very threshold of their lives? If we can couple with this in their young minds a full appreciation that all the good things are from God, we have given them to an invaluable possession. I would rather my children had a perfectly realizing that there was about him, loved him, cared for him, and was the Great Giver of all the beauty about us, than any other one thing. No father should be so busy that he could not take these Sunday walks with the dear children.

Is it not also true that the club or street-corner talk should be very valuable indeed if it rob the children of the time and sympathy of the father? How many fathers carry a life-long burden because of wayward children! I just heard a story of a woman who had a son close by us, who has also been a life-long minister of the gospel, whose son has dipt into all the bad things that mar the life and character. I have known the boy, and his face tells the story of all his reckless days. This same sorrow might very likely have been avoided had the father found time during the boy’s early years to have taken walks, read to him the Youth’s Companion or other good paper, given him some chickens, and then taken the interest in him that is always so pleasing to the boy or girl.

I remember once in a lecture before the Chautauqua Association, in speaking of inviting in children a love of Nature. I said that I feared at the same time was as an assertion. I said that I believed that up to twelve years of age, if Barnum’s “Greatest Show on Earth” were to come our way, and I had said to my boy and girl, “We will take the day off, and go to the circus or for a walk in the woods—which shall it be?” I believe that they would have chosen the woods. As I thought of the circus, the fine horses, the rapid and dizzy riding, the wondrous jumping, swinging and wrestling, I feared that I had perhaps make a reckless statement. After the lecture, I am my grown daughter who was present, if I had done so. She said, “No, indeed. I am sure we should have gone for the walk.”

It is assuredly true that the children are the best crop of the farm. Time, effort, energy, spent in keeping them interested in good things they can only do so. We often wish that I had money so that I could put the Youth’s Companion into every home of the land. Next to our personal attention, nothing will help so much to lift the children from all that is mean and unseemly as good papers and books. These are now so cheap that no home need be without them. We have had many illustrations here at our college that the boy or girl of good stuff need not even go without a college education. Energy, determination, vim, can even give this best of riches with no outside help at all. How much easier to secure the good book, the good paper, for the children.

**CHILDREN IN THE CITY.**

How many of our good friends live in the close quarters of the city, perhaps in a flat where a few feet of ground in front and back form the only exclusive places for the children. The children must have air and sunshine. Without these, palor, weakness, disease, are sure to come. Left to the outside air and sun, many people would be the better for their presence. Sabotage, rudeness, often even the vilest vulgarity will be poured into their ears. Surely, no mother can contemplate this without a dread and horror that will do its utmost to bring invention to the rescue. I have a friend who has just this problem to solve. Her husband’s business makes it almost impossible to escape the narrow limits of the city flat. The back yard is about 30x40 feet. This is boarded up so as to shut out the children, and give them their space as the best good of the children. Lovely vines have converted the rude board fence into a thing of beauty. A hammock, screen to protect from the sun, pile of clean sand for the children, sounds and out of doors. The cloth some clay to be used in moulding, blocks, brick, etc., all make that back yard a veritable paradise for the wee children. Other children in the neighborhood long to gain admittance to this little fairyland, and are themselves moulded into goodness as they know that the most perfect conduct is the only key that unlocks the door.

This mother has not only solved the immediate problem for her own children, but she has a center of good influence that she is through the Youth’s Companion, the open door to a better condition of the city. Whenever the busy mother can do so, she takes the children to the parks and there talks of birds, insects and even creeping things, for she learned to know and love all those things when she was little, and she has some bits of knowledge over to the eager children which have come to bless her home.

A friend at my side asks, “How about the coming years?”
ITALIAN

BEES AND QUEENS

Having been 25 years rearing Queens for the trade on the best known plans, I will continue to rear the best.

PRICES

One Untested Queen..................$1.00
One Tested Queen.....................1.50
One Select Tested Queen 1.50
One Breeder......................... 3.50
One Comb Nucleus.....................1.50

Belgian Hares

Choice, pedigreed and common stock, youngsters, 30c per pair. Write for description and prices.

J. L. STRONG, Cerritos, 10. Co., Iowa.

We want *

To sell you BEE-SUPPLIES!

Our line is all new and complete. Send for our Illustrated Catalog; it will convince you. We offer Dovetail Hives, which is the best on the market. Prices are right, and our service is prompt.

Fred W. Muth & Co.

S. W. Cov. Front & Walnut Sts., Cincinnatlo.

Northern Italian Queens!

Rared from imported Athers.

Our stock of Dovetail Hives, a breeder and selected as to secure car-loads of honey. Locality free from foul brood and other bee diseases. Prices: 1 untested Queen, $1.50, 1 tested Queen, 15c. 5, $7.50; 10, $15.00; 100, $25.00; 1000, $250.00. Best imported Queens, 60c, fair ones, 25c.

ADA L. PICKARD,

RICHLAND CENTER, WIS.

BEE MACHINES, SECTIONS AND ALL BEE-KEEPERS’ SUPPLIES.


AMERICAN BEE JOURNAL

May 2, 1901

This mother has thought this out, and has planned to live so economically and plan so well that as the children get older they can move into the suburbs, and there with garden, poultry and bees, the children may have that which will not only give them wholesome employment, but which will also interest them in the real, vital things of life, and thus prepare them for the stern duties which will come in their later years. We see that this mother has devoted a great deal of time and thought that she may give her children an abundance of the good things, and keep from them anything that she should poison the character and vitiate the life. Ought we not all to do the same thing? Ought we not for our own good and also as a patriotic duty? Mr. Woodward, so well and favorably known in the State of New York, told me that no man should be content to leave this world until he could leave behind children who were brighter and better than he. I believe he said truly. We can hardly hope to realize this happy experience unless we give earnest heed to this "best crop of the farm." INFLUENCE OF GOOD EXAMPLE—TRUTHFULNESS AND HONESTY.

I believe the best cultivation that can be given this crop is that of wholesome example. How few of us that are parents are careful enough in this respect. Our words are not such as becometh the Gospel of Peace or our high position as parents. The rude 'slang,' the profanity, the sarcasm, the thoughtless all, these should be kept away from the home circle. Ought we not to form an idea of just what we want this crop to be? Then we might use a more careful, prayerful effort to strive to make our own lives conform to this ideal? The most blessed thing in character is absolute truthfulness. Are we careful enough that there shall be no lie in our lives? How quickly even the little deception will be detected by the child. If such deception beget in them a lack of genuine truthfulness, then we have sown the biggest tares in our best crop of the farm.

Next to truthfulness, honesty holds first rank. The child, the man, the citizen, are not what the home, the community, the country, stand in pressing need of unless transparent honesty gilds the life. Who has not felt grieved to the quick as they have heard the father, perhaps about the tea-table, tell with great rejoicing how in some way during the day he has cheated a stranger or neighbor to the tune of many dollars? Oh, that he could know what a black eye he was giving to the forming character of the child as he tells of any such experience as that given above.

KEEPING LITTLE HANDS BUSY.

I think one of the most helpful things in the best development of this "best crop of the farm" is the keeping of the little hands busy. This is one of the things that teach our farm boys and farm girls. How difficult always to furnish the city boys with wholesome employment. On the farm it is not difficult at all. If we give the boy the bees, the chickens, or the calf, which he is to care for, we will make this labor at the same time an occasion for economic truths, and for a young boy to learn to defray their expenses in getting a college education. When I was a boy, my father always kept me at work. While I was rarely ever late at school, I never got there much before the opening hour, and taken away from my work then, at times at least, that my lot was a hard one. How many times since have I blst my good father's memory as I have learned to appreciate his wisdom, and have seen its fruits in my own life.

The parent who succeeds in developing habits of industry and a love of honest, honest work in the child, has certainly wrought in the very best way to secure the best fruit of the best crop of the farm.

1860-1901

THOSE LONG-TONGUED ADELS!

WHITE ROCK, Minn., April 10, 1901.

The Adel Queens I got from you are more than you claimed for them. I want more.

S. W. JACKSON.

OZEGO, Conn., April 15, 1901.

The Adels have wintered well and I like them very much. I want more Queens. Send price list.

Rev. T. B. MOWRY.

I have a few bees, which I sell out from my apiary and sold for $1.00 each to be as good as any 90 Queens sold by any dealer. PRICE LIST NOW READY.

HENRY ALLEY, Westham, Mass.

Please mention Bee Journal when writing.

THE WHEEL OF TIME

for all time to the

Metal Wheel.

We make them in all sizes and varia-
tions, to FIT ANY AXLE. Age height, any widths of tire desired. Our wheels are either direct or interconversion, Can fit your WAGON perfectly without change.

NO BREAKING DOWN.

Keep them up to the running time. Cheap because they endure. Send for cata-
logs and prices. Free upon request.

Electric Wheel Co.

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Dittmer’s Foundation!

Retail—Wholesale—Jobbing.

I use a PROCESS that produces EVERY ESSENTIAL necessary to make it the BEST and MOST desirable foundation. My PRO-
CESS and AUTOMATIC MACHINES are my own inventions, which enable me to SELL FOUNDATION and

Work Wax into Foundation For Cash

at prices that are the lowest. Catalog giving Full Line of Supplies, with prices and samples, free on application.

BEESWAX WANTED.

GUS. DITTMER, Augusta, Wis.

Please mention Bee Journal when writing.

BEE HIVES, SECTIONS AND ALL BEE-KEEPERS’ SUPPLIES.


Mention the American Bee Journal.
Handy Little Apiarian Tools.

I enclose a drawing of a little tool that I made for fastening "starters" in sections. The cut is about two-fifths of the full size, and will do the work as fast as any tool I know of. I use two of them, keeping one in a dish of hot water on a small kerosene stove, changing when one gets too cool. There is no wasting of foundation by melting, as with most of the high-priced, patented tools. I made mine out of a broken saw blade, but a piece of heavy tin doubled, with the ends toward the handle, will answer every purpose. The point should be rounded, not sharp, to avoid cutting the foundation in two.

I also have a small scraper for scraping propolis from sections, supers, etc., made in the same way, of steel, only the point is turned down and kept sharp. This beats the Golden section cleaner out of sight. I use it to clean the tops of the sections before removing them from the super, and can do the whole 24 in the time it used to take me to do one with the Golden method.

Reading an article in the Bee Journal some time ago, suggesting that bee-keepers tell each other of any little thing they think might be helpful, is what prompted me to submit the above notes.

A. F. Fouts,
Mitchell Co., Iowa.

Pickled Brood—Introducing Queens.

Pickled brood, in this locality, is of little moment. Colonies of Italian bees are not troubled with it. I have observed it among blacks and hybrids, simply by introducing an Italian queen. When her bees predominate the disease disappears. I am quite sure that pickled brood is not a starvation disease, as newly-hived swarms, gathering honey and pollen freely, have shown it in their first brood.

I successfully introduced over 50 queens, both home-bred and from a distance, to colonies in almost every possible condition, during the season of 1900. I used the Miller cage, pasteboard tack over the candy. The pasteboard must be a little narrower than the hole in the hive with such a rush that a number of them accumulate in front of the hive on the ground or on the slitting-board. I would like to ask the following questions of just as many bee-keepers as will answer them: the "Old Reliable," and when the answers are published I will give my plan with some photographs in this Journal:

1. When a swarm issue do the bees pour out of the hive with such a rush that they can not take to their wings fast enough, and consequently pile up in front of the hive to the amount of a half pound or more?

2. When a prime swarm issue, is the queen one of the last to come out of the hive?

A. B. Ginner,
Hardin Co., Iowa, April 13.
QUEENS!

Improved Golden and Leather-colored Italians are what H. G. QUINIR years.

The Longest-Tongued Bees that I have yet measured are from the grandaughter

of the Doolittle poll. They are a quill that I can transfer just as small larva as Mr.

Prigden can move, "baby, cradle, and all," and no comb with their wax.

To keep up with the times, I have been measuring the tongues of bees from several

of my colonies, and the results have been surprising. The longest-tongued bees that I

have yet measured are from the grandaughter of the Doolittle poll. They are a quill that I can transfer just as small larva as Mr. Prigden can move, "baby, cradle, and all," and no comb with their wax.

The beek-keepers of South Dakota have experienced some of the advantages of co-operation. Supplies were purchased thru our State association. For many of our members the saving of supplies alone many times repaid the membership fee of one dollar.

Perhaps for those who will use quilts on hives nothing is so good as Dr. Miller's quilts which were used by some of the newspapers here. I say one of my neighbors who has used many of them.

I have wintered perfectly, both indoors and outdoors. E. ATWATER.

Yankton Co., S. D., March 1.

Report from Southern Georgia.

I began bee-keeping in 1867 with 5 colonies, and it was not until a few years later that most beginners do. I now have a small apiary of 25 colonies, which I run entirely for coming and going. I have a perfect market for the honey in my local market than for the extracted honey. I have 5000 bees and 800 hives on the stands in single-walled hives the yard around, and I have almost the loss of a single colony in wintering.

I hived a swarm April 5th that weighed 15 pounds, and have put them on. Our main honey-flow begins about May 1st, and lasts until about July 1st. I take off the supers about July 15th, and let them build up for winter. I lose two or three colonies every spring from spring dwindling. The weather is very mild. I suppose about 10 miles of mine. I like keeping, and also like the American Bee Journal, and think that no bee-keeper ought to get along without it.

H. T. HANZA.

Decatur Co., Ga., April 13.

Successful Cellar-Wintering.

Our bees came out booming this spring. From 400 colonies placed in the cellar last fall, we lost only 10 colonies, so I think we will have some bee-business this season. Our imported queens wintered very well, and escaped the floods with plenty of good in their stores. Many of the bee-keepers in this section report heavy losses. We attribute our success in this respect to having plenty of good food, good cellars, and last but not important, good, young, prolific queens.

L. P. BROWN.

Richland Co., Wis., April 17.

Rendering Bee-wax.

Having seen and read a good many articles in the American Bee Journal about rendering wax, I felt I needed more bee-wax and am hereby asking if you have bee-wax—exactly, but at a slow process unless one has but a few colonies. I have tried a number of different ways, and I think the following is "king of all," both for rapid work and ease:

I have made what I call a "jack press." It is 10x16 inches, inside measure, the posts and bees are 3x6 oak, the bottom is made of 3x6 inch planks, and the ends and sides are made of one-inch pine with one-inch slots left on each side of the bottom, these being covered with wire cloth so that the wax can pass through.

I have another plank to fit loosely in the press, which I set jack on, and on a jack with 2x10 inch screw. Set the whole thing on a large tub or trough with some water in it, and allow the wax to drain into the tub. If the wax be entirely hard, put the wax and a little cold water in a pot, boil the water until it boils, and boil the wax until it boils. I boil about 25 or 30 combs at a time in an old wash-boiler, having it as hot as I can get it, and have the wax in the press all ready, pour the boiling wax into it, fold down the sack, lay on the loose plank, screw down the jack, and in a few minutes the wax is reduced as dry as polon that comes from a cider.

After having done this I refill the boiler, and let the bees work over the hot press, pressing it as fast as they can.

Prospects for a Good Honey Crop.

I put 11 colonies into the cellar last fall, but they were not very strong, so I lost 4 of them. Last season was a very poor one for bees in this part of the State, but the prospects are for a good honey crop this year.

ALBERT GOETSCH.

Dodge Co., Wis., April 19.

How the "Robber-Bees" Were Quelled.

I had a little experience once with bees when I first commenced in the bee-business. I had read up a subject of bee-keeping, and was impressed with the importance of having a stationary infestation of robber bees and manage an apiary. I soon started out in quest of bees, and purchased two hives in box-hives. This was in early spring. I kept close watch to see that all was well with them, and everything went well the first day. The second day trouble did not arise until the queen was full of honey and bees, the other one was light in both.

About 1 p.m. I noticed there was something wrong in the apiary. I soon discovered what the trouble was—they were robbing my honey. I thought how very much I would have to learn to manage a bad case of robbing like the one I now had to deal with.

I sent one member of the family after straw, another after water, and myself after the honey. I soon discovered what the trouble was—a strong and vigorous colony which was being robbed, piled high with straw, and the sprinkler running full time. I knew what I wanted, but the bees kept piling into the hive, and none came out, but soon all was quiet. I had conquered them. I decided then and there that I was well informed in all the branches of bee-keeping.

I didn’t learn my mistake till the following day, when the bees again (as before) came out for their daily play spot.

A. E. WILLCUTT.


Value of Honey as Food.

"Comparatively few to-day know the great value of honey both as a food and a medicine. Were its value as medicine thoroly known, it would displace in the market, in some measure, all our domestic remedies or quack compounds now depended upon by them as ‘cure-all.’. If one of the bee-keepers in Minnesota would put together a series of articles for his local weekly newspaper upon the value of honey for food and medicine, it would do a great deal to supply what would require a much larger quantity than is now produced."

This says a writer in one of our agricultural papers. While there may not be in the claims made, all the writer thinks, yet in them is something worthy of thinking about. If honey is really the good thing we bee-keepers
Tennessee Queens!

Fine lot of Choice Tested Queens reared last season, dispatchable, and select golden queens, reared 24 miles apart, and mated to select drones, $1.50 each; nestless warranted. California's Oregon, and the sunny South. Sold on same brand—other, either strain, 75c each. No bees own weight or weighter than 25 miles. None impure within 15 miles, but few within 5 miles. 20 years' experience. Discount on large orders. Contracts with dealers a specialty. Address, M. DAVIS, Spring Hill, Tenn.

Please mention Bee Journal when writing.

California! If you care to know of its Fruits, Flowers, and Resources, send for a copy of California's Favorite Paper—The Pacific Rural Press, the leading Horticultural and Agricultural paper of the Pacific Coast. Publish weekly, handsomely illustrated, 25c per annum. Sample copy free. PACIFIC RURAL PRESS, 330 Market Street, - S. SAN FRANCISCO, CAL.

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We are Distributors for ROOT'S GOODS AT THEIR PRICES for southern Ohio, Indiana, Illinois, West Virginia, Ken-

yon, and Maryland.

MUTH'S SQUARE CLASS HONEY-JARS.

LARGSTHO BEE-HIVES, ETC.

Lowest Freight Rates in the country. Send for Catalog.

C. H. W. WEBER,

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214 West Central Ave., CINCINNATI.

Please mention Bee Journal when writing.

1901—Bee-Keepers' Supplies!

We can furnish you with the A. 1. Root Co's goods at wholesale or retail at their prices, and save you 50% by promptness. Market price paid for beehives. Send for our new catalog.


Please mention Bee Journal when writing.

Do You Want a

High Grade of Italian Queens

Or a CHOICE STRAWBERRY?

CHICAGO, ILL., Jan. 28, 1901.

D. J. BLOCHER, EOQ, Pearl City, Ill.

From your front page on 48 untested Italian Queens, ready for delivery by May 15, 1901, at the lowest offer of our several advertisers, and, besides, you having promptly favored me with your suggestions last year, may, in appreciation, give me at my order. Yours truly, L. REECHINGER.

Prices for May and June.

Number of Queens, 1 2 3 4 5 6 7 8 9 10 11 12

Golden Queens. $1.50 $3.00 $4.50 $6.00 $7.50 $9.00 $10.50 $12.00 $13.50 $15.00 $16.50 $18.00

Select Tested. 1.25 2.50 3.75 5.00 6.25 7.50 8.75 10.00 11.25 12.50 13.75 15.00

Breeders. 1.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00

Honey Queens. $1.50 $3.00 $4.50 $6.00 $7.50 $9.00 $10.50 $12.00 $13.50 $15.00 $16.50 $18.00

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Breeders. 1.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00

Safe arrival guaranteed. Descriptive price list free.

D. J. BLOCHER, Pearl City, Ill.

1400th Minute Please mention the Bee Journal.

CAREER AND CHARACTER OF ABRAHAM LINCOLN.

An address by Joseph Choate, Ambassador from Great Britain, on the career and character of Abraham Lincoln—his early life—his early struggles with the world—his character as developed later on—and his life and his administration, which placed his name so high on the world’s roll of honor and fame, has been published by the Chicago, Middletown, Paul Rail-

way, and may be had by sending six (6) cents in postage to F. A. Miller, General Passenger Agent, Chicago, Ill. 18A3t

think it is, are we doing right in not publishing the matter more? Are we not "hiding our light under a bushel"? Here is the time—by letting it shine brightly all the time, we might honor our calling by leading others to partake of the good which comes to those who hold forth the rays of the bee-keeping sun—honey—G. M. DOOLITTLE, in the Progressive Bee-Keeper.

Load a Worker-Bee Can Carry.

A Stray Straw in Gleanings in Bee-Culture says:—"A worker, according to A. Astor (Rev. Int.), can carry about an eighth more than its own weight when honey is given to it. The maximum load of nectar brought in by (their) foundress (Rev. Int.) is 150 grains (a little more than three-fourths its own weight); and from then to Aug. 8d the loadings show a decrease to 25, 15, 10, 0 and 10. [It appears, then, that a bee can carry more of honey than it can of nectar—nor larger in bulk, but greater in weight. These figures are very interesting.—Editor.]

A Queen Between the Lips.

A pointer for those who, like myself, are fond of honey—bees to remember.

The hive is all open; I hold in my hands the frame she is on, but I have no cage! It is a long way back from the hive. But the sun is hot, and robbers have found us. If I place the frame back into the hive in order to go and get the queen, even the best of the 12 bees can do nothing so long as this frame is in my hands. I want that queen! What shall I do? Simply place the hand, carefully between the dry lips, close the hive, and then go and cage her. See?

I hold cell, root in the same, very easy. Quotations, "FAIRSTEAD," in the American Bee-Ceeper.

Good Apiarian Advice.

Produce what your market calls for; this will be both comb and extracted honey. Some customers want the comb, others the extracted honey.—please both. Bottle nothing but first-class honey. Furnish this to the grocers around you to such an extent that as many as may wish to do this will be able to purchase our goods. Call all your wits into play, and remember, it is as honorable to sell honey as to sell wheat or potatoes. Give good weight, and you will soon work a good trade, and get retail prices for your goods.—F. P. CLARK, in the Bee-Ceeper's Review.

Railroads Against Comb Honey.

Referring to the fact that the Grand Trunk railway in Canada has ruled out a class of honey as of less weight, and to the information given in a recent number of this journal as to contemplated action on this side, the editor of Gleanings in Bee-Culture expresses himself in the following vigorous style:

I regard this as a most serious matter. I can not think of anything that would handicap bee-keeping any more, unless it be foul or black brood, than to have the railroads practically refuse to handle comb honey. We can not and will not pay two or three times the price by quantity as by express; and if the new freight-classification should go thru, we could not afford to send these honey products. Retail dealers would be totally unable to dispose of their product, and the industry would not

Bees-Supplies

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HORSE-HIGH! — BULL-STRONG... With our Duplex Automatic Beadless Wire Fence Machine, any farmer can protect his stock of 50 to 70 (or 100 a day) by placing fence on earth at a cost of $100.00 to $200.00, 20 to 300c. per rod with Gates, Farm Yards and Coated Spring Wire at cost price. Catalogue free. KITSelman Bros., Box B, Muscle, Ind.

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The Rural Californian.

Tells all about Bees in California. The yields and Price of Honey: the Pasture and Nectar-Producing Plants: the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by an expert bee-man. Besides this the paper also tells all about Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.

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A Journal that is over a quarter of a century old and is still growing must possess intrinsically worth, and its field must be a valuable one. Such is the

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BARNES' FOOT POWER MACHINERY

READ what J. K. PARENT, of Chicago, says:—"We cut with one of your Combination Machines last winter, 50 chaff hives with 7-in. cap, 100 honey racks, 80 brood-frames, 160 bees, and a great deal of other work. We have doubled the amount of bee-hives, etc., to suit our needs, and by doing it with this Saw. It will do all you say it will." Catalog and price-list free.

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EMERSON TAYLOR ABBOTT, Editor.

A live, up-to-date Farm Journal with a General Farm Department, a Poultry and Livestock, Bee-Keeping, Veterinary, Home and General News. Edited by one who has had practical experience in every department of farm work, and brings fresh blood to new readers, it will be sent for a short time to New Subscribers, one year for 25 cents. Sample copies free. Best Advertising Medium in the Central West. Address.

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MINNEAPOLIS, MINN. Please mention Bee Journal when writing.
**Catnip Seed Free!**

We have a small quantity of Catnip Seed which we wish to offer our readers. Some consider catnip one of the greatest of honey-yielders. We will mail to one of our regular subscribers one ounce of the seed for sending us our new subscriber to the American Bee Journal for a year with $1.00; we will mail to any one an ounce of the seed and the American Bee Journal one year—both for $1.30; or will mail an ounce of the seed alone for 50 cents. As our stock of this seed is very small, better order soon.

**ALBINO QUEENS**

If you want the most prolific Queens—if you want the greatest honey-yielders—you ever saw by any Albinos, Untested Queens in April, $1.00; Tested, $1.50. J. D. GIVENS, LISBON, TEX. Please mention Bee Journal when writing.

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**MONEY AND BEEWAX**

MARKET QUOTATIONS.

CHICAGO, April 18.—Choice grades of white honeycomb sell at 6c, and there is surplus in sight. Other grades of comb sell fairly well ranging from 2c to 25c. Buckwheat, 28@25c; light amber, 78@80c; dark amber, 100@115c; buckwheat, 100@115c. Extracted, dull, and prices very weak, with the exception of some fancy extracted comb, grades which is quoted at 780, amber, 60c; dark and buckwax comb, 70c. R. A. BURNETT & CO.

BUFFALO, April 18.—Fancy white comb, 150@160c. Poor, dark, etc., 89@95c, as to grade. Demand good on fancy. Bee wax, 200@240c old home. BATTFERSON & CO.

OMAHA, Apr. 25.—There has been no change in the market this month, and there is fair demand for all grades. Fancy white is still selling at from 90c to $1.00, $1.25 to $1.40, 130@140c amber at from 126@135c, buckwheat, 105@115c, according to quality and style of packages. As to extracted, the market is quiet and inactive, and a certain amount will have to be carried over again. Prices are declining somewhat, and what is the honey not moved in large lots will be knocked down. We quote: California white, 87@90c; light amber, 65@75c; other grades and Seathers, 65@75c per gallon. Bee wax very firm at 285@295c, and for exceptional fine you will find 300c.

HILDEBRAND & SEIGLEIN.

CINCINNATI, Apr. 18.—The demand for comb honey is nearly over. The stock of it also well taken. There is a fair demand for extracted, in fair demand: dark sells for 55c; better of 65@75c; Extracted, 75@80c. C. H. W. WEBER.

KANSAS CITY, Apr. 18.—There is very little honey offered, and the demand is steady, selling from 25c@30c. Buckwheat is firm, and no amber on the market at this time. Extracted, no change; white, from 55c@65c; dark amber, 75@80c. It is reported that there will be little on this market that could be sold from 75c@85c. Bee wax scarce and demand good, at 260@280c. W. R. CARSON.

Successors to C. C. Clemens & Co.

ALBANY, N.Y., Apr. 19.—Honey market quiet. Light supply and light demand now. The stock in well cleaned out, so we boldly hold honey to carry over this season.

H. R. WRIGHT.

BOSTON, April 4.—Fancy No. 1 white in carloads, $1.10 per lb. No. 1, 1.50@1.60c per lb., fairly good demand. Absolutely no call for dark honey this year. Extracted, white, 88@94c; light amber, 78@85c; Buckwheat, 25c.

BLAKE, SCOTT & LEE.

SAN FRANCISCO, April 2.—White comb 120@125c amber, 95@100c; buckwheat, 90@95c. Extracted, white, 68@75c; light amber, 49@56c; buckwheat, 25@28c.

BEE WAX.

Despite general expectations and contrary to experience of previous years, new honey is reported on the market. Only a fair quantity of honey is reported from Ventura county 6 cts. is asked, but this venture is probably not worth 20 cts. inquire offering in moderate quantity, both comb and extracted, mostly amber.

WANTED By young woman, position to assist in apiary.

MISS WHITELY, 1915 Prairie Ave, Chicago, Ill.

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Our Specialty is making SECTIONS, and they are the best in the market. Wisconsin BASSWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free illustrated catalog and list.

Marshfield Manufacturing Co., Marshfield, Wis.

Please mention Bee Journal when writing.

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**Red Clover Queens**

**LONG-TONGUED BEES ARE DEMAND NOW.**

ONE Untested Italian Queen FREE as a Premium for sending us TWO new subscribers to the American Bee Journal for one year (with $2; or, one Tested Queen free as a premium for sending as FOUR new subscribers with $4.00.)

We have arranged with one of the oldest and best queen-breeders (having many years' experience) to rear queens for us the coming season. His bees average quite a good deal the longest tongues of any yet measured. The Breeder he will use is direct from Italy, having imported her himself. Her worker-bees are large, somewhat leather-colored, very gentle, and scarcely requiring veiling or smock. They stored red clover honey last season.

Orders for these fine, "long-reach" queens will be filled in rotation—first come, first served—beginning about June 10th. It is therefore important that they be taken at once, since there can be no guarantee that such classification resided in the same order. Why, our Association could better expect every member to do whatever he can to help them than have such a foolish, unreasonable, and unlawful protest against the industry. I am sure that our worthy general suppliers will take such action at once. In the meantime, the Ontario Bee-Keepers' Association in Canada is about to start, and we have to have that in the same list, the Grand Trunk railway resided. It is apparent that the proposed action on our side of the line was instigated by the foolish resistance of the Grand Trunk on the other side, and as long as it stands thus, so long will it be a menace to us.
AMERICAN BEE JOURNAL
May 2, 1901.

We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR
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OR ANYTHING YOU WANT IN THE "BEE-KEEPING LINE."

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of The American Bee-Keepers free. Address,

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We, W. M. Grooming, East Nottingham, N. H., carries a full line of our goods at catalog prices. Order of him and save freight.

LEARN TO SING AS HOME by my new method of teaching. With my complete system you will have your voice in any key. Send 25 cents for samples. No obligation. Address:

Prof. M. W. Whaley, Kalamazoo, Mich.

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SWEET CLOVER
And Several Other Clover Seeds.

we have made arrangements so that we can
We can seed of several of the Clovers by freight
or express, at the following prices, cash with
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5 lb. $1.00 10 lb. $2.50 50 lb. $15.00

Sweet Clover (white) . . . . . . . . 75c
Sweet Clover (yellow) . . . . . . . 85c

Aikakesh Clover . . . . . . . . . . 75c

Japanese Backwheat . . . . . . . . 75c

Prices subject to market changes.

Single post 25 cents more than the 5-pound
rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for carriage, if
wanted by freight, or 10 cents per pound if
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GEORGE W. YORK & CO.
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200-Egg Incubator for $12.00
Perfection construction and action. Hatches every fertile egg. See catalog today. GEORGE H. STAHL, Quincy, Ill.

46A27 Please mention the Bee Journal.

I ARISE
To say to the readers of the Bee Journal that
DOOLITTLE...

has concluded to sell QUEENS in their season
during 1901, at the follow-
ing prices:

1 Untested Queen $1.00
2 Untested Queens 2.50
3 Untested Queens, 2.25
1 Tested Queen . . . . . . . . 1.25
2 Tested Queen . . . . . . . . 2.25
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3 Selected tested Queen 4.00
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Extra selected breeding, the very best . . . . . 5.00

Circular, free, giving particulars regarding
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Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

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Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs

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LANGSTROTH on the HONEY-BEE—Revised

The classic in Bee-Culture—Price, $1.25, by mail.

Becswax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

$15.00 and $25.00 Queens
Having a Measured Tongue Reach.

The call for queens of our celebrated $20 imported mother has been so great that we have decided, in addition to the $2.00, $4.00, and $6.00 grades of this stock, to offer some $10.00, $15.00, and even $25.00 of this same blood. But these prices are for tested queens, the tongues of whose bees have been measured.

The $10.00 queen is guaranteed to produce bees with a tongue-measurement of 19-100.

The $15.00 queen, 20-100.

The $25.00 queen, 21-100.

These last are very rare and with one exception this (21-100) is the longest tongue reach yet secured. We reserve the right, when we do not have the stock with the tongue reach called for, to either return the money or to send the next lower, remitting the balance. It would be well for our friends to put in their orders at once, and as soon as we get the grades we will send notice. When the money is sent, the queens will be forwarded. These will be put up in the very best manner possible; and while we guarantee safe arrival in good order to any point in the United States, on any railway line, we will not guarantee safe introduction. Such valuable queens should be releas on hatching brood.

N. B.—It seems as if it ought not to be necessary to say that no one but a queen-bredcr or a large honey-producer should order these high-priced queens; but it is a fact according to our experience that beginners with only a few colonies will order our highest-priced imported queens, as such bee-keepers have no more use for such queens than a pig has for a wheel-barrow.

THE A. I. ROOT CO., Medina, Ohio.

GEORGE W. YORK & CO. CHICAGO, ILL.

are headquarters for ROOT’S BEE-KEEPERS SUPPLIES IN CHICAGO. Send to them for their free Catalog.
Three American Apiarian Editors.

(Courtesy of the Bee-Keepers' Review.)

ERNEST R. ROOT,
Gleanings in Bee-Culture.
1873.

W. Z. HUTCHINSON,
The Bee-Keepers' Review.
1887.

GEORGE W. YORK,
The American Bee Journal.
1881.
FEMININE FLICKS is exhibited by Miss Rose Kenkott, who, in the good State of Colorado, has worked up in the course of a year from 5 colonies to nearly 300 colonies, with only the textbooks, bee-papers, and her own experience to guide her. May her success continue.

Mr. F. Gent, of Wight Co., Minn., who has been offering bees for sale in our advertising columns, wrote us April 30th, when re-ordering his advertisement: "The American Bee Journal is a good puller." Of course it is. If you have any good thing to sell that bee-keepers want or need, offer it thru our advertising columns.

Mr. N. E. France, of Grant Co., Wis., writing us April 27th, says: "Prospects are for a good honey crop in Wisconsin this season. But some lost many colonies of bees during the winter. I am happy to say that, for the first time in Wisconsin now has a law to suppress foul brood. I have witnessed many times that every State had the right to control disease that is imported with no importing or sending of diseased bees from one State to another."

Three Friendly Editors are shown on the first page this week. The engraving appeared first in the Bee-Keepers' Review for March. Mr. Hutchinson had the following to say, in part, concerning those represented in the picture:

"It is a fortunate fact for the readers of these leading bee-journals, that the editors are really and truly friends. Instead of wasting their time and energies, and using up space in quarrels, in bickerings, in all pull together for the good of the pursuit in which their journals are devoted."

When the editors of the Bee-Keepers' Review last met at Madison, these editors met by appointment at the Chicago, Milwaukee & St. Paul station in Chicago, went together to Madison, and whiled away the time on the way by discussing bee-journalism—each trying to learn from the others how he might improve his own journal.

E. R. Root was called home from Oberlin College, some 15 or 20 years ago, to help his overburdened father; and, gradually, he worked into the editorial harness, until, at last, he was "given head," not only in Glenings, but in the revisions of the "A B C" book. Mr. Root has had exceptionally good advantages for becoming a first-class bee-keeper, having been brought up with the bees, and in connection with the largest factory there is devoted to the manufacture of bee-supplies. If I were to point out his leading characteristic, or, at least, the one that has had a great deal to do with the building up of Glenings, it is this: it is his affinity—the faculty of making and keeping friends. An editor has many times to disagree with his colleagues, but Mr. Root seems to be able to do this without giving offense. There is a great difference between the way people say, "I disagree with you," and the way they say, "I disagree with you," and explaining to him where he has made a mistake. Mr. Root takes the latter course.

About the time that Bro. Root began working on Glenings, I found a reproduction of a motto on a button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it.

Price, by mail, 6 cents; two for 10 cents; one dozen, 50 cents, to the office of the American Bee Journal.
Strenuous Queen-Rearing is the subject written on by Mr. J. H. Martin, as will be seen by the report of the California convention in this number. The paper treats upon a new phase in queen breeding and distribution. We understand that the plan was almost unanimously endorsed by those present at the meeting. Mr. McIntyre made an estimate that if a bee-keeper could definitely depend upon supplying a large number of bee-keepers with queens, and without advertising and the uncertainties of the present method, that queens could be reared for 15 cents each. The members present were willing to pay 25 cents each, and upon that basis the few present were ready to place an order for 1,000 queens. Upon this basis Mr. McIntyre would probably receive orders in his own county, and in Los Angeles county, for over 5,000 queens; but not being prepared for such extensive queen-rearing just at present, the matter is under advisement, meanwhile others are thinking of entering the field and working upon this plan.

Now the questions before the fraternity, or rather before the queen-breeders, are, Can good queens, such as Mr. Martin’s paper calls for, be bred for 25 cents each? Can a queen-breeder rear from 5,000 to 10,000 good queens per year? Or, Mr. Queen-Breeder, how much will you charge per month for your services while rearing queens for from 50 to 100 bee-keepers?

The object in adding the foregoing is that a healthful discussion of the matter may be brought out. Mr. Martin thinks his plan is the right one for improving the working qualities of a large number of colonies of bees.

Are Old Combs Objectionable?—It is a fact that fashion seems to have at least a little to do with practices of bee-keepers in different parts of the world. In this country it is the fashion to continue to use brood-combs when many years old, while in other countries they are considered objectionable when ten, five, and in some places three years old. The rejection of old brood-combs comes from the belief that the cocoons left by successive generations of young bees make the cells so small that bees reared in them can not attain their full size. A few in this country have said that they found bees reared from old combs were a third smaller than others, but others say they can see no difference when the combs are 20 years old or older. One writer in Gleanings in Bee-Culture argued that bees must necessarily be smaller because the cocoons left from year to year do not leave room for full development. But if that proves anything it proves too much. Old combs may be found in which the septum or wall measures ⅛ of an inch, and it was shown in Gleanings in Bee-Culture that if the amount of cocoons left on the cell-walls was the same as at the bottom, the inner diameter of such cells would be so reduced that instead of measuring 5 to the inch it would take 13 of them. It was shown in the Illinois State Apiary of the Illinois State Apiary, and if honey is stored on them in to weigh as much as an ordinary worker. No one pretends that such dwarfing ever takes place.

Some worker-comb 25 years old was measured by E. R. Root, and he found that while the septum was ⅛ of an inch thick the cell-walls were not materially thinned. It seems that while the bees leave the bottoms of the cells undisturbed they continually remove the cocoons from the side-walls, so that by drawing out the cell-walls a little the cell is made as large as ever. From this drawing out of the cell-wall it happens that very old comb measures an inch in thickness, while comb newly built measures only ⅛.

Another item that should not be disregarded is the preference of the bees themselves. Give them their choice between an old black comb 20 years old, and a fresh comb in which little or no brood has ever been reared, and they will promptly choose the old comb, whether it be for the rearing of brood or the storing of honey. It is also claimed that bees winter better on old than on new combs.

Honey-Adulteration in Illinois.—From the First Annual Report of the State Food Commissioner of Illinois—1884-1885—we take the following as written by State Analyst E. N. Eaton last December, which bears directly on this subject:

Honey.

Pure honey may be defined as the nectar of flowers, transformed, and stored in the comb, and if pure bees. Extract of strained honey is the same article removed from the comb by man, usually by centrifugal force. Comb honey can only be adulterated by the bee which seems to have a patent on cupping the cells. Extracted honey, next to vinegar, is more universally adulterated than any other staple food-products.

In Minnesota, before the honey clause was added to the Food Statute, about 20 per cent. of extracted honey proved to be adulterated. In Illinois about the same ratio of adulteration was proven to exist. Last year a committee acting for the National Bee-Keepers Association, secured a large number of samples in Chicago. In all at the time employed in commercial use. I examined the samples for the Association, and found that more than 50 per cent. were adulterated. The present month finds extracted honey again selling during the winter trade. Inspector Mrs. Frank Hubbard has visited many stores in Chicago, and reports very much less extracted honey this year than last. A recent law requires the enforcement of State law requiring the labelling of adulterated honey, thus driving a dishonest competitor from the market. While none of the samples taken this winter have as yet been analyzed, many of them are of those brands which proved genuine in former analyses.

The most common adulterant of honey is glucose, wine, sugar and invert sugar is possible and sometimes practiced. The adulteration thus far discovered in Illinois is mainly confined to the market. The Illinois Food Commission is doing a good work for everybody in this State. There are still some weaknesses in the present law under which the Commission is operating, which, when removed, will tend to make their efforts still more effective in the future. We hope the strengthening amendments will be approved during the present session of the State legislature at Springfield.

A Woman With 500 Colonies.—Gleanings in Bee-Culture has a report from Lydia Crawford Harris, who last year from an apiary of 160 colonies obtained 160 50-pound cans of extracted honey, and 171 cases of comb honey. She also has two other apiaries—in all 500 colonies. If something is not done to stop this sort of thing there is no telling to what it will lead. Instead of being the down-trodden, submissive creature that a properly constructed woman is expected to be, Mrs. Harris boldly declares her independence of the "lords of creation" by saying:

"As we women in Colorado enjoy all the rights of voting, from the lowest county officers to the President of the United States, I propose to operate these yards with women help.

"As a comment on the above, Editor E. R. Root adds this:

"If the right of franchise has this effect on the gentler sex, let's give the women a chance. If the women of the land could vote she would be less of a sibyl best suited with knowledge for the work of the world and a woman of her calling for the women of the world."

A Smoker With Double Bellows has been shown in Gleanings in Bee-Culture which operates so that a puff is given as usual at the pressing together of thumb and fingers, and another puff as they separate; but the two puffs give no more smoke than a single puff of the ordinary smoker. A Stryaw Straw suggests that a smoker could be made to give a perfectly continuous blast by having bellows after the fashion of a melodeon, allowing no possible sucking of smoke into the bellows, but there would be a loss in the strength of the blast.
Convention Proceedings.


The 11th annual convention of the California State Bee-keepers' Association was held in Los Angeles, Feb. 25 and 26, 1901. There was a small attendance, but all were hospitable and kind toward the visiting delegations. Secretary McIntyre explained some of the advantages of the new State Law in the interest of bee-keeping, thru the efforts of Assemblyman R. M. Clark, of Ventura, assisted by other southern legislators. The new law reads as follows:

AN ACT
To promote the Apicultural Interests of the State of California by providing County Inspectors of Apiaries, and defining their duties and powers, and the manner of enforcing the same.

Secretary McIntyre suggested that every member of the Association consider himself a committee of one, authorized to investigate honey adulteration in their respective districts.

ELECTION OF OFFICERS.
At the time of the election of officers the following were chosen to serve the coming year: President, G. S. Stubblefield; vice-presidents, H. E. Wilder, G. W. Brobeck, Robert Wilkin, E. A. Roney, and T. R. Canady; secretary and treasurer, J. R. McIntyre, Sespe; executive board, J. H. Martin, E. Hart and G. W. Brobeck.

A general discussion of the affairs of the bee-keepers' extension, which has a practical interest in the state, was made, and emphasized the need of co-operation among apiarists.

CONDITIONS IN LOS ANGELES COUNTY.
President Brobeck, of the Los Angeles County Bee-keepers' Association, stated that the local Apiary is on the decline. There were a few colonies of bees that had greatly decreased the number of colonies. Four years ago the estimated production was 4,000,000 pounds. Since then 75 percent of the bees have died. This season, however, is so far much more favorable than the season four years ago, and therefore there may be a very fair yield, notwithstanding the decrease in colonies. Most of the apiaries in this county are situated along the lower mountain sides, from San Fernando to the eastern county line, and in the hills around San Pedro.

T. O. Andrews, of Orange county, described the state of the honey-business along the Santa Ana river, where he has owned several apiaries. Seven years ago he took 18 tons in 1852 colonies, but the rain and climate continued drought which had greatly decreased the number of colonies. Four years ago the estimated production was 4,000,000 pounds. Since then 75 percent of the bees have died. This season, however, is so far much more favorable than the season four years ago, and therefore there may be a very fair yield, notwithstanding the decrease in colonies. Most of the apiaries in this county are situated along the lower mountain sides, from San Fernando to the eastern county line, and in the hills around San Pedro.

Strenuous Queen-Rearing.

In these twentieth-century days we hear much about strenuous living and working. I suppose strenuous is only another term for high-pressure, and we have had high-pressure potters rearing, high-pressure poultry rearing, high-pressure commercialism, and high-pressure many other things; but I have never heard much of high-pressure bee-keeping.

High-pressure is, however, too much out of date to apply to twentieth century bee-keeping, and "strenuous" is the term; and I have an idea that, to commence from the root of the matter, we need a more strenuous queen-rearing.

Let us consider the subject. During the past season I found a strain of bees in the apiaries I was managing that were so far superior to the other that, had they been of any strain, their queenly products, in that colony, our honey crop would have been increased by several tons. The discovery that this strain were such good rustlers for honey was not made until the season was well advanced; and now, in order to help them benefit from the hard times that had gradually diffused thru the whole apiary.

When I find a strain of bees like those I have mentioned I am impatient to get them a queen up to that standard, and I will need several when I want them, and the lack of three is likely to ruin them when my bees are devoted to the extractor or at other work. In fact, I am strenuous at something else, and need an extra-strenuous plan to supply the queens.

I think every bee-keeper present has observed that not one apiary in one hundred is properly queened, and I think we all have a dim sus...
tion that our own apiaries are not up to the standard we desire. We hear of golden yellow queens, leather color, long tongues, and even $100 queens. To make a good start we should like one of those $100 queens. But until the time comes when we can afford one, our plan will finally conclude to send for a dollar queen, and that is about as far as we get this year; but next year, if we have a big crop of honey, we will do better. Our dollar queen may be good, bad, or indifferent; and, whichever it is, we do not get much out of her.

Then you know that queen-rearing has become a great science of late years. All the authorities now agree that the number of workers, the quality of the workers, and the size of the colonies are governed by the number of queens, the quality of the queens, and the size of the queen cells. Then we have the problem of making queen cells by the peck, and queens by the quart. A great load seemed to be lifted from my mind, and I formulated the following more strenuous plans for queen-rearing.

In the first place, every bee-keeper needs the very best queens that can be reared—best in hardiness, prolificness, and notably in the honey-gathering qualities of her progeny. And in the second place, there are but few bee-keepers who have the combination of qualities that will insure their success in modern strains scientific queen-rearing. But the number of bee-keepers in a given locality turn their queen-rearing over to an expert in that line of work. A contribution from each bee-keeper interested would enable the expert to commence operations with the best available stock. Each bee-keeper in this district should agree to take a certain number of queens per annum; and, having a definite number of queens rear to, and a large enough colony to support the experiment, the expert could then, by a minimum cost to the bee-keeper, and at the same time with a good profit to himself.

A person devoting his entire attention to queen-rearing will strike to improve his stock, and his patrons will receive the full benefit. But in the same case this would have an influence in keeping the stock up to an approved grade.

The idea of sending for a breeding-queen and rear daughters, granddaughters, and great-granddaughters from her, and trust to a promising mating with our drones. This is another system that is justified to control the mating of queens with selected drones, and the bee-keepers in this district would get queens only one removal from the original, or daughters, and from the rear to the ultimate case. Hence an expert hand will dilute the blood too much by the many removes from the original stock, and this would be entirely avoided thru our expert queen-rearing station.

This plan is in line with the division of labor which at present is recognized as the most effective way for accomplishing great results; and if the experiment is successful, the bee-keepers should readily for this advance in their methods of management?

I will leave the question to you for solution, believing that, if it is determined, then I feel the honey-producing power of our colonies will be advanced many fold.
Do Bees Help to Spread Pear-Blight?

By Prof. A. J. COOK.

Our good friend, J. H. Martin, so favorably known to all beekeepers, writes me from his present home as follows:

"I herewith hand you a clipping from one of our local papers. The subject of bee-keeping and the news from Kings County:

As I understand, the blight is in the blossoms and so it is possible that it is spread by the bees. Would it not be well for you to comment upon this very important subject in the American Bee Journal and give us the truth of the matter?"

The following is the clipping:

"The supervisors have a novel question under consideration. It is whether bees are responsible for the spread of pear-blight, and what steps will or can be taken in the matter. W. Motheral and J.

F. Tilton, Horticultural Commissioners, gave their opinions on the matter. Mr. Motheral asserted strongly that bees spread the pear-blight, and should be condemned as a nuisance to the orchardist. Mr. Tilton is inclined to agree.

There is no doubt but that this question is a very important one, and certainly bee-keepers will be interested in any experience regarding it. Pear-blight has long been a serious enemy in the pear orchards in the East, and is now working its way into the West, as it recently did in California. At a recent institute, held at Banning, Riverside Co., there was no topic which called forth so much of interest as did this same one of pear-blight. The people there are much disturbed regarding the matter.

I think it was Prof. Arthur, of Purdue University, Indiana, who demonstrated that pear-blight is a microbe disease. If I remember correctly, he discovered the specific microbe, found that he could grow it in artificial cultures, and could by their use inoculate healthy trees. I think Prof. Arthur suggested that bees might be a means of spreading the disease. It is not known that the blight attacks the end of the twig and works inward toward the trunk of the tree. Of course the germs are in the sap, and might very likely be in the pollen, altho, so far as I know, their presence there has never been demonstrated. The pollen is carried to the stigma of the flower which, from its delicate sensitiveness, we would suppose, might be a very vulnerable point for infection. Thus the conjecture that bees spread the disease would not be an unreasonable one.

Until we find, however, that the microbe is in the pollen, we certainly have a right to place a large interrogation point after this theory. Mr. Motheral or any one else who speaks with assurance in this matter, would be rash, indeed. To declare bees a nuisance on this account is entirely uncalled for.

In the early spring, the swelling buds of both flower and leaf would be the most susceptible to microbe influence which may contribute greatly without the aid of insects. If insects are the medium of transportation, there are many others than bees, and removing the bees would not bring security. We know that without the honey-bee, complete pollination of flowers is impossible. A decline or disappearance of bees would be a loss in their very light, and would work them incalculable injury.

Many leading scientists of the East, especially Professors Waite and Fairchild, of the Agricultural Department, have given this matter the most careful attention. It is significant that they urge most strongly that fruit-growers take all pains to secure the presence of bees in the near precincts of their orchards. The supervisors and commissioners of Kings County cannot afford to take a back step in this important matter.

Los Angeles Co., Calif.
sour then, where they tax bees, honey on hand, corn in the crib, and potatoes in the cellar—not forgetting the poor man's crop of peas and beans, and even their garden machine.

"About a mile distant from my home lived a man—I shall not tell you his name because he is out of business for good—who kept bees, had kept them, he told me, 'for more than 70 years.' Besides he kept several queen bees about bees—their nature, and ways of doing things—that I could not make up my mind to adopt.

"Well, one beautiful day in early May this friend sent me word that he had a very large swarm out on an apple-tree near his house, which I was to catch and bring to him, as he was a large commercial bronchologist with it. Of course I went for that swarm and brought it home in my bee-box. Within a week I got three more swarms in the same way, and at the same price, and of the same kind friend.

"I had learned from 'Bees and Honey'—an excellent little book on bee-culture, for beginners especially—how to house a new swarm so that it would lose no time money-<ref>money-saving</ref> around, but go right to work storing honey for me. As compensation for knowing how, I took from those four one-<ref>dollar</ref> swarms 350 pounds of white clover honey, in sections most beautifully <ref>finished</ref> and <ref>finest</ref> all before the end of the same month.

"Some time during the following October my friend sent me for one day. The messenger said: 'Would you please come down and take some honey off the hives?' But it was already late in the day, and I was pretty sure to lose that work, in that, coming in the person of a messenger that I wouldn't do such work on such a day for the best friend I had; but that I would come down the first <ref>suitable</ref> day in the morning.

"Well, a little later I went down. My friend pointed out to me two hives, of the 14, from which he wished me to take what surplus honey I might find. The others, he thought, hadn't done anything; and most of them had no supers on, anyway.

"He showed me two sort of a hopper-shaped <ref>beehive</ref>—'The Mother-Hubbard hive'—or something like it—I think he called it. The bee-enclosure was at the small end of the hopper, which stood grandly upon four short legs, and more a conical-shaped hat on top. But that cunningly devised bee-entrance at the extreme lower end of this so-called 'hive' made such a deep impression upon my then very susceptible mind that I have never forgotten it. I am sure my friend was well pleased with both of those two hives—<ref>took</ref> especial pains to explain to me the superior excellence of that particular feature of the hive.

"'You see, Mr. Gehring,' he said, 'that bee-entrance, located as it is, acts as a ventilator to the hive, like a chimney in a house, which resolves all of the moisture in the air that passes through it, as you know. Then, again, that opening is as an automatic dirt-trap—the hive cleans itself, you see, because the dirt and dead bees fall right down thru. Besides all that, Mr. Gehring, you can see for yourself that <ref>honey</ref> can't be very easily get into the hive by way of such a contrivance as that.'

"Well, I opened one of the hives and found quite a <ref>nest</ref> of honey, mostly in small frames inside of a sort of a <ref>beehive</ref>-arrangement on top of the three-cornered brood-frames, and some of it between and above these little frames. The second hive was in the same condition. I called at the kitchen-door and got a large dish-pan, into which I put the honey. The next morning I repeated the experiment for him.

"Then I examined all the other hives for honey, but found none. The dish-pan full was the whole yield from 14 hives!

"'When I carried the honey to the house my friend—who had kept himself out of sight while the honey harvest was on—open the door and met me, as he said. He seemed to be well pleased with his crop of honey, and smilingly inquired how much I got from those four swarms. I told him, and added that I would probably get a hundred more or more from those same swarms before the season ended; and leave them enough each to winter over very nicely.

"I don't know what he thought when I told him that; but I shall never forget his reaction. He <ref>obstructed</ref> the passage to his cellar, and went with me to the kitchen to taste the honey, which we both sampled, and compared the comparative difference between his way of keeping bees and my way of bee-keeping for he sold me his whole outfit before winter for the paltry sum of $15.

"The second case to which I alluded, as I presume you remember, Mr. Bond, happened in this way:

"One of my near neighbors had two colonies of bees in his back-yard—both in box-hives. One Sunday morning word came to me that there was some sort of activity going on the hives and was hanging in a bunch from a limb of an apple-tree in the front yard, and that I could have it by coming after it.

"It was a hot day, and it was a rather poor honey season; but that swarm was filled, and finished nicely, two supers of 28 sections each. One evening I took four of the nicest sections and presented them to my Presbyterian brother, who told me it was a vote of thanks for a good deed. In my case: and that, if he wanted it, I would sell it to him for $10, hive and all.'

(To be continued.)

No. 4.—Drone-Bees and Their Utility.

Can We, and Shall We, Control their Production?

BY C. P. DADANT.

If the reader remembers my previous articles on the subject, he knows that we have plainly shown that there is a decided advantage in decreasing the number of drones in <ref>hives</ref> that are undesirable for breeding purposes, and that the advantage will be derived, in part, from a greater saving of <ref>honey</ref>. The approximate amount of profit to be earned from the prevention of drone-rearing, or from the excess of it, is, however, difficult to establish. By following the method mentioned, of removing drone-comb, and replacing it with <ref>beehive</ref>-cork, we estimate that this large measure the production of the idlers, but increase our chances of a greater production of worker-bees, which, costing no more to rear, will yet help increase the stores in the hive, or the consumption of them.

In the relation of my summer trip to Europe, and of my attendance at the International Bee-Keepers' Congress, I mentioned the discussion that took place on this very question. The matter had perhaps more importance to the bee-keepers of Europe than we could place upon it, because of the very great divergence of opinions expressed over there, by some noted bee-keepers. A French bee-lover, by the name of C. M. Weber, has written a poem on bees, somewhat after the fashion of Dr. Evans. In this work he has asserted that each drone consumes during his life, at least five grams of honey, or in other words, that it takes but a hundred drones to consume, from their birth to their death, over a pound of <ref>honey</ref>. If we take such an assertion seriously, the honey consumption by the drones of a colony would be enormous. This would mean that the drones produced in a square foot of comb could do away with 50 pounds of <ref>honey</ref>. To me it is almost to be considered as an absurdity. Some other men have gone still farther and have endeavored to prove that a drone may consume as much as 11 grams of honey in his life, which would be the equivalent of a pound of sugar. These arguments, however absurd they may appear, have caused considerable comment, and some discussion, and the experiments that were brought to light before the Congress were evidently intended to refute these too-magnified ideas of the utility of removing drones.

A gentleman by the name of Dufour gave notice of quite extensive experiments which he has made on the subject, and reported weighing 10 colonies at different times during the summer. Half of these colonies contained but little drone-comb, and the other half contained drones, while the other five contained many drones, and the total result was a difference in production of 152 pounds of honey in favor of the hives having the least number of drones. The matter had perhaps more importance on a large scale, in matters of this kind, is shown by the fact that out of these 10 colonies two were selected which were apparently of equal strength, to be weighed regularly, and the difference between the two, in the results, was in favor of the one having the most drones, but it was a mere trifle, less than a pound. So we must recognize the wisdom of this
Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, 111.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, many of which will answer them better than these columns can. Please do not ask the Doctor to send answers by mail.—Editors.)

Get a Bee-Book.

For fear some beginner may not have read them, I want to repeat the words of the editor on page 244, that should be emphasized:—

"First get and read a good bee-book thoroughly, then get the bees. Then read your book again. Then you will be ready for a good bee-paper, and, very likely—more bees."  

C. C. MILLER.

A Beginner's Questions.

1. I have a hive offered me. When I receive it what would be the first thing to do to have it in trim for the honey-flow?  
2. I have a hive that about two years ago a colony died in; of what cause I have no idea)—would it be safe to put another swarm in?  
3. The cells are filled with some kind of stuff somewhat resembling a fine sawdust, very filthy, and a few webs, but I cannot find any worms. Is there any way to save them?  
4. Wouldn't it be a good plan to winter two or three colonies, outdoors, in a kind of enclosure made of boards, back, two sides and a roof, with an opening to the south?  
5. When would you put supers on?  

WASHINGTON.

ANSWERS. 1. I am at a loss to know whether you mean a hive or a colony of bees. From your second question I should judge you mean a hive, in which case I should say that probably using more of this is necessary to get the hive is clean. If it is an old hive, it is quite possible that it may need a thorough cleaning out. If you mean a colony of bees, the first thing to be done depends upon the first thing that is needed. That might be a good way of different things, and some of them might be supposed and answers given accordingly, but even then the very one needed might be omitted.

The first thing that is needed more than all else is a thorough familiarity with a good text-book on bee-keeping. If you have only a single copy of such a book it will be well to become familiar with the contents of a text-book. When you have done that, there will be plenty of questions that will come up that may not be fully explained in the text-book, and this department will be ever ready to help out.

2. It will be entirely safe unless there has been foul brood in it. You can find out whether foul brood has been in the neighborhood. If it has not, there can be little risk in the hive. If it has, then you must try to find out whether a diseased colony has been in that hive, and act accordingly. If you use combs upon which a foul-brood colony has died, you may safely count on the appearance of the dread scourge. But the hive itself, with no combs in it, Mr. McEvoy, the foul brood expert, says may be safely used.

3. Very likely what appears like fine sawdust is pollen, and it may have been worked upon by some kind of insect. The webs are likely the work of wax-worms, but the freezing of the comb has destroyed these wax-worms that were present. If these combs are given one or two at a time to a strong colony of bees they will be cleaned up, and if not too badly riddled by the worms will do good service.

4. Such an arrangement is often used with good results. A good way is to watch the first beginning of white wax put by the bees upon the upper part of the combs and at once put on supers when it is seen. Another way is to put then on when you see the first flowers upon the plants from which you expect your honey harvest.

A Beginner's Questions.

Last September I bought some Italian bees in double-walled Langstroth hives, "Langstroth on the Honey-Bee," Cook's "Bee-Keeper's Guide," and the American Bee Journal for one year, which I enjoy very much. My wife says that I have had bees in my bonnet all winter. But I notice that I am not the only reader of the Bee Journal in my home!

May I return to the country and my bees, and there are several things that I would like to know which do not seem to be in the bee books.

1. How can I tell if my colonies are strong?  
2. How often should the hives be inspected? and how often can they be without injury?  
3. Would all the young bees be taken out? (to be out at the same time), and how long left out?  
4. How can I tell if the frames are "well-covered?" and does "frames well covered" mean all the frames in the brood-chamber?  
5. Are particular frames used for brood? and honey?  
6. Do a May queen and nucleus usually yield surplus honey the first year?  
7. Do queens go out for a flight after their wedding-trip?  
8. Is there danger of using too much smoke?  
9. How may I tell if there is a good honey-flow?  
10. How long does it take honey to ripen?  
11. When is the stripping of honey done?  
12. After being stirred, is it the best method of removing the stinger?  

NEW YORK.

ANSWERS.—1. Look at 'em and see. If in April you find combs covered with bees, and brood in them, you may brag that you have a strong colony. If you find only one or two frames covered, it is very weak. If foar, it will come out in good form.

2. That's a tough one. If you mean for the good of the bees, from one to half a dozen times a year may do. If you mean for a cross-pollinating fellow who is just beginning, three times daily except Sundays, I think is no quite rough on the bees. Fortunately, however, they can stand a good deal, and if the hive is only opened when it is once or twice rough for them to fly freely there is perhaps no appreciable harm if they should be opened once every month. At any rate, remembering how crazy-headed I once was myself and how little I have recovered from it in all these years, I'm not the man to put any restrictions on your tinkering with the bees, always providing you do it when warm.
Swarming Management, Etc.

1. I am just a beginner in the bee-business. I hived some 60 swarms last spring, and some eight this spring, and I have my first yet to lose. I always move the swarm. Now what is the difference? See some advocates during the old time.

2. I have my bees on the lowlands of the river, so I have to scaffold up for them, five or six feet off of the ground. Can I set them on the ground during the summer, then raise them in the winter, or on the high water? I have been thinking of putting them on the ground this spring.

CALIFORNIA.

Answers.—1. Putting the swarm on the old stand and moving the old hive is not done for the sake of keeping the swarm from deserting, but to throw the flying force down, making it easier to keep them above high water. I have been thinking of putting them on the ground this spring.

2. I see no reason why it will not work all right to lower the hives during the time it will be safe, and it will certainly be much more convenient not to have them so near the sky when working at them.

Perhaps Bee-Paralysis.

What can be the matter with my bees? The colony most affected has almost perished. The bees craw or are dragged out of the hive and they then crawl off in the grass to die. Some try to fly but fail. Where one lies during the night it is a yard or more long; it is all brood. They have been that way two months. I am feeding them honey. They are in Langstroth hives.

ARKANSAS.

Answer.—From the little of description that is given it is not possible to be certain, but the great probability is that your bees have bee-Paralysis. If that is the trouble, you will find the affected bees have a tremulous motion, are inclined to be black and shiny, and are pulled and dragged about by the other bees. Many cures have been offered, but none of them seem to be reliable. It is possible the disease may disappear of itself, and it is possible it may keep on with its deadly work. Some have confidently claimed a cure by making a diseased colony exchange places with a healthy one. It would do no great harm to try the experiment.

Dividing Colonies.

I have 16 colonies and wish to divide them so as to get the white clover honey. I divided last year and put one-half into each hive, but lost the white clover crop, as they were drawn by the empty hives, or on the honey-flow of foundation that I put in place of the four that I took out. I used the eight-frame dovetail hive. I wish to requeen from two queens that I got last fall. Would I better use the nucleus plan, as I can get that out of the Journal or the "A.B.C."

ILLINOIS.

Answer.—You do well to use the nucleus plan both for rearing your queens and making your increase. That will allow you to keep most of your colonies strong for storing. When you cut a colony right in two, neither half is strong enough to store a frame of honey; but you can from time to time draw a frame or two of brood and bees from a colony that is storing without very seriously interfering. Of course it does make a difference but nothing like the difference it does to take away half the force.

“"The Hum of the Bees" in the Apple-Tree Bloom" is the name of the finest keepers’s song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is sung by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies or more, one new yearly subscription, and the American Bee Journal at $1.00.

The Premiums offered this week are well worth working for. Look at them.
INSECT HONEY ON "CLOUD REST."

As told on page 196, Prof. Cook certainly found scientific "nuts and raisins" on Cloud Rest in the Yosemite—great drops of nectar secreted by pine aphides. And it was doubly beautiful news, as Dr. Gehring who discovered this marvel could hardly believe what the origin of the nectar was. Quite interesting to see that all the party pronounced it of excellent flavor. If some of us should say that bees work on aphide secretion and clever at the same time, and mix the proceeds, and that the mixture pleases every serious soul in all creatures. As to case in hand, the matter is still more complicated. Sometimes the wound is very serious and sometimes it isn't, depending upon the size of the lump of tissue pulled away with the sting. Losing the sting only should not make a bee less than losing her in a fight kills a cow. But if you should jerk off the horns horns in such a way as to carry the whole top off her head away too, she would probably die. Again, stingers are mostly aged (presumably) and aged bees in June have a very short span of life left anyway. Wonder if this fact has not been forgotten in some of the "direct experiments." Page 197.

BEE-KEEPING FOR INVALIDS.

Yes, from one point of view, bee-keeping is hardly the thing for invalids—calls for lively stepping around, long hours, and many other things that bee-keeping is hardly the thing for. For some one successful bee-keeping invalid, like Mrs. Astell, rather extinguishes considerable argument on the other side. And here's a good sentence from Mrs. A., worthy to be printed large on the beginner's banner: "Pay little attention to what your neighbor advises, unless you know him to be a practical apianist." The neighbor wise and gray, who has had "more or less bees around my place all my life," is especially a dangerous snare to the beginner. p. 197.

THOSE TALKS TO BEGINNERS.

Here's compliments to the talks to beginners by Mr. Gehring. They are good. But then, every new dog must expect to be snuffed at and snarled at, and I'll see if I can't find a place where I can snap my teeth together. Ah, here it is: "They give up as soon as they find themselves prisoners—always and everywhere." This is very correct as a general truth; but there are occasional exceptions, that they do sometimes ignore everything else but the consuming passion to find a vulnerable place and put in a sting. The bee under your veil almost always feels intimidated and tries to get out, even the beekeeper's ones have preceded to business. I think this takes in two ways, sometimes by being too infiltrated to notice the plainest evidence of imprisonment, and sometimes by taking a few turns around, sizing up the situation, and then, when the beekeeper has sworn to die in the attempt does best to "strike home" at once. p. 199.

NECTAR-GATHERING MICE.

Our bees, of course, have the other insects and the humming-birds as competitors; but it is news to be informed that there are nectar-gathering mice. (Apologies to the scientists who want them called Marsupials; but the picture says they're mice.) Certainly animate nature is amazingly versatile in its forms. Page 212.

The Afterthought.

The "Old Reliable" seen thru New and Unrealible Glasses.
By E. E. Hasty.

The Home Circle.

Conducted by Prof. A. J. Cook, Claremont, Calif.

ATTRACTION HOMES AND SURROUNDINGS.

The home circle like everything else about us, is wonderfully affected by the surroundings. One might say there are the influence about the kind word and the thoughtful act in the home. I spoke truly of the marvelous influence of the flowers in the home. I think it was Henry Ward Beecher who said, "Show me the books and the bees, and I will tell you who to visit." And the company frequent the same, and I will rightly describe the people of that home. The home is not simply confined to the inside of the walls that domicile us. The immediate surroundings of the house are of equal importance in their influence to refine the character and mould the tastes.

Some years since, the village of Kalamazoo, Mich.—it was larger than a great many cities—gained a wide reputation, not only for being the largest village in the United States, but for being one of the most beautiful towns in the country. It was not that the houses were palatial. Many of these were cottages, and not a few were very humble in their dimensions and architecture. But the thing that attracted everybody, and gave the village its name, was the fact that beautifully kept lawns and lovely flowers, shrubs and trees, usually arranged with the skill of an artist, which adorned nearly every home in that beautiful village. I hardly need say that the people of Kalamazoo were exceptional in refinement, intelligence and enterprize, loneliness like music charmed every one and will certainly attract the best to its near presence. Kalamazoo had its fine public library, its ladies' club which attracted large attention, and its drives and boulevards which were enchanting. People were delighted in spending their summer outings in this lovely spot.

We may not all be so fortunate as to live in Kalamazoo. We may be so unfortunate as to have neighbors who care little for neatness, order, and beauty. We can, of all, most yet our home the pride, not only of those who occupy it, but also the pride of all our neighbors. Even those who are lacking in taste or are too indolent to make the exertion which fine grounds require, often show their appreciation when company comes to visit them. As they walk or drive out, they are very sure to pass by the orderly, well-cared-for places of the town or neighborhood. How many reasons there are why each of us should do all in our power to make our grounds the most lovely and attractive in the neighborhood. Whatever gives us pleasure, we have shown already, will add to health and longevity. Thus we score again for the neat home grounds. We love to have our immediate friends refined and cultured. I wonder if children that are brought up from the earliest years, where everything tells of neatness and order, who never fail to receive something of real refinement. Surely if beauty about the home works such blessedness in its members, we may tally again for home adornment. We know what the Scripture says about the heaven, and how all the moral beauty is transformed. Can any of us have a higher ambition than a wish to plant this heaven that shall tend to make all the homes of our vicinity attractive and beautiful?

I believe I know just why Kalamazoo gained such a wide reputation for its superlative attractiveness. There is no question but that an exceptionally large number of the first settlers of that beautiful little village came from just such homes as we have been trying to describe, and were so attracted to beautiful surroundings that they gave first attention to making their own homes so neat and lovely that others who came to the town even the less enamored of such beautiful things were at once led to follow the good example already set. Soon, it would be said and receivable by any slovenly place was populated to disfigure the view. The plan was to have the village set the example, and thus the whole village became famous through the State and country.

Possibly we bee-keepers stand in special need of some exhortation in this department. In California, especially, the apiary is off in some canyon or on some secluded mesa, and is likely to be seldom visited by any but the bee-keeper and his family. Thus the stimulus which comes from rubbing against the world and from its criticism is wholly lacking, and we are likely to become largely indifferent as regards the appearance.
not only of the apiary but also of the cabin or house in ease we live near the apiary, and all the surroundings. If we do make the apiary our home, and the family shares its pleasures with us, we certainly can not afford to neglect these adornments which will go so far and do so much to make our loved ones posset of a personality which will live through the whole of our lives and delight us and bless the world. Here again we score heavily for home adornment.

There is another reason why we should all look to it that our homes are made as attractive as our means and time will permit. By giving a little more time, we can purchase our flowers, shrubs, vines, and the like, for all that is needed at a slight cost. By giving study to the grounds of others we can learn what are the most beautiful plants and shrubs. This will not only improve our observation but will be a delight in itself. Thus as we come together for ourselves we shall make few, if any, mistakes. By giving a little time each day we can do all that is required, and hardly feel it either in time or labor. We thus keep in touch with all about our home and it soon becomes so much a part of us that it develops within us a love of the place which does so much to sweeten life.

The above is not simply theory with me, for in our own home we have tried to carry out what I have suggested above. California has much to encourage one in this kind of an undertaking. The flowers and plants here are so varied and beautiful that it is a wonder that even the dormant ones will not move to bring them to their own dooryard. The soil here is also so marvelously productive that a single season will suffice to clothe a bare place in the landscape with beauty and verdure that would require years in the more tardy East. Wherever we go, whether in the country or in the city, we are all eagerly watching for vines, flowers or shrubs that are more lovely than those which we already possess. Our excursions are therefore more enjoyable, and we have been able to select the most beauti ful of these flowers and shrubs and place them anywhere. We each of us, then, planned how we would have our walks and drives, where we would put the lawn and where we would put the various plants that might show off to the best effect. We made plans and plans and selected the one which all agreed would serve best for our special place and purpose. We then set out the plants and all have had a part in cultivating the ground, adding the needed water and using the pruning shears. What a bond of interest this forms in the home! What a delightful thing, to think of how it prolongs the meal-time hour. Thus we see that the advantages in all this beautiful work of home adornment reach out in many ways, and pay a tremendous interest on the capital invested.

We are all very fond of grapes and have sought out what we believe are the best, selecting from both foreign and American varieties, and have planted them in two rows about eight feet apart. We have used both gas-pipe and have made arches spanning the drive toward the house. The vines run over this and form a beautiful arbor. This not only affords a shady place to sit and read, and, in the autumn, to eat, but also hides the clothes-line which in the dry climate of California has little need of the sunshine to make its position suitable.

On the north side of our house, similar arbors of English ivy and other beautiful vines form another cozy nook. We have not only thought of shade but of other beautifying shade we plant the exquisite ferns, the charming begonias and the graceful climbing azaleas. These anchor the climbing rose-bushes—wisteria, solanum, tanecus, etc.—away from the house, and give a great deal of color and beauty to our gardens, which are admired by all. Surely, the home circle does not know what it misses if it does not do all it can in this matter of adornment of home grounds.

We have also studied up the matter of fruits, and have added such fruit-trees as we think will contribute most to the comfort and satisfaction of the family. In California, this is a matter of exceeding interest as almost all the fruits known to our country do well here. I remember visiting many apiarists in Michigan who had not lost sight of these matters which engage our attention to-day. I remember very well the home of Dr. Whiting, of East Saginaw, who will be remembered as such an enthusiast in all matters pertaining to the apiary. We remember with what pleasure Dr. Whiting showed us his grapes and his trees, and how proud he seemed to be, as he gave us the beautiful grapes and fruit.

Dr. Whiting enjoyed his bees, I can but believe that he received greater enjoyment from the fruit which graced his own table, and resealed the appetite of his fortunate guests. I have visited many other bee-keepers in many States of the country, and not a few of them had homes that might be the envy of any one. Many, like Dr. Miller, loved the roses and other flowers, and many of them have adorned their homes in a way to offer an object lesson of real value to all passers-by.

I do not believe it is necessary to secure the services of a landscape gardener in carrying out these suggestions. There are very few of us who, if we carefully observe the places of others, especially those that please us and think of the same expense that we are able to make, can not fashion our own grounds in a way to please us and receive the approval of the public. The very study that we shall give to the grounds of our home will be a wholesome pleasure and valuable in the added knowledge which we shall receive. It is also valuable and even more delightful to talk these matters over with those whose beautiful places show that they have taste and appreciation. I have visited almost every place in Southern California. Some of these places, like Montecito and Palos Verdes, are to California what Kalamazoo is to Michigan. With what exquisite delight I look upon and studied the many beautiful places of these cities. How I have enjoyed talking with the owners and finding out the principles which they had used so successfully in adorning their own beautiful grounds. With what especial delight did I take Mrs. Cook to enjoy with me the environs of the second city, and with what eagerness I have wished we could all visit with Mrs. Cook to enjoy together the incomparable beauty of the little suburb of Santa Barbara, known as Montecito.

General Items

FARM WAGON ECONOMY.

The economy of this proposition is not all that is found in the very reasonable price of the wagon itself, but in the fact that the wagon will save, and its great durability. The Electric Wheel Co., who make this Electric Handy Wagon, and the new famous Electric Wheels, have solved the problem of a successful and durable low-wagon at a reasonable price.

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Write for catalog of the full Electric Line to Electric Wheel Co., Farmington, Conn., Ill. Please mention Bee Journal when writing.

Bees in Fair Condition.

I put all my bees out April 29th, and they are only in fair condition, being light in weight and also in bees. I lost 6 thru starvation and others that were brought in were due to not being able to put them into the cellar myself. I had 220 colonies.

EGYPTIAN AND HUNGARIAN BEES.

I have yet to see the first Egyptian bees. Many years ago Mr. J. W. Winder, of Cincinnati, and not very sorry to see in last year's Bee Journal, offered to send me an Egyptian queen the succeeding spring with the pollen of them during the winter which followed. I have had more experience with the Hungarian bees, as I once took care of a colony for an old friend, who has since passed away. I

ITALIAN QUEENS.

Having been 25 years rearing Queens for this Apiary, I have the best known plans, will continue to recommend them.

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Orders for these fine, "long-reach" queens will be filled in rotation—first come, first served;—beginning about June 10th. It is expected that orders can be filled quite promptly, as a large number of nuclei will be run. All queens will be guaranteed to arrive in good condition, and all will be clipping, unless otherwise ordered.

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Buggy Announcement Extraordinary.

The Kalamazoo Carriage and Harness Co. of Kalamazoo, Michigan, have adopted the plan of sending their vehicles anywhere, on 10 days' free trial. They sell direct to consumers at wholesale prices and allow you to take the vehicle from the depot, hitch up to it, try the springs, running qualities, see the trimmings, finish and style before you decide to keep it. No man should "cut the bag, sized unison," They know the quality of their goods and are willing to let them sell themselves. Write for free catalogue on these merits.

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Box 53 Kalamazoo, Michigan.

Weather Unfavorable for Bees.

This is cold weather for bees. Mine came out for a flight April 3d, and those that were alive had a good one. The loss was 12 percent, and if the weather does not change soon I am afraid we shall lose more. There is such a cold wind blowing from the northeast that I am unable to open my hives, but I hope a day will soon come when I can look them over. I know that some of mines are very light, but I am hoping for the best, and I am very much interested in bees. I would like to know what a bee-house is; where it keeps itself; and what the work is that it does in a bee-hive. C. H. Vogt.

Manitou Co., Wis., April 24.

Bees Bringing in Pollen.

Bees came thru the winter nicely, I put them out April 10th, and they brought in pollen an hour after being put on the summer stands. We had heavy frosts April 19th and 29th, the temperature being 21 degrees above zero, but since then the bees have been working lively. They are stronger than usual. I am getting better slowly, but can not do much as yet. I. Threlkell.


Blacks vs. Italians in Brood-Rearing.

I wintered 42 colonies of bees on the summer stands with no protection, and did not lose a colony. I think black bees far ahead of Italians in regard to brood-rearing. C. C. Ream.


Severe Winter Causes Heavy Losses.

My loss so far is 10 out of 25, and I hope the limit has been reached. The weather was so severe all winter that the bees could not reach their stores, so I have been feeding the honey to the survivors. Mrs. C. A. Ball.

Oneida Co., N.Y., April 22.

Bee-Keeping and Bears in Florida.

The secretion of nectar from flowers in this locality has been rather poor so far this season. There have been cool winds and heavy falls of rain. Fruit trees have bloomed profusely, and are now thru with the exception of Burbank plums, which are now opening. The plum season is very early this year, and has been for several weeks, and is a great favorite with bees.

There is an apiary located at the mouth of
the Cheetahtchawke River, near a swamp 15 miles across. The damp, rich soil produces many honey-yielding plants, and it furnish enough secure retreat for bees: one visited the apiary, and ate and destroyed 15 colonies. On an arm of St. Andrews Bay, where an apiary is located, bear destroyed several stanchies, but was shot, and much meed secured and a fine pet.

R. A. HEXT.

Fillmore Co., Minn., April 16.

Last Year an Average One.

My bees wintered well. Last fall I put 54 colonies into the cellar, and last week took out that number in fine shape. Last year the bees have wintered out, as I got about 1,800 pounds of honey.

J. F. ROWLEE.

Osweego Co., N. Y., April 23.

Bees Building Up Nicely.

Bees are building up nicely, and are swarming, but not storing very much honey than they consume. I expect the honey will be from the second cutting of alfalfa, which will be in May.

I appreciate the American Bee Journal very much.

Mrs. A. BOWEN.

Meredic Co., Calif. April 16.

Gathering Pollen and Honey.

We have had a very backward, cold spring, but the bees have wintered well, and it is nice weather now. They are bringing in pollen and some honey from the woods. I have lost colonies. They are very irregular. Some hives, sparsely placed, are good. Clover wintered splendidly, both white and aliskc. DANIEL STUART.

Ontario, Canada. April 27.

Bees Gathering Honey.

My bees wintered tthrop, and are bringing in lots of honey to-day. The American Bee Journal is all right.

GILBERT BROWN.

Fulton Co., N. Y., April 27.

Wintered With Small Loss.

The bees have come thru the winter in good shape, mainly due to the cool weather of 60. It is snowing here to-day, and the temperature is 36 degrees above zero.

FRED HUTCHINSON.

Livingston Co., N. Y., April 19.

Bees in Eastern Pennsylvania.

I am starting in the bee-business in a locality which I suppose is about the poorest in the state. My bees are kept in large quantities by almost every farmer in the neighborhood—from one to five colonies—in the old-fashioned box. All of them are kept for the little surplus honey, only from 5 to 15 pounds from their best colonies. I know of some that the hives have not gotten up until the third year in succession. Bee-plants are very scarce around here, except that of fruit-bloom and white clover, which, however, are quite plentiful. Almost every foot of soil is cultivated, and all weeds and wild flowers along the fencelines and road sides are cut down. There is no buckwheat raised here any more, which used to produce large quantities of honey. We need the bees longingly, as the crops are very badly in this part of the country, as there are hundreds of acres of red clover around here, where barley or hay would do to good advantage.

I bought several colonies of black bees last spring at $1.00 per colony, and expect to transfer some of them into developed hives, and later on supply them with Italian queens.

F. M. MAYBERRY.

Montgomery Co., Pa., April 18.

Tennessee Queens!

Fine lot of Choice Tested Queens ready for sale, daughters of select imported and select golden queens, reared 100% from pure bees, and mated to selected drones, $1.50 each. Aided warranty. Queens, from same breeders, either strain, 75 cts. each. No bees owned more than 25 miles. None impairs within 3, and but few of these 5 miles. 25 years' experience. Discount on large orders. Contracts with dealers a specialty.

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AMERICAN BEE JOURNAL

Quilts or No Quilts.

At the Ontario convention, reported in the Canadian Bee Journal, 18 were in favor of quilts and 12 opposed.

Sugar for Feeding

It is good in the fall, perhaps better than honey; but for spring, honey is away ahead, says A. Alberti in Deutsche H. B. Ttag. The sugar needs a digestion that the honey does not, and in the fall and early winter this little matter because the food is taken in such small portions that when breaking down in late spring or winter, then it is consumed in larger quantities, and so many more sugar overburdens.

Hoffman Frames.

These have been strongly championed by Editor Root, but he now admits that there are localities in which propolis is so bad that Hoffman Frames are impracticable.

A Plan of Producing Comb Honey.

Here is a matter for you to try in your apiaries. It is the system to be used with shallows, discharging brood-chamber thru the spring. Manage so as to have the brood as much as possible in one cell. The chambers for feeding the brood nest in the upper one, and spread it and manipulate as much of the full of brood. The success does not depend on this getting the one set of combs solid full of brood, tho to obtain best results it will pay to do so. With this system there is so much room you keep down the swarming fever, and I think the room to spread, especially downward, gives a greater vigor of work than a crowded hive.

Ten days before the flow begins, put the queen in the lower chamber with a little brood—one comb with any amount of brood will be plenty; an excluder on this, and the rest of the brood on top. At the beginning of the flow when the flow is just starting, take to a new stand the lower hive with the queen, and put the brood chamber on the new stand with nothing but its sealed brood and no queen, but give a virgin queen or ripe protected cell, or wait two or three days and give a queen for cell. Give only a cell or a virgin queen, because the brood is all sealed that is left on the old small; and while the virgin is mating and getting ready to lay, the brood is hatch- ing; so when she does begin laying, the last of the brood is about ready to emerge, and your colony is just in the condition of a colony that has swarmed naturally, and their young queen just ready to lay, except that you have kept the strength of the colony on the old stand, and have been getting section work. As the brood hatch, the brood-cells are filled with honey; but as that young queen begins to lay, that honey goes up to the sections out of her way, and you have no swarming, either.

This system anticipates quite a contracted brood-chamber left on the old stand, which would be the result with one section of a discharging brood-chamber, hence there would not be an great amount of honey. You can do it during the time the queen was not laying. To make the best test with the eight-frame hives, I suggest that you use six to the box, using a dummy at each side; thus you have a twelve-frame hive before the separation at the start of the flow, and way up the strength. The whole plan contemplates a big hive up till the flow, then a very small one on the old stand, and yet all swarming effectually control, with the force of feeders right where they
AMERICAN BEE JOURNAL

May 9, 191.

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Award to the Wise Bee-Keeper

Is the title of an essay on queen-rearing. Sent free to all applicants.

H. D. HENRY ALLEYt Lenham, Mass.

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Spraying Trees in Bloom.

I have already reported that the Experiment Station at Geneva, N. Y., counseled against spraying trees while in bloom; that it may kill the blossoms. But I have also been counseled that the delicate organs of the flowers; that in some cases those who had been most active in urging spraying during blossoming-time had to suffer the sorrow that such spraying had seriously cut down their fruit crops. While these experiments were being conducted and in that vicinity, the same kind of experiments were being carried on at Cornell Uni-
versity, N.Y.; and now we have a report from John Craig, of Cornell station, concerning the findings of the General station. This report is published in the American Gardening for April 9th.

It has been urged by the advocates of spraying in bloom, that during seasons like that of 1890, when the trees are heavily loaded with blossoms, the spraying has a much smaller chance of the reaching away the superabundance of fruit. Regarding this, Mr. Craig very peremptorily says:

"It seems that, when this admission is made, the strength of the argument is very much weakened, for if the spraying process, when carried on correctly, can be practiced with safety and advantage only in seasons of heavy bloom," Elsewhere he states that spraying was injurious to tender tissues; and that, the more delicate the structure the more likely is injury to ensue. The spraying process follows spraying trees in bloom is probably due to the injury to the pistils or stigmatic surface by the spraying insect.

Mr. Craig then mentioned another objection to spraying in bloom viz., the destruction of the bees; and then, in giving a reason why such destruction should not take place, he says:

"When cross-pollination is carried on by the bees, the fruit will be more secure; self-pollination occurs. Now, if we cover our apple-blossoms with mixtures which are likely to prevent the bees in the blossoms, then, I think that we shall be using against ourselves a double-edged weapon."

When it is remembered that these experimental stations are at the Geneva and Cornell stations at the instruction of the fruit-men, who are anxious to prove that spraying during blooming-time was an advantage, the results, being just the reverse of what was expected, are all the more valuable. —Editorial in Gleanings in Bee Culture.

CONVENTION NOTICES.

Illinois.—The spring meeting of the eastern division of the Northern Illinois Bee-Keepers Association will be held at the residence of R. Kendall, 141 miles southeast of Rockford, Ill., on Rural Route No. 5, and 3 miles northeast of New Milford, Ill., Tuesday, May 21, 1901. All interested in bees are cordially invited to attend. B. Kennedy, Sec.

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Honey & Beewax

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Honey & Beewax

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In the title of an illustrated booklet just issued by the Chicago, Milwaukee & St. Paul Railway, descriptive of the country between Chicago and St. Paul, the reader will find an account of the Upper Mississippi River, a section heretofore unprovided with railway facilities, but which is now reach by a new line of the Chicago, Milwaukee & St. Paul Railway. A contemplation of a change of location will be interested in the information contained in it, and a copy may be had by sending a 2-cent stamp to P. A. Miller, General Passenger Agent, Chicago, Ill. 19A3t

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We have a Large Stock on hand and can ship promptly.

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WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundations are ahead of everything, and cost no more than other makes. Our new Catalog and copy of The American Bee-Keeper free. Address,

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JAMESTOWN, N. Y.

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And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

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<td>Sweet Clover (white)</td>
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<td>Japanese Blackseed</td>
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AT HOME by my thorough method of training. With my complete control I guarantee to train and cultivate your voice or refund your money. The best musical knowledge gained especially for home study. Its Highest Endorsement. Beautiful Acoustic harmonium. Address Prof. G. R. Waite, Kalamazoo, Mich.

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We guarantee satisfaction. ** Why does it sell so well? **

What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

BEE-KEEPERS’ SUPPLIES OF ALL KINDS.

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

LANGSTROTH on the HONEY-BEE—Revised

The classic in Bee-Culture—Price, $1.25, by mail.

Beeswax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

$15.00 and $25.00 Queens

Having a Measured Tongue Reach.

The call for queens of our celebrated $200 imported mother has been so great that we have decided, in addition to the $2.00, $4.00, and $6.00 grades of this stock, to offer some $10.00, $15.00, and even $25.00 of this same blood. But these prices are for tested queens, the tongues of whose bees have been measured.

The $10.00 queen is guaranteed to produce bees with a tongue-measurement of 19–100.

The $15.00 queen, 20–100.

The $25.00 queen, 21–100.

These last are very rare and with one exception this (21–100) is the longest tongue reach yet secured. We reserve the right, when we do not have the stock with the tongue reach called for, to either return the money or to send the next lower, remitting the balance. It would be well for our friends to put in their orders at once, and as soon as we get the grades we will send notice. When the money is sent, the queens will be forwarded. These will be put up in the very best manner possible; and while we guarantee safe arrival in good order to any point in the United States, on any railway line, we will not guarantee safe introduction. Such valuable queens should be reared on hatching brood.

N. B.—It seems as if it ought not to be necessary to say that no one but a queen-breeder or a large honey-producer should order these high-priced queens; but it is a fact according to our experience that beginners with only a few colonies will order our highest priced imported queens. Such beekeepers have no more use for such queens than a pig has for a wheel-barrow.

THE A. I. ROOT CO., Medina, Ohio.

GEORGE W. YORK & CO. 144 & 146 Erie Street, CHICAGO, ILL. are headquarters for ROOT’S BEE-KEEPERS’ SUPPLIES IN CHICAGO. Send them for their free Catalog.
MR. JESSE M. DONALDSON AND HIS APIARY.
(See page 312.)
Weekly Budget.

REV. E. T. ABBOTT will soon lecture at the high school in St. Joseph, Mo., on bees and bee-keeping. He knows how to do it in an interesting and profitable manner.

MR. O. O. POPPLETON, of Dade City, Fla., writing us May 1st, said:

"This season in this locality the honey-flow will be an almost absolute failure, because of lack of saw pines to pollinate, but there is plenty of bloom farther up the coast."

Mr. Daniel Danielson, one of the prominent bee-keepers of Turner Co., South Dakota, gave us a call recently. He had been in a Chicago hospital for awhile, and was about to return to his home and farm, where he looks after the bees, not being able to do heavy farm work any more.

Mr. M. L. Treaster, of Nebraska, called on us May 3d. He is not now engaged in bee-keeping, and has not been for years. At one time he was secretary of the Nebraska State Bee-Keepers’ Association. Nearly 30 years ago he had a super-abundance of foul brood. It is an interesting story, as he tells it, though one that he would not like to experience again.

Messrs. Bartlett Bros. & Merrick, last year, in one apiary in Utah, from 100 colonies and their respective Trombley colonies of 25,000, got:

No. 1, white extracted honey 27½ tons, or a shade more than 343 pounds per colony, spring count—cleanings in Bee-Culture. It is no great thing to get 343 pounds of extracted honey from one colony—that has often been beaten. To get that amount from each of 25 Trombley colonies would be remarkable; from 199, spring count, in one apiary—it is stupendous!

Mr. Wm. M. Whitney, of Kankakee Co., Ill., wrote us April 24th as follows:

FRIEND YORK,—I am trying to get caught up on my reading matter, which accumulated during my long absence, and I spend much of my leisure time with the "Old Reliable." While I expected to attend all the sessions of the National Association in Chicago, on account of ill health I was there at the opening session only. I have been very much interested in the report of the proceedings.

On many questions discussed, it is plain, I think, that difference in locality, with different climatic conditions, differences in trading conditions, etc., make all the difference in the world in conclusions—change places and circumstances, and opinions reverse as quickly.

I think you are entirely right in the matter of labeling your honey. If any producer desires to do retail business, why, it would be all right to label his packages; but it would be presumptuous in me, to wholesale to you, and expect you to label to the retail trade or consumer.

I am with the majority respecting the second-hand tin cans. Of the few I purchased two years ago, three were used—two spoiled my honey, and the other was used for refusal dignities. The third has never been taken from the cases. They were so rusty, and smelt so badly, I dared not use them for anything. But I paid 3½ cents per pound, and took out the price paid, and sold for waste honey.

I had heard nothing of your removal till the day I concluded on you at your present location; nor did I realize the extent of your misfortune till I read the account in the Bee Journal. You certainly have the sympathy of all your patrons, and it is hoped that what seems a misfortune may prove a blessing in disguise. Your present location is certainly much more convenient than the other. I am just lucky enough at my age (73) to prefer riding four or five blocks on street-cars, to climbing two or three flights of stairs, when I wish to find you.

I hope you have not sustained a serious loss. Truly yours,

WM. M. WHITNEY.

The loss on the stock of bee-keepers’ supplies was much larger than we anticipated at the time we settled with the insurance company. We should have paid at least twice the amount received.

As you say, we believe our patrons will help us out by giving us all the trade they can, and especially try to help us extend the circulation of the old American Bee Journal. For all of which we will be truly grateful, and do our best to give them good value in return.

"BEE-KEEPING BY AN AMATEUR" is the heading of an article in the Bee-Keepers’ Review, accompanied by a fine picture of the apiary of the "amateur," Peter N. Duff, of Cook Co., Ill. Beginning less than two years ago, he now has 52 colonies—a pretty good outfit for one who calls himself an amateur. He wintered his bees in a repository above ground at a place generally considered bad, but as he succeeded in keeping the temperature between 40 and 48 degrees, he must be excused for successfully wintering. A small oil-heater, with chimney to carry off gases, raised the temperature when too low. Success to the genial Mr. Duff.

Mr. GEO. THOMPSON, of Geneva, Ill., we regret very much to learn, died April 14th. He was one of the oldest bee-keepers in northern Illinois, and a very staunch friend of the American Bee Journal and its editor. We feel that his departure is indeed a personal loss, and our sympathy is extended to Mrs. Thompson and the bereft family. We understand she has a number of complete volumes of the American Bee Journal, which she, of course, has no use for, and would like to sell. Any of our readers desiring such volumes would do well to write Mrs. Thompson.

That story about Bee-Trackers in Texas who make a living by marking a single bee as it leaves its hive, then following it mounted on a bronco without ever losing sight of it till it alights on a particular flower, and thus the kind of honey is tracked for exact place—the bee-trackers generally each have a hand Queen with the remark that in that part of Texas it isn’t the men that track the bees, but the bees that track the men! No doubt the men often “make tracks,” and that in rapid succession, too.

Mr. CHAS. KOEPFEN reports in the Bee-Keepers’ Review for this month. Without any help, he took 14,000 pounds of comb honey from six apiaries. Unfortunately the size of the apiaries is not given, nor the yield per colony. If he had 120 colonies averaging 117 pounds each, he must have had little time to waste. If he had 280 colonies averaging 50 pounds each, he must have done some remarkably lively stepping around.

American Bee Journal.

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EDITORIAL STAFF.

GEORGE W. YORK, Editor-in-Chief.

DR. C. C. MILLER, E. E. HARRITY, DEPARTMENT EDITORS

F. A. J. COOK, PM.

IMPORTANT NOTICES.

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The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec. 1st" on your label shows that it is paid to the end of December, 1901.

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National Bee-Keepers’ Association.

OBJECTS: To promote and protect the interests of its members. To prevent the adulteration of honey. To promote dishonest honey-dealers.

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MEMBERSHIP DUES, $1.00 a year.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

NOTE.—One reader writes:

"I have every reason to believe that it would be a very good idea for every bee-keeper to wear one (of the buttons) as it will cause people to ask questions about the busy bee, and many a conversation will start which will end in the sale of more or less honey: at any rate it would give one a chance to give theospel publicity to enlighten many a person in regard to honey and bees."

The picture shown here-with is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside for holding in place.

Price, by mail, 6 cents; two for 10 cents; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

May 16, 1900.
Heavy Rains in California—the last week in April gave almost positive assurance of large crops. It seems that the rains were quite general over the State, and particularly in the central and southern parts. Mr. W. A. Pryal, of Alhambra Co., has kindly sent us clippings from local daily newspapers which speak almost gleefully over the hopeful prospects for farmers of the State. This, of course, means much for the bee-keepers as well.

But what if old California should come up to her old-time record as a honey-producing State this year? And if all the rest of the country should also have a large honey crop, this whole nation ought to be well sweetened.

And yet, unless there is a proper distribution of the crop of honey, there will be glutted markets and losing prices. There ought to be something done to handle the crop in a manner that will realize to the producers fair and just prices for their honey product. And now is the time to think about this subject—before the crop is ready to market, and not afterward, when it is too late.

Buckwheat Comb Honey, according to Henry Segelken, of Hildreth & Segelken, in Gleanings in Bee-Culture, is in so much greater demand than extracted buckwheat that it would be well for producers to change from extracted to comb.

Queen Rearing is discussed by L. Stachniel in a very able article in Die Deutsche Bienenzucht. His manner of securing the work of queenless bees seems especially commendable. On one of his strongest colonies (several such colonies may be used) he places an excluder, and over this a hive-body in which he puts four or five frames of brood from other colonies, filling up with empty combs. In eight or nine days nearly all the brood in this upper story will be sealed, and a large number of young bees will have emerged. At this time, in the afternoon, he takes out one of the broodless combs, and moves the frames in this upper story so that a vacant space shall be left in the center, in which a frame afterward be hung. This upper story is then moved bodily to a new stand. So large a proportion of the bees being young, few will return to the old stand, and in the evening they will show full signs of queenlessness, when the frame with prepared cells is carefully pushed down into the vacant space with full expectation that prompt work will be started to rear queens, and that they will soon be under way the next morning. This hive, with its contents, can now be returned and placed over the excluder from which it was taken, when the cells will continue to completion.

Editor Pender, of the Australian Bee-Keeper, makes a practical point by saying that when he takes the frame of prepared cells from the queenless bees (which he says need only two hours to give the cells a good start) he makes sure to take with the frame all the adhering bees, and puts this frame in an upper story over an excluder, between two frames of young brood placed there at least a day before. He says:

I do not disturb the bees on the cappings any more than I can help when carrying them to the upper story. I want the work to go on without any check. If I had removed those bees hanging on the frame and put the frame into the super without any bees, it would be some time before the hive in hive 2 would find the started cells, because the hive is not over-crowded, but by taking the clinging bees, too, the building of the cells goes on as if the chance had not been made, and the bees in the super soon assist in making the cells perfect.

Time for Development of a Queen.—In the Australian Bee-Bulletin Mr. Doolittle is credited with saying that from the laying of the egg to emerging from the cell the queen requires 15 days. It is doubtful that Mr. Doolittle would be willing to father that statement, altho there is some good authority for it. In the past 40 years there has been a material shortening of the time taught. In the first volume of this journal, in the year 1861, between 17 and 18 days was given as the right time. At the present day, some say 15, some 16. The 17 to 18 days formerly taught was probably true for a weak nucleus, and 15 may be the normal time for a strong colony.

Shipping Drone-Eggs by Mail.—One difficulty in the way of rearing queens early at the North is that early drones can not be secured. “Swarthmore,” in the Rocky Mountain Bee Journal, tells how he has overcome this difficulty. By way of caution it may be said that even if drones were plenty it remains to be proven that good queens can be reared ahead of their usual time. “Swarthmore” says in part:

Last season I was prompted to do some experimenting with drone-eggs, sent to me from many distant points by post, and the result was so highly satisfactory that I cannot but give the long-suffering Northerner the benefit of these experiments.

A number of tubes of fresh-laid drone-eggs, in dry comb, were forwarded to me by mail nicely packed in tissue paper and enclosed in 4½ x 4½ section-boxes. Immediately on receipt of these bits of drone-comb they were fitted into frames and placed in the center of the brood-nest of a strong colony previously made queenless for the occasion.

Very few of these eggs were removed by the bees, and the number of dissolvements in transit was hardly worth mentioning.

The queenless bees readily accepted these drone-eggs, and each and every one will be properly cared for, reared and sent forth in handsome, healthy, flying drones long before any other colony in the yard has given a thought to drones or the need of them.

Thus the Northern breeder may gain from six to eight weeks' time in getting under way with his breeding operations for the season, and as soon as the traffic is well understood by oildraper and receiver. I warrant bees will wonder why they did not do the simple thing many years ago.

Must Bait Sections be Cleaned in the fall by the bee ? A discussion in one of the foreign bee journals as to whether it was best to put away extracting-combs in the fall without first having them licked out by the bees showed a division of opinion and practice. The claim was made that if the combs were left wet there was danger that the small quantity of comb left would sour. On the other hand, it was urged that giving back the combs in the fall was likely to induce robbing, and that worms were not likely to trouble the wet combs so much as the dry ones. Strangely enough, little or nothing was said about the chief objection urged in this country—the effect of the granules of honey inducing granulation in the fresh honey stored in the cells.

It has been held that the need for fall cleaning by the bees was more urgent in the case of sections than extracting-combs. But G. M. Doolittle comes forward in Gleanings in Bee-Culture and stoutly asserts that it is all a mistake to suppose that honey left in bait-combs will granulate any quicker than it would have done if the sections had been full. He claims as good results by using baits that have not been cleaned out by the bees in the fall. Several others have reported, some on one side and some on the other. So far from agreeing with Mr. Doolittle, Mrs. A. J. Barber reports that even when cleaned out by the bees, bait-sections are very slow in being sealed. Others say that bait-sections when properly cleaned out in the fall by the bees and used the following summer are the first to be sealed. A call for more reports is made, and the end is not yet.

“The Way from the Cappings of a ton of honey I find to be about 35 pounds when all completely capped, about 30 pounds.” So says R. Beume, in the Australian Bee-Bulletin.
CONVENTION PROCEEDINGS.

Report of the Utah Bee-Keeper's Convention.

The Utah Bee-Keeper's Association held a convention April 5, 1901. The meeting was called to order by Tres. Lovesy promptly at 10 o'clock, a.m. Secretary J. B. Fagg called the roll and read the minutes of the previous meeting.

A letter was read by County Vice-president C. C. Hartlett, of Uintah County, regrettting his inability to attend. He reported the bee-industry in Uintah County in a satisfactory condition; also that there were 50 or more bee-keepers in the county, and about 20,000 hives. Similar reports were made from County Vice-presidents A. N. Winson, of Washington County, W. J. F. McAllister, of Kanab County, and P. M. Grigg, of Wayne County.

Mr. Roberts, one of our old-time bee-keepers, and who was one of the first to introduce bees into Utah, gave some of his early experiences in hauling bees many hundred miles on wagons from California. He also spoke on the introduction of the movable frame, on organization among bee-keepers, and on the medicinal qualities of honey.

THE PRESIDENT'S ADDRESS.

I have received fair to flattering reports from nearly all parts of the State during the past 10 to 15 days. The reports from some of the central and southern parts, especially, have been universally encouraging in the prospects for the coming season. I find, as a rule, that the snowfall has been abundant, and it has been more evenly distributed over the State than in other years. Thus insuring a fair amount of irrigation water, and so the chances for success are fairly good where the bees are in good condition. But while the many hopeful letters I have received give an encouraging outlook, still the bright picture may have a dark side to it. While the winter has been very much above the average in some localities, still a more serious condition exists in at least one or more counties. I find that there is a great deal of disease among the bees in some places. I have tried to urge a more persistent effort on the part of our bee-keepers to eradicate this disease, resting that a few minutes spent in prevention are worth a month trying to cure. And one of the many reasons for publishing our expected treatise is that it will benefit our bee-keepers and bee-inspectors by putting into the hands of every bee-keeper simple and effective remedies for the benefit of himself and the industry. Our bee-keepers can and should take a new pace in the new century by helping themselves and aiding the Association in its laudable efforts.

There are other things which we as bee-keepers could improve on to our own benefit and advantage, and one of these is organization. We need no prophet to tell us that our only salvation depends upon a strong union of interest by proper organization. We find that the trades, laborers, farmers, etc., are organizing for mutual benefit, and why should not the bee-keepers? They should organize for the purchase of supplies and also for the disposal of their products.

Some many obstacles can be overcome by timely and proper management, still our brightest prospects do not always turn out a shining success, and if we attempt to count our profits by the prospects, we sometimes reap disappointments. I find the greatest interest in this State still an unsolved problem; while with proper care the bees can be wintered successfully in most parts, in some places success seems to be almost impossible.

Would it not be well to consider the question of our Association making an exhibit at our State fair, or the one at Buffalo, and also the World's Fair to be held in St. Louis two years hence? We certainly should be represented there. I would be pleased to have our bee-keepers throw additional light and information on these matters, or any other one in the interest of the industry, not forgetting the treatise which I wish to publish as soon as possible.

E. S. LOVEY.

Vice-President J. Hansen, of Boxelder County, reported the industry in his local and southern parts, of the same county, reported quite a loss of bees in wintering in his portion of the county, and J. L. P. Johnson, also of Boxelder County, wrote that as a rule conditions were favorable, but that there was some foul brood.

County Vice-Presidents Geo. Hone, of Utah County, A. F. Stevenson, of Davis County, C. O. Falkman, of Weber County, Thos. Belliston, of Juab County, and Ulrich Braymer of Carbon County, reported their respective counties in fairly good condition. A number of letters were read from the secretary from county vice-presidents, inspectors, and others, and while most of the reports were encouraging, some spoke of loss by disease.

Inspector Anderson, of Cache County, said they had some disease, and that the county commissioners desired him to do all in his power to eradicate it. Mr. Scott reported much disease in some localities, and Mr. Dart exhibited samples of diseased food, and other interesting articles from Fort Worth, Tex., after which a long discussion ensued as to the cause and effect of disease, the best treatment to prevent, cure, etc. The McEvoy treatment, with some modifications, was recommended. Our bee-keepers are waking up, and with the aid of our treatise, our county inspectors, we hope soon to banish it from the State.

A resolution was offered favoring the publication of a treatise or pamphlet by the Association, the object of which is to give the best and quickest method of fighting and preventing disease among the bees; and also how best to protect them against their enemies. Also, that the State law, the relation of bees to fruit, seed, plants, etc., be published in connection with it. After a long discussion which was participated in by many, the resolution was unanimously passed, and Pres. Lovesy, Secretary Fagg, and Messrs. Thos. Belliston, L. J. Whitney, and F. S. Dart, were appointed a committee to compile and publish the treatise.

Stronger organization among bee-keepers was discussed at length, with no definite results. A resolution was presented and passed, urging the bee-keepers to aid the Association in making an exhibit at the State Fair in October, and also in Utah and St. Louis. Many reports were given, coming from honey-consumers in the East, praising the superiority of Utah honey.

The election of officers resulted as follows: President, E. S. Lovesy; 1st Vice-President, R. T. Rhino; 2d Vice-President, Wm. Warham; and Secretary and Treasurer, J. B. Fagg; Assistant Secretary, C. R. Matson. County vice-presidents, Salt Lake, Wm. A. Bills; Utah, George Hone; Washington, A. G. Stevenson; Juab, J. Hansen; Weber, C. O. Falkman; Juab, Thos. Belliston; Utah, A. N. Winson; Tooele, Ben Barrows; Cache, Henry Bullock; Morgan, T. R. G. Welch; Uintah, C. C. Bartlett; Emery, Chris Wilcox; Wayne, P. M. Grigg; Carbon, Ulrich Braymer; Sevier, R. A. Lowe; Kane, W. J. F. McAlister.

AFTERTWO SESSION, 2 P.M.

The next question considered was the purchase of supplies and the disposal of bee-products. It was stated that nearly all supplies except sections can be purchased in the home market; the only supply that has to be sent out for is material for the hives. Howard, it was decided to try to keep all bee-keepers informed as to prices, from time to time. The question of grading was discussed at length, and it was shown that a few dealers prefer the raw honey to the cut, and that it is cheaper. Still there is a good demand for the best, regardless of the difference in the price.

Mr. Scott urged bee-keepers to be careful in grading their comb honey, because a few partially filled or un capped comb would not only materially reduce the price of the honey, but it would injure the reputation of the bee-keepers. Mr. Hone stated that, as a rule, the greater portion of the bee-keepers of Utah had a good reputation for fair dealing, but in order to protect their products in many cases they ought to stamp their names on each case.

QUESTION BOX.

Ques.—Is dividing preferable to swarming?

Mr. Hone preferred dividing because he had better success than with swarming. Mr. Whitney obtained very good results by forced swarming. Mr. Lovesy preferred dividing, as the bees are more gentle, the colonies more easily regulated, and better results can be obtained.

Ques.—What style of hive is preferred?

Mr. Fagg.—The 10-frame Langstroth for all practical purposes, both for our own and contracted hives.

Ques.—Does spraying during fruit-bloom kill the bees?

It was proven that it did, and also that it was an injury and no benefit to the fruit-grower.

Ques.—Is queen-stamping necessary?

It was decided that it is.

Mr. Dart.—I put new burraps between the hive and super, with some chaff in it; this keeps the bees dry, and I have no trouble.

J. B. PAGO, Sec.
Contributed Articles.

Bees Dying in the Hives—One of the Causes.

BY C. P. DADANT.

I SEE an inquiry on page 201, concerning the cause of the great and almost total loss of bees and the recorded hives in one apiary, the bee-keepers being at a loss to decide to the bee-losses in this vicinity during the winter of 1879-80, and I will ask leave to describe it.

The season of 1879 was very dry. During the summer and fall the bees harvested nothing. But fruits were plentiful and so were brier and raspberries. This season on all sorts of damaged fruit. They began on damaged peaches, in August, then to grapes, and later to apples. The number of bees found in small vineyards was so great that the win ters held meetings in which they discussed the advisibility of petitioning the Legislature to obtain a law forbidding the keeping of more than 20 colonies of bees in one apiary. Wherever a damaged berry was found it was full of bees and most of the grape-growers were of the opinion that it was the bees that punctured the fruit. Arguments were out of question until the heads became cooler, and it was at that time that we decided to plant grapes on a large scale in order to show our neighbors that grapes and bees long kept profitably on the same farm, in large numbers and without mutual injury. The damage in this case was really greater on the bees than on the fruit, which had of itself no value for any one, and that with such water, unhealthy food, they became unable to do anything. This unwholesome sweet (?) fermented in the hive and became inferior wine, cider, vinegar—yes, mainly vinegar. But there was nothing else for them except an occasional sorgl to pass through this disastrous winter, prospered and thrived when warm days came, on the plunder that they obtained from deserted hives, for the stuff seemed to be scattered in small patches in many of the combs, of the most of it being unsealed, as might be expected.

The most damaging result of this reduced food is certainly brought about by the confinement of the bees during cold weather. In an open winter, when the bees can have a flight once a week, I believe much less trouble would ensue, but when the bees are long confined on the comb, with such water, unhealthy food, they become unable to retain their excreta and the healthy bees catch the infection from the diseased ones. The after result of this trouble in spring is, sometimes, constipation or an indication of undernourishment. This is caused by the failure in the spring to carry on their food in a more warm. But in most instances the disease slowly disappears or wears out. I have, however, seen it persist through the summer in a few hives and the diseased bees kept themselves alive by varying the amount of food that they were carried out by their merciless sisters, for the bee is pitiless to the useless member of the family, and sickness finds no sympathy with her.

I cannot help thinking that the case mentioned on page 201 is identical with what I have described. The fruit-juce stores, the sickly bees dying in small clusters, the stench in the hives, and the protracted cold weather, all lead to the conclusion of the cause. This has become a more and more common winter cause. By the time this article appears in print, there may be left of that apiary which will probably be in much better condition, as the spring blossoms are a sovereign remedy for Winter's ill-doings.

Hancock Co., Ill.

Numbering Hives and Keeping a Record.

BY C. DAVENPORT.

There are some who do not consider it necessary to have hives numbered, but to me it would seem almost impossible to handle a large number of colonies unless the hives were all numbered or distinguished by a letter or number. This is true of all kinds of operations. Hives are also numbered, and to have both hives and rows numbered saves a large amount of work, for, as will be explained, it enables me easily to keep track of each colony and the entire assemblage of colonies. It is of nearly as much importance, I can find or tell where any colony is without searching over the entire yard.

Instead of using a record-book I use smooth pieces of thin blotting paper, which I cross with boards 16 inches long. I much prefer these boards to a book or paper of any kind for all transient records, as they are a great deal harder. For permanent records a book is, of course, preferable. With my system it requires about three of the record-boards for a 100 colonies. In the case of 100 colonies, but each board can be used for a number of seasons, for at the end of the season, if there is anything on them which is to be preserved, it can be transferred to a book, and the writing on the boards planned off, when they are ready for use again the next season.

After the bees are put out in the spring, the condition of each colony is set down on one of these boards. A board is marked off into as many rows as there are rows of hives in the yard, and if, for instance, the colony in hive No. 8 in row 5 is weak in bees and short of stores, it is marked off on the board under row five thus: 8—M—W—B.

The letter M after the number of the hive shows that this hive is the middle colony, the B, that it has but one colony. If I have the rows run east and west, and if I have been nearer the east end of the row than the middle, the first letter would have been E instead of M; or W if nearer the west end.

The first letter after the number always tells where in the row the colony is, and this saves a good deal of walking where there are 25 or more colonies in each row.

The next letter in the record is W, which shows that the colony is weak. Next is the letter B, showing that they are short of stores. If they had had plenty of stores the last letter would have been A instead of B; and if they had been so short that it would be necessary to feed within two or three days, the last letter would have been C.

To explain my system further I will say that under some row we find this record: 98—E—W—A X. This says that the colony in hive No. 98 is at the east end of that row, and is weak in bees, and maybe they can use, so we can draw a frame of stores, and the record for that colony will be No. 8, whose record will now read thus: 8—M—W—B—A. The letter B being crossed shows that this colony has been fed, and the letter A after it shows that they have been fed enough to make them strong in stores. If we have crossed a wedge beneath them by feeding No. 8, and then only fed a small amount, then it would have read: 8—M—W—B—C—15. This says that they were fed April 15th enough to last them a week or 10 days from that date. If no honey comes in from the fields by this time, or before, we can tell by looking at this record-board what colonies have to be fed again, what rows they are in, and where in the row.

Later, if it is desired to equalize the colonies in
strength by drawing frames of brood from the strongest and exchanging them with weaker colonies, it is not necessary to spend a day or two in hard work examining each colony, for the record board shows the weak, medium and weak colonies, and tells just where they are.

Still later, the strong colonies may require more room, especially those that had a large amount of stores—the record shows what and just where these are.

At the beginning of the main flow, or when the supers are put on, a second board is taken and a new record begun. This board is marked off in rows to correspond with those in the yard, the same as the first one was. This second record also shows the strength of the colony and where it is. So at the end of the season these records show what colonies have swarmed, and about what each colony has done in the way of surplus work. Of course, this system of a cipher code or abbreviation keeps the management of the apiary from any endless variation: for instance, when examining the colonies the first time in the spring, if any are found to be queenless, a small x is placed under their number, and soon after they are united with weak colonies that have a queen so far I have decided that with me it does not pay to try to save a colony that loses its queen during the winter, for after the long winter confinement that bees are here subjected to, they live but a short time after being put out in the spring, and, before a queen can be secured from the South and new brood reared, they, as a rule, become so weak that they do not amount to anything that season, so far as surplus is concerned; and with a large number of colonies there is almost always a few that have a queen but are so weak that they are unable to build up in time for the white clover flow. A queenless colony united with one of these may enable them to build up into a strong colony for the white flow, so that anywhere from 10 to 160 pounds of surplus may be obtained, besides artificially swarming or dividing them so as to have, if increase is desired, two colonies in good condition for winter; and this of course may apply to two weak colonies that have queens, for although many have decided that it does not pay to use the queenless colony in the spring, I know that in my locality, under some conditions, it can be very profitably done; but if there is anything about our pursuit that requires skill and experience, it is, in my opinion, uniting weak colonies with profitably in the spring.

Southern Minnesota.

A Few Grains of Wheat for Honey-Gleaners.

BY ALLEN LATHAM.

It has been so long since I have sent any of my wisdom to the "Old Reliable" that I ought to have a good store accumulated now. So much straw has been sent that I think it is time for a harvest of grain.

Bees and Strawberries.

In this locality bees are frequently seen at work on strawberry-bloom in the season of bloom. They appear to get a little honey, but more frequently are gathering scant loads of pollen.

Honey and Pollen on the Same Trip.

The statement made some months ago that bees do not gather pollen while after honey, must be received by the bee-keepers of Massachusetts with great incredulity. In the season of clover especially do the bees here gather the two products. In some seasons the sections of clover honey are ruined by the accumulation of pollen in them. We are thankful that this does not happen every year.

Apple-Blossom Honey.

I am glad to see that this delicious honey has received its credentials. It is the most reliable honey we have for quality. With favorable weather a good crop is obtained every year of even date. The trees do not blossom evenly on the "off" years with this. The honey is a pale straw color. It is the heaviest honey we get. I have seen it so thick that it was almost gummy. It never dries. It is palatable on the day that it is gathered. This can be said of no other variety with which I am acquainted. I get two or three hundred pounds of apple-blossom honey every year. This on the day that the blossoms are about to open, or perhaps two days earlier, I fill the brood-nest full of syrup. This drives the bees into the sections. To make doubly sure that the bees go up to the vitamin in the syrup, I fill the super with syrup, in the super. This feed does not stay in the section, nor is it carried up. As every bee-keeper knows, the brood-combs get the first of the flow. If the combs are filled with the cheaper feed, then the honey is taken directly to the supers.

This flow from apple-blossom lasts only a few days, usually about 10; hence the necessity of getting the bees into the sections at the very beginning. This treatment will yield some thirty pounds of honey per colony. Some may express fear that the sugar will get into the sections and injure the purity of the honey. This does not happen. The syrup is ripened and placed in the brood-combs. It is difficult to get enough of the thist syrup. It prevents the bees from preventing considerable honey going there too. The syrup is poured into the empty cells of each comb from a coffee-pot. It diminishes greatly in bulk in being cured by the bees. If it is desirable to fill the sections, some cold rain comes on. Then a small allowance, as soon as clearing weather arrives, will probably drive the bees again to the sections, which they will have drawn away from during the rain. After the syrup has been used up, a new apiary filled with a few honey comb-cells: the bee-keeper will find beautiful sections of the most delicately flavored honey in the supers. In the corners of the brood-chamber will be found sealed syrup. It does no harm there as it will keep perfectly. I would advise every bee-keeper to run a few colonies with this honey, if he has not yet to get a choice honey for home consumption. My apple-blossom honey never goes into the general trade. It is all saved for home, friends, and a limited select trade. I sell it always at 25 cents per pound. I never have any left into the second summer.

Bumble-Bees in Winter.

Possibly the subject has been sufficiently hashed, but I will add my chop. Only the queens live through the winter. They crawl into a pile of leaves and lie inert till April or May. They do not become white, and the writer who found such "about ready to emerge" probably found the image of the June-bug.

The Tent for Mating of Queens.

This is the best yet. Now let us investigate as to how small this tent can be successful. If a drone has not been made the highest premium will be paid in the bee-yards. If a tent six feet in diameter will do, then that is what the small breeder wants. Some of us should hardly care to build a 30-foot one.

Tent for Breeding, Etc.

The "grain" that I shall now offer is worth its weight in gold. Having more honey in brood-combs than I needed, and a great number of unfinished sections, I wished a transfer fer. I loaded up a strong colony with supers of these sections. Then came the rab. Bees will not empty combs unless they are outside their hive. If outside the combs attract robbers. The problem was solved in this way:

My tent was made of five screens, each six feet square. This tent was without any bottom removed. Then the uncapped combs were placed within the tent as far from the hive as possible. These bees finished many sections. The work went on all through August. There was no honey in the fields, and robbers were fierce. They were taken by the score outside the tent, but never go up and in. The home bees quickly learned that to go away from home they must rise, and to return they must get above the hive and drop. This device is of wide application. The very best way of obtaining combs out of the bees trying to get out as the hive is left open. With a six-foot fence of mosquito-bar around the hive the advantage of the tent is retained and the worst feature gotten rid of.

If a weak colony is being robbed, try such a fence about it. You will be highly gratified with the result. Robbers will not get in—theY will try to enter through the netting, but not otherwise.
I am rather short of land space, and thought I would utilize my attic windows for hives. Two hives were placed facing each other on the east side of the room, with a small window to the entrance served for exit. Two or three small holes were bored through the glass at the top of each pane to let out those bees which left the combs during manipulation. As far as honey-gathering is concerned nothing is gained, more than to offset loss. In wintering much is gained. The two colonies have seen two winters thus. They have come through strong in each. Few bees were lost from the combs, usually vigorous. The combs come through without a spot of mold on them. It is delightful to open hives in which all the combs, even the outer ones, are dry and clean. This means rapid building up in the spring. The two in question are remarkably strong for the season.

I should state that I remove the covers and throw old clothes and papers over the hives for the winter. The attic is unfinished and is well ventilated. The results of this experiment are so pleasing to me that, at my first opportunity, I build a beehouse in which I can set 30 or 30 hives. This would be a tight, double-walled house with double windows. It would have ample ventilating facilities—this for dryness. The bees would get their rain by the entrances. An oil-stove would be set in the house on extremely cold nights, for I believe that extreme cold robs the bees of much of their vitality. There would be an arrangement to shade the windows when sunlight would do harm. Such a house would be simple enough in winter stores and in bees to pay the cost of it.


Introducing a Queen-Bee—Her Normal Good Graces the Key to Success.

BY W. W. M'NEAL.

I WOULD better, dear reader, impress you with the fact that the honey-bee in all her actions is governed more by cold business principles than by any feeling of love for kin or stranger. I have watched closely the habits of bees for years, and am old in the bee, but I have not yet come to believe that they are swayed by a selfish love only. Her motives may be good; and that from necessity she employs harsh methods. However, it is by her methods that we are fitted to judge; and, judging from these we say that her motives are unrelenting.

Let me cite a few prominent traits which characterize the honey-bee as being utterly indifferent to the sufferings of her kind, and to the perils of her sisterhood:

1. If the worker-bees love their queen, why will they, when this same queen becomes old and decrepit, allow a young, vigorous queen, and a stranger, to dispatch the mother-bee right in their midst? Not only do the workers positively refuse to assist the old and (to them) faithful queen, but when the bloom is on the stranger queen, they welcome her with the keenest relish to the situation she covets. When this same queen has become established in her new home, and is generous to the colony in the performance of her special duties, take her from the bees for a few short hours, or until they realize fully the loss of her. This will portray more clearly their real avaricious, grasping nature, and that love with them is an unnatural, impetuous passion. For night and day, they grumble to each other: the bees, note the results: The worker-bees ball her as they would a stranger queen; and in every way evidence a spirit of revenge rather than of rejoicing because she has left them to take to them. They appear to regard her sudden disappearance as a wilful shirking of high responsibility intrusted to her, and, accordingly, the most influential member of the colony is made to feel their indignation.

2. When a worker-bee has given its life in the defense of the colony, is it to be expected by some means regains the hive before becoming helpless, why is she at once dragged therefrom, alone to die?

3. The great, boisterous drone-bee, which was so tenderly cared for when his presence in the hive guaranteed the safety of the colony, finds himself in the midst of plenty; and within the immediate presence of the queen and worker-bees? If the honey-bees have that quality, or attribute—love—which higher intelligences are supposed to have, why do they always commit these fearfully cruel acts?

Gentlemen, from my observations of the honey-bees, I am inclined to think that love is for the mother-queen, or the peculiar scent of the newcomer, that have to do with the art of introducing a queen-bee. The key to success is in retaining the normal good graces of the queen—her influence—which the honey-bee is the greediest of the greedy, and the question with her is, apparently, Has the exchange of queens been a good business deal? Of course, there are exceptions, but this can abundantly be said to be the rule. The worker-bee is after the queen's tiny home, individuality is nothing further than to serve the colony in the advancement of its selfish interests. This principle is painfully manifest in all their doings. The stranger bee, whose physical force shall be his manipulation, is always welcomed thereto, until it reaches a period or condition in life which requires that it then be helped by the colony.

Let me call your attention to a few common occurrences in the apiary, which serve to make manifest the assertion that this is the ruling principle with the honey-bees.

1. Note, please, that young bees having just reached the zenith of their physical power and beauty, are, upon returning from a flight, allowed to enter almost any hive they choose. Surely these have not lost their identity—the distinct impress of the queen's scent during the little while they were out of the hive! Oh, no, nothing of the kind. It is seen at once by the elder heads within, that these are just the ones of helpful value needed; and so they are permitted to join ranks with them.

2. Note, that there is no fighting upon exchanging supers with two or more colonies, when honey is being stored. Why, then, is this and case of manipulation, to take them the peculiar scent of the queen of that particular hive? To be sure they do; but then they always carry with them what is of vastly more importance to the stranger colony—the fact that here is a company of able bees, and ample evidence in the shape of newly built comb and honey, of their willingness to work.

3. Note, that at swarming-time there is no fighting when two or more swarms unite, each swarm evidently feels that it is nothing to lose, but lots to be gained, by an addition to their forces.

4. Note, that any colony feeling the need of drones will welcome them to its hive; but when not needing their assisting bees, it will reject them at once; that a worker-bee laden with honey and pollen may, and quite frequently does, enter the hive of some near-by colony; and that a colony frequently calls its reigning queen when there has been no outside disturbance of the hive. Note, that when the mother-queen, or reigning queen, is found in an unexpected quarter of the hive, she is often sung by the workers; that a colony having a good laying queen will attend upon a score or more of queens in cages, promising that there shall not be lacking to the family the natural development; and that a virgin queen will be allowed to starve to death, her entreaties for food availing nothing. Now, why this partiality? Verily, the virgin is regarded as bringing with her no security to the colony, while the queen of the other class, so soon as it is seen that she will not, or can not, molest the reigning queen, is reserved unto future use should any accident befall that queen.

Please note, also, that the bees of a colony in whose hive there are so many caged queens, are just as able to pick out a robber-bee at the entrance as though there was but the one or reigning queen within. If it is the scent of the queen that entices them, or the understanding of what matter does the queen having the freedom of the hive, so impress upon the bees of her colony her own peculiar scent as to protect them against the depredations of theiang bees? My bee-keeping friend, I believe that all this matter of the queen's scent is but a vapor cloud, and in due time will have blown away.

I will repeat that the key to success along this line of introducing queen-bees consists in having the queen in the best possible physical condition at the time she is to be given to the colony. She must be the peer of the colony—must be equal to their expectations. Not only must the queen's scent—evidence of the latter's—manifest a willingness to do the same. Is it not enough to break the even tenor of her ways—the worker-bee's—to take away the queen in the prime and beauty of life, and offer instead, a poor, half-starved and frightened little queen to fill the place made vacant?

I have exchanged the queens of two colonies during the
season of surplus, and had each laying in the hive of the other within an hour of her removal. It is this way: Catch both queens, and then close the hives; smoke each colony a little from the entrance, and then run the queen into both to supply my own tables with home, but I had so many calls for honey that I decided to increase the number of my colonies. I now have 25, but that is not enough to supply my trade, which is growing larger each year.

I have quite often seen this question asked, in the bee papers, as to what cause you think is best to divide swarms? I do not believe that's the best way to divide. It's one of the easiest ways, but not the way for best results. If you leave the queen on the old stand with half the brood, that part ought to do good work, but the other half will have no field ready at first, and will be in a discouraged condition, which is not the best thing for rearing a young queen. You could use the nucleus plan without making very frequent visits, and have a chance for better queens. Or, here is a way that might suit you, with no nuclei in the case:

Get some good cells started, and when they are within three or four days of having the young queens emerge, make your divisions. Take from a colony all its brood but

very strange when I say that he never entered a complaint against me.

If you will take another look at the picture you will see my two "swarm-catchers" standing at the end of the rear row of hives. They are not the automatic or patented kind, but as swarm-catchers they are a success, because they have not let one swarm get away. If a swarm issues, they are sure to see it; they first notice which hive it came out of, and then there is a race to the shop to see which one will sell me that the queen is swarming. I have sold these "swarm-catchers" by the hundreds.

Franklin Co., Mass. JESSE M. DONALDSON.

Questions and Answers.

CONDUCTED BY DR. C. C. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.)

Detecting Queenlessness in a Box-Hive Colony.

I have a box-hive in which is a large colony of bees. It wintered well, but seems to be at present without a queen. How can I tell that they have none? WISCONSIN.

Answer.—Give the bees a little smoke, turn the hive over, blow smoke down between the combs, putting them apart at the same time, and if there is no queen, you will be able to see sealed brood. Another way is to get from a movable-frame hive a piece of young worker-brood and crowd it between two combs so it will be held in place. Two days later if you find no queen-cells started on this brood, you may safely conclude they have a queen. If they are queenless, the bees are very old, and unless quite strong they are not worth a queen.

Dividing to Prevent Swarming.

I have moved 30 colonies of my bees three miles up the creek, right in the midst of hundreds of acres of alfalfa. Now I plan to divide them just as soon as the alfalfa commences to bloom, as I will not be able to watch for the swarms. I wish you kindly tell me whether I can just scatter starters of honey and bee brood-frames in the frames I put in, or must I have full sheets for fear they will make drone-comb? The way I thought to do was just to take out half of the frames of brood and bees and put them into a new hive, and then fill in the vacant spaces with frames with starters on them. Of course I have young brood and eggs if I do not know they have a queen.

A year ago last winter I visited at the home of a sister of yours, in Denver, where I learned so many pleasant things about you, and Miss Wilson, too, that I feel quite as if I knew you, and that you will not laugh if I do ask foolish questions; I have nearly 300 colonies of bees to care for the coming summer, and all I know about bees is from reading. I have never even seen a properly conducted apiary, but I have managed to have this many bees with only 5 colonies to start with in 12 years, with only one year's failure, when most of my bees died during the winter and spring. I have very few new swarms of late years— I think it may be because I have so many bees in one place—150 colonies or more.

COLORADO.

Answer.—If you divide the way you propose, you just must put in full sheets of foundation if you do not want a considerable part of your bees going on swarming. Of course, I don't believe that's the best way to divide. It's one of the easiest ways, but not the way for best results. If you leave the queen on the old stand with half the brood, that part ought to do good work, but the other half will have no field ready, and will be in a discouraged condition, which is not the best thing for rearing a young queen. You could use the nucleus plan without making very frequent visits, and have a chance for better queens. Or, here is a way that might suit you, with no nuclei in the case:

Get some good cells started, and when they are within three or four days of having the young queens emerge, make your divisions. Take from a colony all its brood but

Biographical.

JESSE M. DONALDSON.

On our first page this week is shown Mr. Jesse M. Donaldson, of Franklin Co., Mass., and his nice city apiary. He gives the following account of himself and his bee-keeping experience:

My first lessons in bee-keeping were learned in the early '70's, in the apiary of my uncle, James P. Sterritt, of Mercer Co., Pa. At that time I intended to become a bee-keeper, but, like almost all other boys, I had a desire to travel and see some of the world.

Nature had endowed me with very flexible joints, so I concluded to take advantage of that and become a professional acrobat and contortionist. In that line of business I visited every State in the Union, also Canada, Newfoundland, Mexico and Cuba.

I was married in May, 1886, and a few years afterward decided to quit the show business and "settle down." With that object in view I found employment in the shoe factory where I now live.

Soon after settling here I became afflicted with that old disease—bee-fever. As it was the second attack, I knew the only remedy, and applied it at once by buying a colony of bees. The advertisement in one of my bee-papers that read something like this:

FOR SALE—400 colonies of Italian bees in 10-frame Langstroth hives, all in good condition. Price, $4.00 per colony, on board the cars here. Reason for selling, sickness.

I sent my $4.00, and in due time received the colony of bees, which I examined as soon as possible. When I saw the inside of that hive I began wondering which it was, the bees or the advertiser that was sick. If that colony was a fair sample of the other 399, it is no wonder that he was sick.

Some of the frames were minus an end-bar, others had no bottom-bar, and the whole 10 frames did not contain enough worker-comb to fill six frames.

When I bought my first colony, I intended to keep just enough bees to keep my family and home in honey, but I had so many calls for honey that I decided to increase the number of my colonies. I now have 25, but that is not enough to supply my trade, which is growing larger each year.

I have quite often seen this question asked, in the bee papers, as to what cause you think is best to divide swarms? I do not believe that's the best way to divide. It's one of the easiest ways, but not the way for best results. If you leave the queen on the old stand with half the brood, that part ought to do good work, but the other half will have no field ready, and will be in a discouraged condition, which is not the best thing for rearing a young queen. You could use the nucleus plan without making very frequent visits, and have a chance for better queens. Or, here is a way that might suit you, with no nuclei in the case:

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one frame, and in this case you may use only starters, and have a fair chance for little drone-comb. That leaves on the old stand the old queen and the field-force, and if the colony is very strong you may risk shaking off a few of the bees from the old hive from the frames you remove. The old bees will return to the old stand in a day or two, and it might leave the new colony with hardly enough bees to care for the brood, so it will be safer to take all the adhering bees with the conical frame from the old hive. Two days later take the remaining frame of brood from the old colony, and at the same time give to the new colony a sealed queen-cell. I have a suspicion that you are not anxious for increase from these colonies, but instead to divide them because you know they will die if you do not divide. If that is the case, your plan is easy: Just before there is any danger of swarming, remove from its stand a hive and put in its place a hive filled with foundation, putting the queen in this hive. Then it will be found that in the course of your experience you may count on freedom from swarming, unless your experience is exceptional, and you can make your increase nearer home where you can have it directly under your eye. You will readily understand that 2 or 3 days after opening it will be no work to make a similar box by the lower story. There may be some drones in the upper story that can not escape, but I have found this trouble more theoretical than real. The remains of the drones will be there the first time you open the hive, and you can easily shake them off the excluder.

Don’t be afraid of asking foolish questions. Bless your heart, if you can study up any more foolish than this, I don’t think you can. In the course of my experience you must be an adept in the line of foolishness. The worst of it is that in my case I haven’t yet outgrown it, and expect to make more or less blunders as long as I live. I confess to you (but this is only between ourselves) that I do sometimes feel quite inadequate when one or two questions that are plainly answered in every text-book published; but when one has studied the text-books carefully there will still be always plenty of questions to be asked, and with such I am quite willing to be flooded—glad to answer them just so far as I know how. And this suggests to me that you may ask why leave that one frame of brood instead of taking all, and then why take it away later. If the bees are left with larder entirely bare, they may desert the hive, and if the frame of brood is not taken away within a few days they may prepare to swarm. If you ask why they will swarm if that one frame of brood is left, I may explain that—that is—well, the fact is I don’t know.

Using Old Combs—Getting Increase—Italians vs. Blacks.

1. Will the combs of a colony of bees that died with the dysentery do use again?

2. I have 8 colonies of bees which I wish to increase to 20. Would you advise dividing, or natural swarming?

3. Are the Italians more apt to have dysentery than the blacks?

A. In losing 3 colonies that is made of tiny close material. When the weather is cool this will matter little, but on a hot day it would be very uncomfortable, and to wear it all day long on such a day would be, I judge, quite a trial. I would advise you to wear a cooler or closely woven material. It is quite clear that you have one on for some time on a hot day, for I find it better fit for you.

I doubt whether you would dislike his way of smoking bees before opening a hive, if you were actually to see him at work, for it is not very likely he does just as he says. It is quite common to say that a man preaches better than he prac-tises, which is, I think, only a part of the truth; it is better than the preaching, and no doubt writing away from the hive he had not in mind as clearly as he might just what his practice was. Taking it, however, just as it reads, his first act was to blow smoke into the entrance for about 30 seconds, working the bellows with slow, steady pressure so as not to alarm the bees with the noise of quicker motions. Just what is meant by that last I do not fully understand, for it is hardly possible that any noise made by the smoker can alarm the bees a tenth part as much as the horrible flood of smoke that many of the bees have never before experienced. Indeed, the very object of the smoke is to calm the bees.

I very much doubt that in actual practice Mr. Gehring blows smoke into the entrance for 30 seconds, first starting “a good volume of smoke.” I have just been trying it by the watch, and working the bellows what I consider a slow, moderate, steady, smoke for 30 seconds, and dry puffs when putting at the usual rate. That would certainly be an unnecessary amount of smoke, in some cases driving the bees out of the hive, and in any case frightening the bees so much that if it would be necessary to wait a few minutes for the bees to get themselves. A “few minutes” would hardly be understood as less than three minutes. That would leave the bees in good condition to handle, but the smoker would hardly feel he had nor to take so much time. If I may be allowed to refer to my own practice, instead of taking 5 minutes from the first puff in the entrance before opening the hive, I do not take one-sixtieth of that time, for the bees are all that are given, when, without waiting a fraction of a second for the bees to get themselves, I immediately open the hive, giving them two, three, or four puffs on top of the frames. That will usually be sufficient; but if at any time the smoker puffs in 30 seconds, and the humming noise spoken of is a proof of thorough submission; I would hardly consider it one of “satisfaction,” but the opposite. Neither would I want to have the bees proceed to much of a humming noise unless I wanted to drive them out.

Gehring’s Bee-Veil and Way of Smoking Bees.

I have been reading Mr. Gehring’s series of articles now running in the American Bee Journal, but not quite like his bee-vill, nor his way of smoking bees before opening a hive. What do you think of them, Doctor?—BUNGHAD.

ANSWER.—The bee-vill described by Mr. Gehring in his very interesting articles will answer a very good purpose, although is objection is its bulkiness—it is quite close material. When the weather is cool this will matter little, but on a hot day it would be very uncomfortable, and to wear it all day long on such a day would be, I judge, quite a trial. I would advise you to wear a cooler or closely woven material. It is quite clear that you have one on for some time on a hot day, for I find it better fit for you.

I doubt whether you would dislike his way of smoking bees before opening a hive, if you were actually to see him at work, for it is not very likely he does just as he says. It is quite common to say that a man preaches better than he practises, which is, I think, only a part of the truth; it is better than the preaching, and no doubt writing away from the hive he had not in mind as clearly as he might just what his practice was. Taking it, however, just as it reads, his first act was to blow smoke into the entrance for about 30 seconds, working the bellows with slow, steady pressure so as not to alarm the bees with the noise of quicker motions. Just what is meant by that last I do not fully

Bees Cross at Swarming-Time.

I purchased 3 colonies of bees in the fall, and the person delivering them put them down in the most convenient place, and I let them alone until I could familiarize myself with them. I came home in the forenoon of April 20th, and found they had swarmed (about a peck measure full), so I have made a virtue of necessity, and went about it according to the formula in the "ABC of Bee-Culture." I got a hive with full frames of foundation, laid it down on the top of a sheet, got a box and a turkey wing and went to sweeping them into it (as they do after the top rail). I got some of them into the box, but it did not take me long to tumble what I had in the box down in front of the hive, and make a very hasty retreat.

Now I take it for granted that there was something wrong with my manipulation, for Mr. Root says that they would be so full of honey that they would not fight, but I need not tell you that I am nursing my wounds yet. I had
a brand new smoker, and got it out, but really did not know what to do with it. I got some rags, lit them, and went back in fear and trembling. I gave them a good smoking, took the same box (with a long-handle this time) and a long-handled brush, and got out the bees, dumped them down again in front of the hive, and when they would not go in I smoked them in, and they stayed.

TENNESSEE.

Answer.—It is true that bees swarm they are filled with honey, but very soon after that they may hive their bare-headed and bare-handed. But it is also true that sometimes they are cross enough, just why I don’t know. Very likely there was no fault on your part, only you had one of the “sometimes” cases.

Transferring Bees.

Several weeks ago I bought 5 colonies, and found 2 of them very strong, and consequently did not disturb them. Two of them were very weak, so that only one frame could be covered in one, and two frames in the other. It happened that the old home-made frame fit in the new dove-tailed hives which I use, and so I put them into the new hives.

1. Now, would I not better take from them both queens, and unite them into one hive, then give them a new queen? I then have the queens united.

2. Now, the fifth hive was a mess—it was chock-full of honey, and although it was a movable-frame the bees had built their combs diagonally in the frames. I began to cut out from one side where there were no bees, and proceeded until I hit the fifth frame, when I came to the bees, then I lifted the remaining frame, and got the bees out of the fifth frame, and made a new hive. How can I get those bees out on straight combs? Would you advise leaving them and gradually coaxing them over on new frames filled with foundation?

Penn.

Answers.—1. As your letter is written in April, it is quite possible that a colony very weak at that time may build up to good proportions by the time of the honey harvest. At any rate, it is a common observation that if a colony has been started this fall, and has been in a good condition as to building up, the united will hardly do any better.

Are you sure about the queens being old? If you are experienced in such matters you may judge somewhat by the appearance of the queens, but even then you may not be sure. If a colony threw out a swarm last year, you may know it has a young queen less than a year old. The swarm will generally have an older queen, although there may be exceptions. Generally, however, the bees will supersede a queen before she is old enough to be worthless. Very likely you will do well to leave the two colonies as they are, unless you want to introduce a new queen for the sake of improving the stock.

2. Yes, fill up the hive with frames filled with foundation, and let the bees work over upon it at their own sweet will.

Weak or Queenless Colony.

I have 2 colonies of bees, and both seemed to winter well, but I notice this morning a great many dead bees in front of one of the hives, and that colony seems weak and not nearly so active and strong as the other. What is the trouble and the remedy?

Alabama.

Answer.—It may be that there is nothing beyond the fact that the colony is weak. A good many bees die every winter, and some strong colonies will keep them, carried away so that you may think that none were lost, while a weaker colony may leave them on the floor of the hive or at the entrance. The chief question is whether there is a good chance for some of the young—the second part—my bees are not the old queens in the second frame, and if you find nothing of the kind there, you are hopeless queenless, and the bees left are so old that they are not inclined to fuser with. There is a bare chance, however, that they have reared a young queen that has not begun laying yet. In that case you may find no brood except a little sealed brood. If you want to make sure of it, give them a frame of young brood from the other colony, and if they start queen-cells on it you may believe them queenless; but if no queen-cells are started in two or three days, there is still hope they may have a queen. If they start cells, and they are sufficiently strong in bees, you may allow them to mature the queen-cell, but the game is not likely to be worth the candle. If you find the sealed brood in worker-cells raised like little bullets instead of being flat, you may know they have a drone-laying queen or flying-workers, in which case the only thing to be done will be to destroy them.

The Commonplace.

A commonplace life, we say, and we sigh;
But why should we sigh as we say?
’Tis the commonplace sun in the commonplace sky
Makes up this commonplace day;
And the moon and the stars are commonplace things,
And the flower that blooms, and the bird that sings;
But dark were our fate, and sad were our lot,
If the flowers should fade and the birds sang not.

Oh, God, who watches each separate soul,
Out of commonplace things makes this beauteous whole.

—Selected.

“DAD BUTTER” HOME COURTESIES.

This would seem a curious text for our greeting to “The Home Circle’s” friends. Yet it suggests some valuable thoughts, as we see.

I taught my first school when I was young—in my teens. How vivid are some of the things of our childhood and youth! How stamped upon memory was the ride—11 miles—with my dear old father, as I went to try my skill at the teacher’s desk. Among other wise things my father said was, “Start right.” That might well be a text for any epistle or sermon. Again, “Never lose your self-control.” A man near Claremont was shot yesterday—another man lost his self-control. The one will be marred through life, if not worse. The other will doubtless languish for months behind prison doors, and will have long, bitter, regretful thoughts. Did I say too much in a previous article? Can we say too much to our dear children at the very first, from cradle up, regarding the importance of self-control? I am glad my father impressed it upon me that memorable ride, as I went to fashion the still younger lives.

Again, my father said, “Never be callous in the morning.” I was to “board around,” and such evidence of energy he thought would win me favor. I think I was never called, and I was often first up, and in the quiet of those early hours I not only carefully read my New York Tribune (which was a good school for a school-teacher), but also read during the winter Irving’s “Life of Washington.” Whatever some may think of this advice, its results were certainly good in my case.

Again, father urged that I use no words that I would not use in the presence of the most refined ladies. This was good advice. I hope I followed it. Were I to train children to-day—were I to bring up my children again—I would start urging the “yea, yea,” and “nay, nay,” which the blessed Master enjoined upon all his disciples. There is something so sweet, wholesome, and impressive in the pure, direct speech, especially in these days of slang, that I wonder more are not more popular.

But why my text? I often noticed as I boarded with the good people, that the language of the children was not always courteous, respectful, refined. The people were for the most part—indeed, almost in their entire—through good people; people who would sacrifice heavily to aid a neighbor who might need comfort or assistance; people who prided themselves upon their honesty; whose word was honored in matters of common report, or in business. It was a neighborhood that would sooner empty itself in case the country should be threatened and assistance required. This was proved two or three years later, when the call for 100,000 men was sounded by that glorious man who then guided the great “Ship of State.” It was a goodly folk to meet, and I used my opportunity and dwelt among them poor and rich alike. No home escaped my visitation. I have rejoiced ever since that the poorest and least respected
The "Old Reliable" seen through New and Unreliable Glasses. By E. E. HASTY, Sta. B Korall, Toledo, O.

THE UNCAPPING FORK.

If the implement known as the uncaping fork has been in use 20 years, and has occupied all that time in getting itself heard of on this side of the world—well, one would say it can hardly be of very great value. Perhaps that’s not the way to look at things, however. At any rate the slowness of truth which attended a product of the 18th century is certainly a match. This is anest those pictures furnished by Mr. Griener, on page 215. All tools for uncaping, one would say, which operate like a garden- rake, and draw all they get hold of in front of them, must manifestly be self-clogging and too slow for general business.

THE UNCAPPING ROLLER.

How about that, roller fail of fine pickers to puncture the cappings instead of removing them? Can it be depended on to let go of the cappings? The pickers must be near together else some of the cells will be missed; and if near together will it not, first you know, pull off small patches of capping and hold on too long and the rollers snap. I have a little pricking arrangement not a roller which departs itself in about that style: and picking things clear is an unendurable waste of time. Perhaps a rolling motion instead of a patting motion would do the business whole or in part. I fear not, however, that the uncaping roller is one of the Galatians—"run well for a time"—and short time at that. It is by no means absolutely necessary that an uncaping device should remove the cappings at all. It’s nice to have that done; but if the new device works rapidly enough, and well enough, we can afford to float out the cappings with the inverted syphon, or lift them off the gravity tank. There is another thing to be thought of, however. If we give back most of the cappings to the bees, there may be a temptation to throw away the most of them, to the serious loss.

MR. CHAPMAN’S METHODS AND MANAGEMENT.

The long article of S. D. Chapman, pages 215–217, very valuable as it is, needs lots of discrimination on the part of the reader. Things which will work in one locality will not in another; and any one of two or three operations may work well when the most captivating member of the series, turned out and used alone, might be ruinous. Or, again, take the plan of killing all queens early in July—the man who overworks his queens so that they do not have more occasions to suffer than the man does whose bees run their brood-rear as according to their own sweet will—albeit there are some other reasons not directly connected with premature old age.

The idea that queens will lay much faster in the middle of the brood-nest than in outside combs will come to some of us as rather a novel one. It is quite likely to be correct; and if correct it is a large-sized item to conjure with.

Another prominent idea is not exactly new, but one which many of us have entertained (perhaps a little sheepishly or clandestinely) that the time spent on very weak colonies in spring is time thrown away.

I note that he does not claim for his diligent taking out of brood and putting in of empty combs that it doubles the size of the colony, nor yet doubles it, but only puts it 40 percent to the good. It is of value to have the experience of an expert that a dozen queens hatching in an upper story do not necessarily make the colony swarm. I believe it has been said that one queen is enough both for section-honey and extracted is a practice poor if not un economical. Here we have a forecible and plump denial at strong hands—more bees, and more comb honey, and some extracted honey as so to free grade.

Raspberry bloom and berries in all stages in northern Michigan up to November 1st, is simply another of the many evidences that last autumn was a very abnormal one indeed.

That out of 140 colonies 50 should neglect to start cells when queens were killed, until brood was all too old, is a very strange experience. Good case to bear in mind as evidence that “one can’t pretty much always tell” what bees will do, or what they will not do.

* * *

AMERICAN Bee JOURNAL

May 16, 1901.

The "Hum of the Bees" in the Apple-Tree Bloom is the name of the finest bee-keeper’s song—words by Hon. Eugene Searc and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Searc and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at $1.00.

The Premiums offered this week are well worth working for. Look at them.

* * *
QUEENS!

Improved Golden and Leather-colored Italian queens are what H. G. QUIRIN
tears in. We have one of the longest Red-Clover Breeders from their 12000 queen, and
a Golden Breeder from Dollittle, who says it is a BREEDER OF SUPERIOR STOCK.
It is a fact that 12000 queens reared in the U. S. during
this one is worth that sum. The above breeders have been the origin of our already im-
proved strain of queens for the coming season.
J. L. Gundl, of Humboldt, Neb., wrote as on Aug.
5th, 1906: "It is my opinion that, having one
of our queens had already stored over 400
pounds of honey. Under these circumstances
he stated that he is certain that our bees work on Red
Coves, as they were the only kind in his locality and
apart.
A. I. Root's folks say that our queens are extra-
ordinary, while in the American Bee Journal tells us that he has good reports from
our queens from time to time. We have
files of unselected testimonials.
A pure Italian royal jelly, feed, are
you wonder why our orders have increased each year?
Give us a trial order and be pleased. We
lack of experience in mailing and rearing
queens, Safe delivery will be guaranteed, and
instructions for introducing sent with each lot of
queens.

AMERICAN BEE JOURNAL May 16, 1901.

WINTERED ON GRANULATED SUGAR.
Mr. Gill, a beekeeper here, put a colony on
nothing but granulated sugar in the fall, and
this was the report he has sent. He
that some colonies that are already filling
their second super with honey this sea-
son.

Sutter Co., Calif., April 14.

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their second super with honey this sea-
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Sutter Co., Calif., April 14.

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Breeders:
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tested, either
type for circular.

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both for only 1.00.

GEORGE W. YORK & CO.,
144 & 146 Erie Street, .CHICAGO, I. C.
Bees Expelling Water from Nectar—Fruit-Bloom Honey.

Prof. Cook says on page 119, in his "Review of A. B. C of Bee-Culture": "I have always wondered at the statements we so frequently see of bees expelling water from the honey while on the wing. I never saw it, and I don't believe they do it," etc.

I was indeed surprised to read this from Prof. Cook. I have seen bees expel water from the honey as they left buckwheat fields for the hives, and I think all doubt will be removed when it is tried. If those who do not believe it if they will get bees to work on a piece of comb containing honey as bee-hunters do, they have some of that water that it will be only sweetened water, but sweet enough that the bees will work on it. If you watch some of this into a empty comb, remove the original comb, and place the watered honey in its place. Watch these bees, and then after ex- pelling a quantity of the load in the form of water (soon after leaving the box, and always before she got out of sight), make the trip of one or two miles, and return in much less time than when a thick syrup of honey was used for ball. All good bee-keepers know this.

On the same page Prof. Cook speaks of Mr. Root being in error about fruit-bloom honey. I think this is Mr. Root's great mistake of this, and he acknowledged his mistake. I have seen hundreds of pounds of pure apple-bloom honey. Ship in May, and I think I have had a few cases of comb honey gathered from it by my own bees. With the exception of raspberry honey it is the best produced in the State.

Worcester Co., Mass. JAMES F. WOOD.

Three Hive-Bodies Per Colony for Extracted Honey.

On page 137 I read the questions on ventilating supers, and then I read Dr. Miller's replies, and was very glad to find that I was walking to some extent in the footsteps of some of the bee-keepers who have run entirely for extracted honey, and for every colony I use three 8-frame dovetailed hive-bodies in the super. After the bloom, when the summer stands in two hive-bodies each, and in the spring I feed so as to cause all to swarm. The parent colony in my apiary is left all summer by the old stand, and facing at right angles to it, and when it is re- quired to go out, but before the bloom issues I put a ventilator under the old colony, about 1½ inches deep, about three days after they swarm I examine the parent colony, take it with eight of the frames that are nearest to being empty, and put it on top of the new colony with a honey-board between and another ventilator on top 1½ inches deep. So you see there is plenty of ventilation, but in case of a stoppage of the honey-flow I am not afraid of the honey getting too hot.

My principal reasons for using three hive- bodies to the colony are as follows:

1. I do not want to go out to get warm air after the blooms are over. I will send the bees to a little strip along the top of each comb in the bottom story. This method of doubling up every fall I have the same number year after year, and do not have so many come to protect from pests.

We have had a very mild winter, and bees have flown at least one day in every week, and now I have them busy engaged in casting artificial pollen to the hives. I use one to five pounds of flour a day mixed with flaked oatmeal, and they visit it by the thousands, and I expect the hum of these bees would beat the "hum of the bees in the apple-tree blossom." A few miles from a crop made from 20 pounds of the best granulated sugar, 40 pounds of water, and 15 pounds of honey to a barrel, and a few weeks after the bloom, the next week, my work will be over for awhile.

W. H. ALDER.

Callahan Co., Tex., March 4.

More Rain in California.

It began to rain last night, and up to the present time has been the wettest period in April in the San Francisco basin, about four days earlier than last year. Then we had a cold, wet time, killing all the early blossoms, for two weeks, and now the bees have a hard time to live, as they had a quantity of brood—in fact, it has been the wettest April for bees that I can remember. The past few days everything has been coming rapidly forward, and the trees are in bloom. It is looking like spring, and there seems to be no nectar in the blossoms. I have made a few improvements or discovering since my last report, and will write about them later.

D. H. METCALF.

Worst Spring for Years.

My bees came through the winter seemingly stronger than when closed up in the fall. They made a good showing in April, and four days earlier than last year. Then we had a cold, wet time, killing all the early blossoms, for two weeks, and now the bees had a hard time to live, as they had a quantity of brood—in fact, it has been the wettest April for bees that I can remember. The past few days everything has been coming rapidly forward, and the trees are in bloom. It is looking like spring, and there seems to be no nectar in the blossoms. I have made a few improvements or discovering since my last report, and will write about them later.

D. H. METCALF.

Report from the "Old Dominion."

I began the season of 1901 with 47 colonies, seven spring, count and increased to 52, working on Doddle's plan of spreading brood. I met with perfect success in using that plan, securing populous colonies which were in readiness when the honey-flow came. We destroyed all drone-comb in colonies in we did not wish to parent, and used the best and the best drone-comb and the best drone-comb, and also some from the colonies with the best layers and honey-combs. We have worked very hard.

Our honey season was tolerable good during the months of June and July, when our bees gathered the most surplus. During August and September the bees did not do so much, but the latter part of September and the first of October they laid in a good supply for winter, and we had a good sugar-brood, and some surplus from sweetwater.

We tried the golden plan on one colony, and it worked well. It adopted to some extent during this season. We want to increase to 65 or 75 colonies. Many of our bees have been weakened all winter all right with the exception of two that became queenless, and we have 48 colonies now. During the month of February the weather has been very mild and pleasant, but it doesn’t look now as if we were going to have much more. Over the season as the snow is flying in all directions,
end the mountains around about us are clad in miles of snow.

Our crop last season amounted to over 10,000 pounds of comb honey (we do not extract any honey, which we consider pretty good for the season, as was a drouth which cut our corn crop short by over one-half."

P. F. Huffman.

Rockbridge Co., Va., April 22.

Clipping Queens’ Wings.

G. M. Doolittle enumerates the advantages in the American Bee-Keeper, viz.: Greater ease of finding a clipped queen in a hive; security against runaway swarms; freedom from keeping two or getting two from distant places. Either one of which might be sufficient reason for the practice.

Queens Fating in the Hive.

This is reported in Gleamings in Bee-Culture by H. L. Jeffrey as a success, but Editor Root thinks there may be some mistake about it.

A Swarming-Stick.

For those who depend upon having their bees settle so as to hive them, it is by no means a pleasant thing to have the swarm on a very high tree, or in the middle of some thorny shrub, tree, or hedge. Mr. J. F. Mun
day has this to say about a “swarming-stick” which he uses:

It is therefore advisable for a bee-keeper to prepare suitable places near his apiary for his hives to settle on. The plan I adopted was the following: I bored an angle-hole in the top rail of the fence which enclosed my apiary. I fixed a stick about two feet long, one end of which would slip into the hole made in the rail; on the other end of the stick I fastened a small bag of dry grass about the size of a small pumpkin. Before making the bag, I placed the material of which it was made (a piece of burlap) on the top of the frames of a hive of bees for a few days to obtain the scent of the bees on it. Well, I simply placed this stick with the little bag of grass on it in the hole made in the rail of the fence, and I had the satisfaction of seeing my swarm settle on it, or rather them, for I had four of them in different places.

Now, I do not wish to imply that all my swarms settled on those prepared places, for they did not, but the majority of them did, and when they did, after placing a hive ready for their reception, I gently removed the stick with the swarm on it from the hole in the rail and carried it to the hive. With another little stick I carried, or with my hands if I had not gone. I always took a few bees from the cluster, letting them fall at the mouth of the hive, and when I noticed them entering the hive satisfactorily I shook off the rest of the swarm, and when most of the bees had entered the hive I returned the swarm-stick to its place in the fence again.

Foul Brood—An Important Subject.

Every little while there comes a frantic inquiry from some bee-keeper to know what is the matter with his bees, and what he shall do for them. He suspects the presence of foul brood, but has always skipped it in his reading—let those troubled with the disease trouble themselves with the reading. The wise bee-keeper will not wait till he is per-

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AMERICAN BEE JOURNAL

May 16, 1901

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BEE SELLERS.

Cincinnati, Apr. 19.—The demand for comb honey is nearly over. The stock of it also well cleared. Fancy white comb honey has been pretty uniformly sold, and the price of it is firm and steady. All the comb honey is now on hand, and the demand for it is small.

KANSAS CITY, May 4.—Practically no shipments arriving, and very little selling. We get our supplies at 15c per pound, and sell fancy white comb honey for export at 16c.

ALBANY, N. Y., May 3.—Honey market very dull. Very little call for anything but choice comb honey, of which there is a scarcity. Ex- tracted quick.

BOSTON, May 4.—Fancy white comb honey we quote at 15c. A No. 1, 15c; No. 2, 16c. No call at 15c for dark honey. Reports are that supplies of white comb honey and dark comb honey are very scarce.

SAN FRANCISCO, May 1.—White comb 11@ 12 cents; amber, 80@85; dark, 60@67. Extracted white, 95@97; amber, 80@85; dark, 60@67; fancy white, 100; fancy amber, 85@90; fancy dark, 85@90; fancy white, 100.

The market inclines in favor of buyers, with considerable honey offering, spot and lots, and the inquiry not very active. There is some of last year’s honey still in stock, one of our firms reporting as having about 3 car-loads, including comb and extracted.

Our market on comb honey is firm with light stocks and at fairly good prices, for the same time of the year.

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AMERICAN BEE JOURNAL

GEORGE W. YORK, Editor.

CHICAGO, ILL., MAY 23, 1901.

WEEKLY

FORTY-FIRST YEAR

No. 21.

APIARY OF MR. J. B. ALEXANDER, OF PULASKI CO., ARK.
(See page 326.)
Weekly Budget.

Dr. Peirce has removed to 75 State Street, Chicago, opposite Marshall Field's, where he would be pleased to see friends of the American Bee Journal at any time when they are in the city.

G. M. Dollittle, "gets off" the following in one of his editorials in the Progressive Bee Keeper for May:

PACKING POLLEN—An amateur beekeeper once told how this was done in these words: "When a bee brings pollen into the hive, she advances to the cell into which it is to be deposited, and kicks it into another bee; one of the indoor hands, comes along and rams it down with her head and packs it into the cell as the dairymaid packs butter into a frirkin. The paper publishing, said, "We prefer not to have any dairymaid pack our butter that way." An editor seeing both of the above, remarked, "If our butter must be packed in that way, let it be done by a bald-headed queen as it is not possible to keep them all." and after reading all the above, ventured, "We will add that in either case it would be "dand-ruff" on the butter."

DAFT CITY FATHERS—The Daily Camera, of Boulder, Colo., for May 4th, contained this paragraph which is of interest to beekeepers:

"Our neighbor, Longmont, is beginning to feel quite metropolitan. She has passed an ordinance to keep cows off the main street and now tackles the bee question. Hereafter no person shall be allowed to keep more than 4 colonies of bees in the corporate limits. This ordinance has caused a humming and buzzing beside which the noise of the bees was as nothing. The matrons and farmers of the town are up in arms and really it looks as if the town council is putting on unwanted airs. Why banish the busy bee and the luscious honey?"

It must be that Longmont rulers think their city needs a charming look or something and that they must do what they can to keep them down, or drive them out. Instead of trying to encourage an honest and honorable industry there seem to be people who prefer to destroy it entirely. But we can hardly believe that a majority of the residents of Longmont will permit such an imposition upon their beekeepers as the one suggested in the foregoing quotation.

MR. MACKENZIE, THE PROPOLIS MAN—Those who attended the National Convention at Chicago last August will recall the discussion of the question as to the practical use of propolis, or whether it has any commercial value. A man by the name of John MacKenzie, of Troy, N. Y. was present with samples of leather and furniture polish, in which propolis was a prominent ingredient. We believe he offered to pay 50 cents per pound for propolis, saying that he expected to be able to use it in large quantities.

It seems that Mr. A. G. Wilson, of Vernon Co., Wis., sold Mr. MacKenzie a quantity of propolis, but he could not make any use of it for the purpose for which he purchased it. He wrote us during the winter about it, asking us to do what we could to help him get what Mr. MacKenzie owed him for the propolis. We wrote the Troy man, but received no reply. A few weeks ago Mr. Wilson again wrote us, when we again wrote MacKenzie, saying that if we did not hear from him within two weeks we would mention the matter in the American Bee Journal. We are now simply keeping our promise to him. Mr. Wilson, writing us May 8th, gives the following facts:

FRIEND YORK—On or about Nov. 1, 1900, I sold and shipped to John MacKenzie, of Troy, N. Y., 65 pounds of propolis at 25 cents per pound. After waiting a reasonable time for settlement, I wrote and reminded him of the shipment and the amount due which he made no reply. I then drew on him in New York, and you will see the results (dishonored drafts, etc., are enclosed). I have not heard from him in any way since. That is all the propolis to him. The propolis was sold through a sample sent to him, he agreeing to pay for it the price I set, which was approximately 25 cents per pound.

We do not know whether there are any other beekeepers who have been so unfortunate as to have shipped any propolis to MacKenzie. We trust not. We were hoping that Mr. MacKenzie was all right, and that he really had found a good use for propolis, as we were aware that certain beekeepers would be able to supply it in fair quantities.

If our memory serves us rightly, Mr. Frank Benton also met Mr. MacKenzie, and told him he had about 40 pounds of propolis saved up, but he would be glad to have it. Mr. MacKenzie asked him to ship it C. O. D. We have since wondered whether Mr. Benton sent his stock of propolis to him; and if so, whether he received anything in return for it.

MR. J. C. ARMSTRONG, of Marshall Co., Iowa, when renewing his subscription recently, had this to say about some so-called beekeepers:

"I have delayed renewing some time, thinking to get a couple of subscribers to whom I sold bees, but they are not ready. They want to wait until they get their money's worth before they will send any more. I have a man to a man and asked him to take the American Bee Journal and a book on bee-management, which he said, 'No, I will wait till I see what luck I have.' I told him if he had good luck he didn't need a book, but the way to have him was to read up. I saw him occasionally through the summer and he was having good luck. He had gotten two swarms! I have not heard from him this spring; but I suppose he will sing a different song now—no luck. That is the way with them. They will come in at the wrong end of the bee business. If a farmer were to go to work on his farm with no more knowledge of the business than they have of bee-management, and trust to luck, we would think him foolish. Yet they are wise!"

A "MEASLEY" EDITOR is Mr. H. E. Hill, of the American Bee-keeper, if we may take the following paragraph in his May number to refer to himself instead of to a youthful member of his family:

"It is our rare privilege this month to have a case of measles against which to charge any editorial short-comings."

That reminds us of the exceedingly "measly" time we had with the bee disease last year.

We were 21 years of age, and as is well known when this disease takes hold of an adult, he is liable to have a hard time of it. We were attending college at the time, so away from home and mother. We will never know whether those of us who arrived the sick boy began to mend almost at once. Ah, can any one ever forget a mother's love and tender care? God bless all the dear self-sacrificing mothers—and yes, all the boys who are away from home and mother.
City Ordinances Against Bee-Keeping.—We have received newspaper clippings from the Rochester, N. Y., daily papers, announcing that an ordinance relating to the keeping of bees within the city limits was passed there by the common council April 30th, to go into effect May 2d. It provides that no bees can be kept within the city limits without the written permission of lot owners within 100 feet of the hives; such written permission to be filed in the office of the city clerk.

The passage of the ordinance grew out of complaints made by several residents of the 10th Ward to its alderman, against W. R. Taunton, a bee-keeper. We understand that Mr. Taunton is prepared to test the legality of the ordinance, and is backed by the National Bee-Keepers' Association, and also the New York State Association. Personally, we are in favor of having the matter pushed to the fullest test, as we are very confident that no such ordinance is legal anywhere. Of course, there may be certain instances where the keeping of many colonies of bees is not advisable on account of the locality being closely built up with occupied houses, and yet, even in such a place, if the bees were kept on the roof there would likely be no danger whatever. This is the case in several places in Chicago, and so far as we can learn there has been no complaint from the neighbors. Whenever there is trouble it usually grows out of some spite or jealousy on the part of those living near the bee-keeper, and very likely from troubles arising from other sources than the bees.

We understand that in several other cities in this country there are municipal ordinances prohibiting the keeping of bees within the city limits. We do not know whether their legality has yet been tested, or whether the bee-keeper has simply moved outside. We certainly would not encourage the keeping of bees in thickly settled portions of any city, even though no harm would come from it to any one. But there are many portions of every city that are so sparsely settled that there is no reason at all why bees could not be kept, if so desired. Bees in such places are not only a source of pleasure, but often yield profit to their owners. It would hardly be advisable to make a business of bee-keeping in some cities, but in a large one like Chicago, where there are hundreds of acres of vacant property within the limits of the city, it appears to work all right. In some portions of Chicago there are almost whole farms that are not more than an hour's ride and built upon for many years to come. There is no reason why hundreds of colonies of bees should not be kept in such places, especially when there is such an abundance of bloom that is going to waste for the want of bees to gather the nectar.

In view of the many demands upon the National Bee-Keepers' Association for funds to be used in the defense of cases which are constantly coming up for settlement, it behooves every bee-keeper to send in his dollar and become a member. No one knows when he may have trouble of his own, in the settlement of which he will be glad to call upon the Association. We wish that all readers of the American Bee Journal were members of the National Bee-Keepers' Association. Even if any of them should never need its aid, they have the satisfaction of contributing to what has often proved a “Gibraltar of Defense” in the pursuit of bee-keeping. It should never lack for funds to carry on its righteous wars.

Breeding for Good Stock.—The Luxembourg Bee, gives some of the principles that are held by Swiss bee-keepers:

Parents transmit their good qualities with more or less certainty to their progeny. The longer a trait of character is continued from generation to generation, the more certainly it is transmitted. The more alike the parents are in their traits without being nearly related, the more surely are those traits transmitted. Every country has its own conditions, which affect the course of time; affect the character of its animals, so that the natives are the best for that country.

As to the last item, it might be said there is no native race of bees in this country, and the fact that the black bee was first imported into this country by no means settles the question of its superiority, for this country.

Slow Cooling of Wax.—The American Bee-keeper quotes the Progressive Bee-keeper as saying "the color will not settle." Probably both will admit that the dirt settles, and when the dirt settles the color of the dirt settles with the dirt, and the color of the dirt, as well as the dirt itself, is part and parcel of a cake of wax in which the dirt has not settled.

Unpainted Hives are discussed by G. M. Doolittle in the American Bee-keeper. He figures as to the matter of economy. He has hives and covers 20 years old that are still good. If he had kept them painted it would have cost him $1.15 for the 20 years for each hive, while $200 will get that part of the hive new. It is only single-walled hives that he believes should be left unpainted, the advantage being that in unpainted hives the dampness has a chance to dry out. To the objection of Arthur C. Miller that the inside coating of bee-glue prevents evaporation, he replies that "with the freezing of winter and the moisture coming in contact with it, the bright, shining surface of this varnish becomes dull and full of very fine cracks and holes so that moisture and air pass through it."

Honey as a Remedy.—We desire to call particular attention to the article by Dr. Jas. McLean, on another page of this issue, it will repay a careful re-reading and heeding. Bee-keepers and their families ought to be the healthiest people on earth. Undoubtedly they would be very much healthier than they are if they really knew how best to utilize one of their most common home productions—honey. The reading of a few articles like Dr. McLean's would be a great help to all. It should have a wide reading.

Artificial Ripening of Extracted Honey.—W. S. Hart, in the American Bee-keeper, says he gets more honey and a more uniformly high-grade article by extracting it when one-third capped, and ripening it artificially. He built a room adjoining his honey-house, covered it with glass, and put in an evaporator of tin, in which the honey runs slowly from side to side in a thin stream four inches wide a distance of about 110 feet, under the full heat of the Florida summer sun. By drawing off from the bottom of the tank he gets only the heaviest, while the thin honey at the top of the tank is constantly evaporating.

Pictures of Apiaries Wanted.—All have doubtless noticed that during the past year or two, since using a better quality of paper, we have been endeavoring to present to our readers half-tone pictures of apiaries in different parts of the country. Of course, we are after the nicest and best ones, and it may be that there are quite a large number that have not yet been shown, that are far superior to any that have appeared on these pages. At any rate, we would like to receive good, clear photographs of modern, up-to-date bee-yards for the use mentioned. Should any pictures be received that for any reason we could not use, we will return them, if requested to do so.

It may be those who have not already had photographs taken of their apiaries will be led to do so the coming summer, by reason of the above suggestion.
Medicinal and Nourishing Properties of Honey.

BY DR. JAS. M'LEAN.

A PERUSAL of Prof. Cook's able review of Thomas W. Cowan's book, The Honey-Beey, which appeared in the Bee Journal for Dec. 20, 1900, suggested the following remarks on pure honey, etc.

The physiological effects of honey are singular, though mild and passive in their character. Honey occupies a broad line between alimentation and therapeutics, being both food and medicine: therefore it belongs to the class of medicinal remedies that cure indirectly—that is, by putting the vital forces in such a condition as to enable them to overcome diseased action. Mineral water, cod-liver oil, malt, etc., all belong to this class of remedies.

Before speaking of the curative properties of honey we will note its physical properties.

In the first place, where does honey come from? Some assert that it is a secretion of the bees, others that it is a natural substance. Of course it is a natural substance. Each product the laboratory would have furnished us long ago with genuine honey. It must be remembered that the sugar and glucose that bees resort to in flowers and fruits, is nearer honey until it has passed through the stomach and intestines. It is well known that bees do not make honey, it is produced by their saliva, and the other to make it assimilative for the formation of an oil, that is perfect wax.

It is generally supposed that after a bee returns to its hive, it has treated it hurriedly down into a cell, and goes out for another, but this is not the case. When the bee returns, because of fatigue and under the stupifying influence of digestion, it has to abide for a time, both to recover its strength and to assimilate the product of its labors. We have reason to believe that even after the honey is deposited in the cells it has yet to receive the finishing touch of perfection, which in all probability is given by the younger bees of the colony. They live on the honey importations, and as the process of assimilation, digestion, and excess of gastric secretion: when coming to a certain point it creates a regurgitation something akin to vomiting. This is a preparation of bees preparing for the cell, thus completing the process of honey-making.

Another point as to the character of the bee's stomach. As soon as it is unloaded an insatiable sense of hunger and restlessness ensues, which at once forces the old bee to work or be disposed of. It is an insult to the bee to respect the buzz of the hungry bee, and admire the sweet disposition of the one that has just finished a sumptuous repast. Ah, how rare are family jigs when the pantry is ever full! It is Nature's law, all the same.

We go more especially into these details to point out the medical properties of honey. It has two physical elements that make it particularly a medicine, namely: First, an aromatic irritant imparted to it by the stomach of the bee. Second, its ready transformation into fat without those complicated physiological operations necessary to transfer other saccharine elements into this material. These make it at once both a local and a constitutional remedy. Laxative, diuretic, antispetic, resolvent, rubefacient, and a parasiticide. Constitutionally it is nutrient, demulcent, laxative, deoh- struent, alterative, restorative, tonic, expectorant, febrifuge, and antiphlogistic, being a most beneficial, containing poisons proper to the human body. These are manifested under peculiar circumstances.

When we say that honey is both an irritant and a sedative we mean that its first effects may irritate, and be followed with a sedative effect. All stimulants and poisons, whether taken internally or applied externally, act upon the system at first with the most of eye- waters, etc. The solution of honey as an eye-water proves particularly beneficial on account of its antiseptic, absorbent, or resolvent properties. It cures inflammation of the eyes in the way a solution of boracic acid does, that is, mainly by reason of its antiseptic and sedative properties.

The irritant properties of honey are, in a great measure, destroyed by dilution. Therefore, as a topical irritant where we wish to favor resolution by counteraction it is used in a pure state, or in conjunction with more active irritants. It is its irritant or rubefacient effect, joined with its emollient nature, that precipitates local inflammation into suppuration, and, therefore, a suitable remedy for chronic ulcers and boils, which do not answer to any other means. I have known a case precisely similar to one who applies a honey plaster over an inflamed eye in place of the solution. As a rubefacient and absorbent it makes an excellent local application in glandular swelling, and tuberculous inflammation; particularly when joined with iodine, iodoform, or mercury.

On account of the temperature of the body it is difficult to keep pure, undiluted honey on the surface. This can be alleviated to some extent by dipping the eye, as the Canton flannel, and applying them, changing frequently. I speak of it as a parasiticide not in connection with the theory of the pathogenesis of diseases as advocated by Pasteur, Cohn, Koch, Klebs, and others, who have investigated the bacteria, but even those who created general skin diseases, well known to almost every one. Take honey for the destruction of the bacteria, because of its antiseptic, tonic and laxative effects. Its daily use would disarm every dire and malignant disease of its destructive force. Cholera, yellow fever, smallpox, scarlatina, and diphtheria, may run their course as before, but comparatively in such a mild form as to afford but little, if any, suffering for the patient. I speak of it as a suppressant of malignancy in these diseases, and not as a curative agent.

The constitutional effects of honey can not be fully understood and appreciated, except it be studied from its medical properties, as represented above. All scientific solution of a complex mixture, which is worth the time of the reader, I have purposely left in the text to a long and complicated sermon. Every physician will read in it such a multiplicity of applications as would astonish the uninitiated.

As a nutritive and stimulant we speak of it as a food, but in connection with its properties which serve to arrest certain diseases, particularly consumption. The important features of the medical properties of honey lie in the nutrient, antiphlogistic, deoh- struent, expectorant, and resolvent, and the management of consumption, and its allied diseases.

Now, let us go back to a fact that exists in the process of making honey. No honey could be had if it were not for its ready metamorphosis into wax. In the making of wax, as stated. The great object in the treatment of consumption is to arrest waste. Therefore we resort to the use of oils, or remedies that will readily make fat in the system. But the great difficulty in the way is to get the system to accept these remedies and effect their assimilation. Under Liebig's authority we give sugar freely to make fat, but the system often refuses it. This alone gives us a great advantage in giving honey to the patient for food, and for that reason we invert it.

In being assimilated honey is disposed of in three ways. What is not deposited in the cellular tissue as fat is consumed by the liver, and its volatile principle is eliminated by the lungs. This elimination is a matter of the greatest importance. It is a part of all applications and uses of the honey. The most remarkable feature of honey as a sedative is in administration by atomization and inhalation. The spray arising in extracting has been proven to exert a very beneficial effect upon cough and dyspnea, thus revealing its curative tendency.

The most effective and enjoyable way to benefit from the general use of pure honey is to have in every home a ready supply, diluted with, say one pound to a quart of water. Let this be used when a large dose must not be used—from which about one tablespoonsful put into a cupful of warm or cold water and taken at each meal, would benefit one a thousandfold more than the stubborn application of nostrums which dilute the system and seriously disarrange our physical and mental machinery. Let any one who suffers from kidney and bladder trouble try this simple and pleasant substitute for one week, and be as well as, or better than he ever was. Indeed, must mankind be to reject one of Nature's very best disease-preventing remedies, in order to temporarily relieve their perverted appetites.

That we would learn seriously to feel and honestly to say, with the Psalmist of old:—"How manifold are Thy works Lord, God, Almighty, in wisdom Thou hast made them all"—including the divinely inspired honey-manufacturing bee.

Let me close by suggesting a trial of one table- spoonful of pure honey, dissolved in about half a glass of cold water, and one teaspoonful of tincture of myrrh, for the cure of indigestion.

San Francisco Co., Calif.
Prevention of Increase—Other Matters.

BY G. M. DOOLITTLE.

In a letter from a correspondent I find the following: "What is the best way to keep down increase? The colonies which I now have furnish all the honey I may need. I do not want to increase my number of colonies further than I now have. Please answer through the Journal, as I am not familiar with beekeeping.

The surest way is to give plenty of comb-room, and then extract closely till the swarming season is over. Probably not one colony in 50 will offer to cast a swarm treated in this way. In fact, very few colonies will offer to swarm where tiered up for extracted honey, and the extracting not done till the end of the season, providing that empty comb-room is given as fast as needed. But when working for comb honey the case is different, and the bees are almost sure to swarm, no matter how much section-room is given or whether these sections are filled with foundation or not.

I know of some apiarists who keep their apiaries at the original number of colonies, while working for comb honey. They are unifying all the brood and before the honey harvest, making one colony out of two, they preparing for this in advance by keeping each colony shut on only half the combs contained in the hives they use, making the stronger help the weaker till all have the half of their hives filled, in the manner just given, and then the bees will divide by natural swarming to the original number, keeping down all after-swarming. Or you can let them swarm without uniting before the honey harvest and, after the swarming season, is over, then divide the swarm to the original number. This accomplishes the same object as the former, only the colonies are not as strong in numbers for storing, and it gives more months to feed after the honey harvest is over, with less losses in section honey.

Swarming is the bane in comb-honey production, and Dr. C. C. Miller and myself are waiting, and living in hopes, that some bright bee-keeper will yet invent something, or evolve some plan, which will entirely do away with the swarming. This plan is based on the thought that they will work all the "livelong days," and all the days of the season, with the vias manifested by a new swarm, with no such a thought as swarming ever entering their heads. What fun there would be, then, in having a number of out-apiaries, all piling up the comb honey—yes, and home apiaries, also.

DRONES FROM VIRGIN QUEENS.

Another correspondent writes thus: "Please tell us through the columns of the American Bee Journal whether virgin queens ever lay any but drone-eggs? And are the drones from these queens capable of fertilizing other queens?"

To the first question I think it would be perfectly safe to answer no, although one or two cases have been reported but rather little as if these drones, which are only few eggs which matured into workers; but I think this can not be other than a mistake.

The second question is one which has not been settled satisfactorily to all parties. Some claim that such drones are just as good as any, arguing from a scientific standpoint that it must necessarily be that, as the drone is the "son of his mother," he could not be otherwise than as good as a virgin queen from a virgin queen as from the same queen after becoming fertile. On the other hand, some of our most practical bee-keepers claim that such drones are not capable of fertilizing queens, and give instances where plenty of such drones were flying but no queens would get to laying because the drones were flying when they should fly to, when they would become fertile and make good mothers.

I have had very little personal experience going to prove the correctness of either, but have always supposed drones from a virgin queen, when reared in drone-comb, were as good as any. Such drones, when reared in worker-comb, may be virile, and, even were they not so, I would not expect any queen to prove first-class which had mated with a drone reared in a worker-cell.

Can you tell us anything about this line? A practical article by some one having experience in these matters would be read with interest by thousands of apiarists.

"OUTGO MUST ALWAYS BE LESS THAN INCOME."

This is what Prof. Cook tells us if necessary if happiness is to result. (See page 248.) And I agree with him exactly as applied to successful business, or to "successful" health. But when he intimates that the "balance of trade" between this and other countries is "very cheering," because our exports exceed our imports, I can not harmonize his logic; for this, to our nation, is like Macawber's "Annual income.
Experiences With Swarming, Hive-Making, Etc.

BY J. B. ALEXANDER

I HAVE been keeping bees for three years. My text book is "A B.C. of Bee-Culture." I take two bee-papers, which cost me about one dollar, and turn over the pages of them I like them very much, because I think they are published by good men—men that try to do the right thing.

Last spring I had a colony of bees to swarm; I caught and caged the queen, and let the bees return, as I did not want to increase. One evening I looked through the brood-chamber to cut out the queen-cells, and the first cell I found the queen had just hatched—I saw her on the frame that contained the vacant queen-cells. I cut all the queen-cells that I could, as I did not want to leave one. I let the newly hatched queen stay in the hive. I noticed there were eggs in the combs at the time. In six days from the prime swarm they swarmed out again. Clustering for half an hour, then returned to the hive. I looked through the hive again and found one or two of the combs, to see if I had left another queen-cell. I found nothing but the cell that had first hatched, and one unassembled queen-cell with a larva in it. I cut this out and they did not try to swarm any more.

My next experience with the peculiarities of bees was in dequeening a colony of five-banded bees (these being the only five-banded bees in this portion of country). I noticed in the course of half an hour a great quantity of dead bees in front of the hive. I watched them for quite a while to see if robbing was the trouble; there was no robbing at all, for the bees all had the same number of bands, so I was sure they were having war among themselves. I opened the hive, and to my great astonishment it appeared to me that every bee in the hive was in a state of war with one of its mates. I swept the dead bees from the bottom-board, which I am satisfied would have filled a quart measure. I cleared the hive quickly, and smoked them with tobacco-smoke at the entrance. In five minutes they were perfectly peaceable.

Now some one will say that it was caused by robbing, but everything went to prove that there was no robbing going on.

I make my hives 16 inches long inside measure, and 12½ wide inside. I cut the frame-rabbets 3⁄8 of an inch deep, and 3⁄4 inch wide, and cut a piece of tin 12½×2½ inches, and double it so it is 1 inch wide, then make the other frames in the round edge (caused by doubling) of this piece of tin. Commencing 13-16 of an inch from one end, I file the notches 1½ inches apart. Then I nail the tin in the hive so that it cannot slip, and I have an extra inch in width. I am not afraid of my bars slanting, and if I do not believe the measurements are without value. It seems a pretty clear case that with long enough tongues there ought to be no difficulty about getting the red clover. If I could get all the red clover honey going on to waste within the reach of my bees, it seems to me I should hardly consider it either a sad or a fallacy. The fact that the midget destroy's Mr. Doolittle's chances does not make red clover honey any less desirable to me. We
are not all "migded." Thousands upon thousands of bee-keepers are located where red clover is all right except the depth of the flower-tubes.

Without knowing anything definitely about it, I am of the opinion that $200 would be a low estimate of the gain it would be to me annually if I could have all the red clover honey within easy reach of my bees. At any rate, I would be willing to give $25 or even $100, for a queen accompanied by a guarantee that I should have all of said red clover honey, and high $1 and $2 to the keeper. It is such a scoundrel that he would stretch the tongues in so as to palm off on me a $10 queen for a $25 one.

Although Mr. Doottle may have no red clover, he might be willing I should have some bees to harvest the hundred thousands of others. McHenry Co., Ill.

Small Neglects Affecting Apiarist Profits. Read at the last Convention of the Ontario Bee-Keepers’ Association

H. W. Z. HUTCHINSON.

"For want of a nail the shoe was lost; for want of a shoe the horse was lost; for want of a horse the rider was lost; being overtaken by the enemy and slain; and for want of a horseshoe nail a kingdom is lost.

Most emphatically is bee-keeping a business of details. Of course, there are certain broad principles that must be observed before success can even be hoped for. The apairy must be located where there are honey-producing plants, and there must be plenty of bees to gather the nectar. The bee-keeper must understand his locality, know when to expect the harvest, and have everything in readiness for it. If in a Northern climate, the bees must be protected from the cold in some kind of packing or by putting them into the cellar. If comb honey is to be produced, some system must be adopted that will keep the working force together instead of having it divided up into two or three colonies. But after a man has mastered all of the basic principles of bee-keeping—yes, after he has become conversant with the details—he may lose a large share of his profits simply from out-and-out neglect.

The bees are in the cellar. He does not go near them. He has made a perfect wintering place for the colony low and, if so, it might be possible to add to the protection afforded by the walls. Boards might be set up around the walls, held in place by strips of wood tacked to the sides of the house, and the space filled in with sawdust. This little colony, secure in its wintering quarters, may come through the winter in poor condition. The bees are in the cellar under the home of the bee-keeper he might employ artificial heat at those times when it is necessary to have a large oil-stove having a hood over it, connected by means of a pipe with the stovepipe in the room above, will answer every purpose. A cellar may become infested with rats or mice that will gnaw comb and do much damage if not gotten rid of. Equal parts of flour, sugar and arsenic placed in dishes in the cellar, will make quick work with the rodents. Mice will play sad havoc with colonies left out from doors if the entrances are neglected. The bee-keeper should make a wintering, he should not neglect them. A perfect wintering of the apiary lays the foundation for a successful season.

After the bees are placed upon the summer-stands don’t neglect them. As soon as the conditions are favorable, look after the wintering bees. Here and there will be a weak one. United, such colonies may prove as good as there are in the apiary. Neglected, they will be of little value—the queenless ones will certainly perish, perhaps because a prey to robbers, thus stirring up bad blood in the apiary at the time of the year when all should be peace and happiness. Some colonies will be found with a great abundance of stores, others on the verge of starvation. Neglect here means the loss of all colonies that are short of stores.

As the harvest comes on, don’t neglect to have the hives, sections, frames, etc., all in readiness. Some of you may be ready to shout, “Chestnuts!” Well, if only those who have never been caught, I think none of us will need to cover up our cars. Nothing will more quickly change the mood, and disposition, and intention of a colony than the neglect of its queen. It is, I think, simply, than the neglect to furnish it surplus room when it is needed. The disposition to store honey is laid aside for that of swarming. A colony with the swarming fever will do little work until that fever is abated. If a colony first swarms for a large portion of the hive will be kept, it will often continue on in this way the entire season with no thoughts of swarming. And, speaking of swarming, reminds me that the neglect to clip off just one little eighth part of a prime hive, the supposed losses from the bee-keeper striking a dejected attitude, as he gazes sorrowfully in the tree tops where he sees, appearing, as little specks in the sky, the last, some straggling members of the rear of a prime hive, that has just swarmed. If perhaps 50, perhaps 75, pounds of honey for its owner had he not neglected to clip off that little one-eighth of an inch.

When it comes to the extracting of honey there is on point that I wish to mention, although it may be more a mistake than a case of neglect; it is that of extracting the honey before it is ripe. Of course, it is possible to evaporate artificially thin honey, but with this evaporation goes a portion of the fine aroma. Not only this, but the evaporation of honey does not ripen it. The bees in their hard work has taken from the nectar a certain amount of water and sugar. They change the raw nectar into ripened honey. If we take it away from them before this change is completed, it lacks that much of perfect ripeness. It lacks the "tang" that tickles our palate. Thin, unripe, watery honey is not a thing to be desired. It is raw nectar, and not much disturbed. It is full of acids and disgusts and disappoints everyone one who has anything to do with it. Nothing has done more to destroy the market for honey than the placing upon it of unripe honey.

Little neglects in preparing the honey for market are very expensive. The neglect to scrape the propolis from the sections, the neglect to use non-drip cases, the neglect to put the cases into a larger case or crate when small shipments are made, may mean the loss of two or three cents on each pound. (Sectional cases are to be used, with roofs and bottoms put on one case and dabbing the one below it, coal dust and cinders rubbed upon the dabbed cases, greatly lower the price and retard sales. Before the days of no drip cases and outside crates I went so far as to wrap a paper around each case before shipment, that the cases might be clean when they reached their destination.

Men who make exhibits at fairs often lose premiums that they might have captured had they not neglected to label their packages tastefully. It is a little thing, but it adds to the finishing touch.

Then there are little things, like, “Where do you keep your smoker and fuel?” The neglect to provide a proper place for them may mean a costly fire. I once kept my smoker and fuel in the same storehouse with the bees, and was charged $50 for a fire that started just before I removed the cover, the flames burst out. Suppose the boiler had been a wooden box kept in a building, and the fire had not been discovered while still confined to the box? I now keep my smoker and fuel in a large box, with a hinged cover, out in the yard.

The matter of saving wax ought not to be neglected. It is a good deal like saving paper rags—just about as easy to save the odds and ends as to throw them away. A solar wax-extractor is a nice thing for this purpose. Keep it out in the yard and the bees will carry it to the comb toss it into the extractor. One year when I did a large job of transferring I threw all the odds and ends into a barrel, and pounded them down hard with the end of a large stick. The bees got down on it, and before I was through until that barrel two-thirds full of pounded-down comb was one mass of webs and wriggling worms.

But why multiply examples? We all know that the profits of an apiary can be entirely wasted or destroyed by such little neglects. Nevertheless, in some places, in some cases it is simply a combination of indolence, procrastination, and a sort of belief that things will come out all right of themselves. Then there is the neglect that comes from having to do so many things, and a certain amount of business that you can only half attend to, that something must be neglected, two courses are open: hire some one to help you, or else dispose of part of your business. There is more pleasure and more profit in a small business well managed, than in a large business that must be neglected. Some men are so constituted that they can not employ help to advantage. They have done all of their

May 23, 1901.
work so long that they feel no one else can do it properly. It would put them all inidgets to see some one else cleaning their sections, or uncapping combs for the extractor. Other men have learned that it is much more profitable for them to quilt, and plan the work, leaving the carrying out of the details to competent help. You know yourself or ought to, so choose the course to which you are adapted, but don’t keep on conducting your business in such a manner that you are compelled to neglect it. Be thorough, up-to-date, program, and expand, and don’t lose half your profits as the result of little neglects.

Questions and Answers.

CONDUCTED BY
DR. C. G. MILLER, Marengo, Ill.
(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—Enron.)

Queen Laying Several Eggs in a Cell.

What is the cause of a queen laying from one to four eggs in a cell? It is a weak colony, with a hive full of honey, and some chilled brood. It is not a laying worker that is doing the laying, but a fine, large queen.

Answer.—The colony though small is lively and ambitious, and the queen is probably fed as much as she would be in a much larger colony. The eggs must be laid somewhere, and as the space that is warm enough for egg-laying is too limited there is nothing for her to do but to use the same cells over again. As the colony becomes stronger you will find that she lays only one egg in a cell.

The Nail-Spaced Frame Preferred.

I have had more of the Hoffman frames than I want, and as I have sold all my bees and fixtures, and wish to start this summer, I wish to know first if the Danzenbaker is just as bad to manage for the reason of propolis, and are the general features as good as the nail-spaced Langstroth standard?

Answer.—The Danzenbaker frames are closed-end frames in full, and the Hoffmans partly closed, so there is more surface in contact to invite propolis in the former than in the latter. After giving a pretty thorough trial to both, and all to other kinds, and nothing so satisfactory as the Miller frame already described in these columns. I commenced using them on a somewhat small scale, feeling a little afraid that continued use would develop some objection not suspected in advance, but the more I use them the better I like them, and have perhaps 2,000 of them now in use.

Keeping Down Increase.

1. I have five colonies and do not wish to increase. The swarming-fever struck them a week ago and has not stopped yet. My neighbor told me how he does but I do not like his plan, viz: Take a soda-cracker box five inches long, about 8 x 10 inches, and about 8 inches deep, and put in the cluster into it, and place a bottom-board over it. Take it to a new stand, invert it, and as an entrance has been previously made we have a new but small hive which my neighbor says will be filled solid.

Yesterday one of these swarms came out of the box three times, clustering on the same post each time. The third time I gave them a new box with two pieces of foundation stuck to the top 1/2 inches wide, and they seem to stay all right. The neighbor says early in the spring he gives these cracker-box bees back to the original colony, and has a fine colony to begin the harvest, and then repeats with the same boxes next year. This is my first experience with bees, so I don’t like to fall too heavily on my instructor, but it does seem to me that the number of bees which I have put into these small boxes will be terribly crowded.

What was the reason of those bees coming out three times? As I am a half-invalid, through eight years of throat affection, it nearly exhausted me, going to and fro.

2. Now, to-day, another swarm came out of the hive that swarmed day before yesterday, at which time we requeened the colony, killing the old queen, of course. The bees are maintaining the new queen, just hatched yesterday, How can you account for to-day’s swarming with such a new queen? or do you think the new queen never materialized? Would they swarm under those conditions? We cut off all the rest of the queen-cells in that hive.

California.

Answer.—1. I’m a little inclined to think I’d pay off that instructor and hire a new one. To put a strong swarm into a box containing no more than 640 cubic inches—less than 10 quarters—in these days of expansion is pretty severe contraction. The combs built are not in movable frames, hence not the most desirable. The probability is that the bees were too crowded and warm, and swarmed out on that account. Shaking well and raising up the box inch from the bottom-board would help. If your object is to keep down increase, perhaps this plan might suit you better: When the colony swarms, kill the old queen and return the swarm. If your queen is clipped all you have to do will be to pick her up and kill her, and the swarm will return of its own accord. A week later cut out all queen-cells but one, and the work is done. There will be no more swarming for that colony till another year.

2. If I understand you, when the colony swarmed, you killed the old queen and returned the swarm to the queen-cells and giving them another cell, then two days later the colony swarmed again. It is not easy to say just why they swarmed the last time, but there are several possibilities in the case. One is that a queen may have entered from another hive. Another is that the cell you gave may have been well advanced, the queen having been held in some time by the bees so that two days after you gave the cell she was old enough to make her wedding-flight, and the bees swarmed out with her, and when she made this flight, which is not a very unusual occurrence.

A Question on Bee-Management.

White honey is produced in this locality early in the spring, and the nights here on the coast are cool so the bees fell to breed up to good working force in time to get the first flow. How will it do to form a nucleus say in June, and in the fall place it on the old colony with an excluder between; then when both are well filled with brood take out the excluder and kill one of the queens in the spring? Florida.

Answer.—I don’t know. I doubt if it would work to your satisfaction. The object would be to throw, in the spring, the force of the two queens together. I suspect you might do that better by having the two colonies side by side in the same hive. In this way you have a third division-board between them with no communication between the two sides. Then in the spring they could be thrown together. But it would be worth while to try very hard to have colonies so strong in the fall that there would be little need for feeding in the spring. Then the weakest could be united with the medium ones.

Managing Bees in a “Beer-Keg Hive.”

I have a very strong colony in a “beer-keg” nearly filled with honey. I propose to add one or two 8-frame hives underneath until the white clover flow begins, then change them to the top of the keg with a queen-excluder between, with the queen below. Will the bees carry the honey, or do you think they will form a separate colony and live in the brood alone until hatched, then put on sections. My idea is to get the honey now in the beer-keg in sections, and let the bees winter in the keg. Indiana.

Answer.—I’m afraid that thing is so mixed up that the bees will hardly know what is expected of them, especially if there is any of the beer left in the very bottom to stupefy their little brains! Evidently, your idea is that the keg will be so filled with honey by the time of clover that the bees will have worked down so as to fill one if not two stories of combs in frame hives.

That may be so, and it may be that they won’t come up to your expectations and will have very little done in the hive under the keg. Suppose, however, it works to your
satisfaction, and your two hives are fairly filled, it will be mostly brood in them. When you put them above the excluder, the queen you will put below in the key that is now solled with honey (for you may count that it will be filled with honey if the bees have been driven down to occupy the two hives.) At this time the bees will turn all their energies toward storing, and the likelihood is that while the bees will do some emptying to give the queen a chance, the chance will not be a very large one, especially as the queen up to this time has had unlimited room to spread herself and by this time has become somewhat exhausted with laying. The brood will be all the time having a home to turn and as your two hives are solid with honey there will not be such a great deal of time left for the bees to work in sections, for they will not do much in sections so long as room is left in the hive-bodies. I don't quite see what you expect to gain by getting your key filled with brood and emptying the top. If you want the bees to winter in the key, why not leave them their brood-nest there all the time, putting sections on the key? One good plan would be to leave them in the key till they swarm, then hive the swarm in a hive and throw the field-force all into the swarm, leaving the key to strengthen up for the winter.

**Transferring Bees on Crisscross Combs.**

I bought two colonies of bees and they are in small hives, one is a seven-frame and the other is an eight. The frames had no foundation, and the comb is built in every direction. Is it advisable to transfer them to another hive? If so, when is the best time? and will that prevent them from swarming?  

**ANoNTARO.**

**Answer.**—If you don't expect to handle the frames at any time, then it is not worth while to transfer, and it will be better to leave the bees as they are. If, however, you want to handle the frames at any time, then by all means they should be transferred. You can turn the hive upside down if the bottom can be taken off; cut down a long knife or saw so as to loosen entirely the combs from the side of the hive, then when you lift the hive-body off the frames it will be easy to get at the combs.

It is a good time to transfer, and it need not prevent swarming. Nowadays the tendency is growing toward waiting till the bees swarming, and transferring 21 days after swarming, when there will be no brood in the hive except a little sealed drone-brood.

**Curing Pickled Brood.**

What can I do to cure pickled brood?  

**WEST VIRGINIA.**

**Answer.**—In an able article in this journal five years ago, Dr. Wm. H. Howard wrote: I have recommended, with successful results, placing the bees on full sheets of foundation, confining them for three days (giving them plenty of water) before removing all of the insected material, that none of it might be deposited in the new combs to be covered with new pollen or honey.

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**Convention Proceedings.**

**Report of the Chicago Bee-Keepers' Convention.**

The Chicago Bee-Keepers' Association held its 23rd annual meeting at the Briggs House, Chicago, April 4, 1901. There were 35 in attendance, and several new members were secured.

The secretary had some correspondence with Mr. C. P. Dadant, about being present, and had given up hope he would come. But about 10 a.m. on April 4th a telegram was received by Pres. George W. York, saying that Mr. Dadant would arrive at the Union depot at 2:30 p.m. Of course this was an agreeable surprise, but we had known it a week earlier we might have filled the clubroom of the Briggs House at our meeting.

I would like to say right here that those 250 bee-kepers, within reach of Chicago, are standing very much in their own light in not attending our semi-annual meetings. We have really good times and exchange many valuable ideas.

Of course Mr. Dadant's presence made a good convention, above from any other annual meeting. He held up to us about Paris and the great Exposition: about the French people; about the little old man who had carried him in his arms when he was a very small child; and of course he was ready to answer any and all questions asked of him by the A B C class of bee-keepers as well as the X Y Z class—and the questions were numerous.

Prof. E. N. Eaton, State Analyst of the Pure Food Commission, was present, and addressed the meeting, and also forced his annual dinner tackle. He told us about Paris and the great Exposition: about the French people; about the little old man who had carried him in his arms when he was a very small child; and of course he was ready to answer any and all questions asked of him by the A B C class of bee-keepers as well as the X Y Z class—and the questions were numerous.

**Report of the Texas Bee-Keepers' Convention.**

The Texas State Bee-Keepers' Association held its 23rd annual session at Greenville, April 3 and 4, 1900. President W. R. Graham being sick, was unable to preside, and vice-president A. M. Tuttle being absent the meeting was called to order by the secretary, J. N. Hunter, who acted as chairman. He made a few preliminary remarks, reviewing the history of the Association from its organization to the present time. Prayer was offered by the Rev. W. R. Lowery.

Messrs. Hagood, Osborn and Scott were appointed a committee on program for discussion.

About 40 bee-keepers were present during the two days' session, representing some 2000 colonies of bees, the average yield of which last season being over 100. Secretary Hunter explained his method of transferring bees. He prefers the hybrid bees and uses full sheets of comb foundation.

J. R. Scott explained his method of transferring and feeding. He gives the black bees due credit for gathering honey from cotton.

Peter Lambert and some others are satisfied that bees gather honey from corn-tassels.

Mr. Tuttle has discovered that ants rob cotton-bloom of its honey on the sandy lands. He thinks that is the reason why bees gather more honey from black-land cotton-bloom.

Messrs. Graham, Hagood and Lowery were elected to represent the Association at the bee-keepers' meeting to be held at College Station, Tex., next July.

W. R. Graham was re-elected president; J. M. Hagood and W. R. Lowery, vice-presidents; and J. N. Hunter, of Renner, secretary.

After its usual vote of thanks for hospitality and entertainment the convention adjourned to meet in Greenville the first Wednesday in April, 1902.  

**J. N. HUNTER, Sec.**

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**Why Not Help a Little**—both your neighbor bee-keepers and the old American Bee Journal—by giving to the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

**The Chicago Convention Picture** is a fine one. It is nearly 8x10 inches in size, mounted on heavy cardboard 10x12 inches. It is, we believe, the largest group of bee-keepers ever taken in one picture. It is sent, postpaid, for 75 cents; or we can send the American Bee Journal one year and the picture—both for $1.60. It would be a nice picture to frame. We have not counted them, but think there are nearly 200 bee-keepers shown.
EASTERN FROM THE SOUTH.

As Dr. Miller, on page 219, queens may arrive from the South when it's not altogether safe to introduce them. General requeening with young queens is often urged; and I think that this practice should be discontinued. The queen is seldom danger to the hive, and usually a word to the wise is sufficient: but if it is a printed word he may not see it—so I think a little more "racket" on the point would be well. Doubtless the Southern breeders will be willing to assist in the racket—to moderate the push for extra-early queens.

QUEEN KIND OF CHAFF HIVE.

Mr. Ochsenner, of the Wisconsinans, seems to have a queen kind of chaff hive. Pumps down heat so that melting occurs, and frames and colony have to be put into single-walled hives to stand the sun. That's not the kind of chaff hive which prevails elsewhere out west?

WEAK COLONIES IN THE SPRING.

Why does a weak colony in spring survive when left alone, but dwindle out and perish when united with several others like itself? I have made an off-hand guess that although not fighting when united they felt more like fighting than they did like going to work—disgruntled at the mixed company. Am quite willing, page 246. I am fairly disposed to give Mr. Doolittle's more thoughtful solution—too much activity, too much brood started, and nearly all the bees dying off, in regular course of nature, before any young bees emerge. Page 291.

SWARMS CLUSTERING WITH CLIPPED QUEENS.

Prof. Cook gives us a good, hearty stake to tie to on page 250. Has seen hundreds of swarms issue whose clipped queens could not go with them; and only a few in the lost fail to cluster (either wholly or in part) before going back.

HYMYOPTERA—"MARRIED WINGS."

I'm a little disgruntled at Prof. Cook's Greek on page 233, where he translates Hymyoptera (the order to which our bees belong) "membranous wings." Don't wish to deny that the word will bear that translation, as meanings of words go; but what in hymenopterous is the matter now with the straight-out translation "married wings?" This is an allusion to the fact that each wing is bound to its neighbor on the same side both fore and hind, thus marrying the one to the other. It's marriage become a failure even among the wings of bees?

DISCIPLE OF IZAAK WALTON.

And, so according to page 238, its fishing you're going to set me at next. On the familiar principle, that a man can go on the most freely on a subject when he draws it fresh out of his own head (unpestered by facts and natural laws and experiences and things), I ought to be able to write a two-volume work on fishing. Tell Mr. Blunk it's 57 years this spring since I cast my first hook in the waters for fish. But I didn't catch any. Neither did I on any subsequent occasion. Never in my life caught even a minnow the size of your little finger. So in this sub, for the volumes, if you want 'em.

WHY BEES BUILD A CERTAIN KIND OF COMB.

It is something of a mystery—and a mystery that we should care much about—why a bee should build worker-comb when they build it, and drone-comb when they build that. One rather feels that Mr. C. P. Radant is walking on the water instead of touching bottom in that part of page 207. The facts are as he states them; but the reasons—well, we must ask the respect to the reasons, too, till some one can offer better ones. In fact, if we assume that (for some unknown reason) a bee prefers to build drone size, except when the queen (by some unknown means) causes them to build worker size, that will pretty nearly cover the ground, perhance. If the queen caused them to do it we would not need to assume that she intelligently caused it, nor yet that they fully understood the effect of their own work. But even then we might have trouble to answer when asked: Why then do they build any worker-comb in an upper tier of sections?
and it is better still that the most of our beekeepers will prize it most because of this very fact. Any one who knows Mr. Hatch and his kindly thoughtfulness, can readily understand how Mr. Wallenmeyer, and Mr. Miller might say that it was a prize that was of no worth to the rest of the household. Some may wonder that I speak of wax as “dirt.” A weed is a plant out of place. Dirt is matter out of place. Purslane (pusley) on the common or by the roadside is no weed. In the garden or field, it is a pestiferous one. This is the same as can be said of the dirt that is neither dirt nor dirty. Inside the kitchen it is usually both.

THOUGHTFULNESS FOR OTHERS.

The above suggests what I believe will prove the best ornament in the household—thoughtfulness to help and to give pleasure to all its members. In many a home the thoughtful habit becomes almost instinctive. If any member of the household has the habit of rising earlier than the others, he or she will do his or her best to keep the others from sleeping. Thrus at this earlier hour he will find himself tiptoeing about the house, which he would not think of doing later in the day. The door will be carefully shut and the lights will be turned off to keep the others from sleeping. This caution may become so instinctive that it will even last through the day, as I have known the father frequently to find himself tiptoeing even in the daytime as he approached the bedrooms.

It has been my privilege in my past life frequently to pass, often quite late in the evening, by the house of an old gentleman whose habit it was to retire early, with a person who thoughtfully closed the doors and shut off the heat, to make an inspiration to me. This one, as we approached the house, the old gentleman, would always lower the voice or cut short the laugh which might awaken the sleeping one. This never-failing thoughtfulness did more to beset thoughtfulness in old hands than perhaps a dozen requests to act in like manner.

We often hear people lamenting that there is so little reverence at the present time among us. I believe this implies an error. I believe there is more genuine reverence among us today than ever before. The greatest of these examples is my father. I am always displeased at the complaint. Want of reverence is so hateful a thing that even fear that it is a growing evil may well cause unrest and regret. We must remember in this day of telephone and rapid transit, we have traveled over the whole world, each day, and our fuller knowledge often misleads us in regard to the condition of society.

I repeat, I believe the world never has so much of reverence as it has today. It is certainly true that nothing so increases the reverent spirit among us as thoughtfulness. There is no place where thoughtfulness pays such large interest as in the home. I remember once a girl asked me for a sure test in selecting the right person for a life companion. I believe there is no one person on this earth, not even the thoughtful father, mother, yea of all the members of the home circle—always intent to add to the pleasures of others, and equally careful never to wound or make uncomfortable—has been requested to stop playing the part of God.

Unselfishness must always be at the root of thoughtfulness. Unselfishness is a Godlike attribute. If we can only teach our children from the very cradle always to be thoughtful of the happiness of others, and always to be on the lookout for opportunities to make the home more a place of comfort and good feeling, we surely have done our part toward the building of an unselfish and a reverent character.

In the years when I lived at the Michigan Agricultural Colleage, there was a Sunday morning habit of my wife and family to go to the church in Lansing, three and a half miles distant. In going, we almost always passed one of the business men of the city going with his family to the same church, a little boy who was~his brother. In the early years, up to the teens, they were always hand in hand, and the evident attention of the brother, and watchfulness for the comfort of his little companion were often the subject of remark in our family as we passed the church. This boy and his little brother, unconscious of it, were helping us to become better people. As the young people grew into their teens, the same attention on the part of the brother was always in evidence. Walking on the windward side of the church, while the others passed first into the church, were all signs of a lovely character which from the first challenged our admiration. Mrs. Cook often remarked, “There is the making of a model housekeeper.” True, if it is a true judgment, it was not accidental. There are a few things which we in the home circles should never forget—love of truth, self-control, and this habit of thoughtfulness; it is a trinity of blessed qualities, and means so much not only to the life of the individual but to the comfort and blessedness of the home, that we should commence at the very cradle to speak their importance to the loved ones whose characters we are to fashion.

NEATNESS AND ORDER—A FOURTH VIRTUE.

It has been my happy fortune to visit very many of the beekeeping homes of our country. It is always a rare treat to visit those who are interested in the same things that occur in the audience-room, one of the best pleasures comes from the study of others, their habit and manner, so in these visits it is not the least pleasure that comes to us to study the special fitness of our hosts.

I remember my first visit to Mr. T. F. Bingham’s apiary. I had often met Mr. Bingham in conventions, and was always pleased at his perfect attire and every courtesy, and so was prepared to find his shop and apiary the perfection of order and neatness.

I have one other example that is quite-as striking, and no one will wonder that it is suggested. It was that of Mr. Hetherington, who has been so long associated with Mr. Bingham in the matter of the honey-knife. Many of my readers will remember how pleasant it was to look upon Mr. Hetherington at our conventions. One had to see him but a moment to know that system and neatness were ever in attendance at the Hetherington home. It was but to think of all hundreds of similar cases. Mr. Hilton and Mr. Taylor were other examples. These men never came to a convention without a necktie, or with spots on their clothing. These gentlemen had apilaries that were justly their pride. It always gives me a thrill to see the neatness that was so much in evidence, and they could put their hand on every utensil even in the dark. Such system implies neatness, for nothing is out of place, and so from our description above, there can be no dirt.

I have often wished that it might have been my good fortune to have visited the apiaries of Captain Hetherington, of New York State. I have no doubt he has the same habit of order and neatness that I admired in his brother. We have all wondered that one man could manage so large a business as is carried on by Captain Hetherington, and win success all along the line. Does not the word system give quick explanation?

We have given above a trinity of qualities so excellent that we should commence at the cradle to develop them in the lives of our children. Would it not be well to make it a quartet, and add the virtue of neatness and order? This can be done by teaching the children always to hang their clothes neatly on a chair as he retires to keep his playthings in perfect order; and his room, if we can afford him one, always neat and orderly. Put a premium upon such habits, and if we cannot, let him be urged to keep his playthings in order and his room neat and orderly. We can put a premium upon such habits, and if we cannot, let him be urged to keep his playthings in order and his room neat and orderly. We can put a premium upon such habits, and if we cannot, let him be urged to keep his playthings in order and his room neat and orderly. We can put a premium upon such habits, and if we cannot, let him be urged to keep his playthings in order and his room neat and orderly. We can put a premium upon such habits, and if we cannot, let him be urged to keep his playthings in order and his room neat and orderly.
A Young Bee-Keeper's Report.

My grandfather was a bee-keeper, and he gave a colony of bees to the oldest grandchild in each of his children's families, and I, being the oldest in our family, got one of them. We now have 12 colonies working nicely on fruit-blossoms. We make our living mostly by selling section honey and poultry, and would like to have 30 colonies to help us get our own honey. I help manna the hive and bees and take off the honey; my father is not able to help any, so I've taught children all help a little. I go going 3 sacks of bees to work about an hour 3 times a week, and when I do that I will have to help my father. I am not afraid of them as a great many people are. I am a girl of 13 summers, and not a very big one at that.

GERTHIE HENRY.
Page Co., Iowa, May 3.

Bees in Fair Condition.

At this time our bees are in fair condition, and we hope for a good crop of honey. All our colonies wintered well.

Miss. D. W. WOODMANSEE.
Arapahoe Co., Colo., May 9.

From a Young Bee-Keeper.

I am 18 years of age, and have been trying to keep bees for the last four years. I got up to 75 colonies, and about one third dry years I lost 60 of them, so you can see we have hard times as well as anybody else.

Los Angeles Co., Calif., May 1.

An Industrious Lady Bee-Keeper.

We think we will have a good honey crop this year. Our bees are storing in the supers now, and are swarming right along. We have 48 colonies. You ought to have been here last week and the week before, I, myself, put up 75 hives, driving every mail, and then painted them, and caught all swarms that came out. My husband is a railroad conductor, and can't be here to do any work, so I have to hire anything done on the place. I was out putting up hives one evening when a lady came in. She said: "Oh, the bees are to have it that way? You have got a gold watch." I said: "I have silk dresses in the wardrobe, but I like to work. My husband tries to keep me from it, but he can't.

I think if more women would work there would not be so many bankrupt men. Of all things, a lady woman is the worst. The bees teach us such good lessons. For 20 years my health had been so bad every spring that if I didn't use a tonic I was bedridden; but the little bee is the best tonic. For five years we have kept them, and I am out almost all day with them. I do not need a drop of medicine now. I tell many women if they would keep off the streets and go to bed before the stings of a few colonies of bees, watch them, and read bee-books instead of novels, they would be better wives and mothers. They say: "Oh, the bees will sting." Well, if they do it will not last long. I would rather be stung trying to make something than to be stung for the want of something.

MRS. J. TUCKER.

Prospect Good—Bees Stinging Chickens.

We are expecting a good honey crop this year. Bees wintered well, seen strong, and are building up fast at present. Fruit is a little past its best now. Vine maple will be the next to bloom after apple; it makes a very nice honey, and has a flavor like maple syrup.

I have about 30 colonies, mostly hybrids, though some of them are blacks. Last year

G. F. DAVIDSON & SONS, Estab. 1858.
FAIRVIEW, Wilson Co., Tex.

If you want the Bee-Book
That covers the whole Apicultural Field more completely than any other published, send $1.25 to
Prof. A. J. Cook, Claremont, Cal.,
for his "Bee-Keeper's Guide."
Liberal Discounts to the Trade.

Queen-Clipping Device Free.
The Monnette Queen-Clipping Device is a fine thing for use in catching and clipping queens' wings. We will mail it for 25 cents, or will send it FREE as a premium for sending us ONE NEW subscription to the AMERICAN BEE JOURNAL for a year at $1.00; or for $1.00 we will mail the Bee Journal one year and the Clipping Device, Address:

GEORGE W. YORK & COMPANY.
Chicago, Ill.

A Word to the Wise Bee-Keeper
Is the title of an essay on queen-rearing. Sent free to all applicants. Address

HENRY ALLEY, Wrenham, Mass.
Please mention Bee Journal when writing

SOUTH DAKOTA FARMS
Is the title of an illustrated booklet just issued by the Chicago, Milwaukee & St. Paul Railway, to popularize the country between Aberdeen and the Missouri River, a section heretofore unprovided with railway facilities, but which is now reached by a new line of the Chicago, Milwaukee & St. Paul R'y. Every one contemplating a change of location will be interested in the information contained in it, and a copy may be had by sending a 2-cent stamp to P. A. Miller, General Passenger Agent, Chicago, Ill.

We want *
To sell you BEE-SUPPLIES!
Our line is all new and complete. Send for our Illustrated Catalog; it will convince you that the Dollathill Hive is the best on the market. Our prices are right, and our service is prompt.

FRED W. MUTH & CO.
S. W. Cor. Front & Walnut Sts., CINCINNATI, O.
Please mention Bee Journal when writing.

ALBINO QUEENS
If you want the most prolific Queens—If you want the best of your bees—If you want the best honey-gatherers you ever saw—try my Albinos. Unexcelled in April, $1.00; Tested, $3.00. For Samples, 25 cents.

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Dittmer's Foundation!
Retail—Wholesale—Jobbing.
I use a PROCESS that produces EVERY LIVESTOCK, excellent foundation honey, the BEST and MOST desirable in all respects. My PROCESS and AUTOMATIC MACHINES are my own inventions, which enable me to SELL FOUNDATION and

Work Wax Into Foundation For Cash
at prices that are the lowest. Catalog giving Full Line of Supplies, with prices and samples, free on application. BEEWAX WANTED.

GUS. DITTMER, Augusta, Wis.
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POULTRY BOOK FREE, 44 pages, illustrated with 2 mon, trial subscription to our INLAND POULTRY JOURNAL.
Indianapolis, Ind
Please mention Bee Journal when writing.

Bees—Supplies

CATALOG FREE.
1. J. STRINGHAM.
105 Park Place, NEW YORK, N. Y.
Please mention Bee Journal.

PAN-AMERICAN OPENING.
The Nickel Plate Road will sell excursion tickets from Chicago to Buffalo at $13.00 for the round-trip on each Tuesday in May (the 7th, 14th, 21st and 28th), with limit of 5 days, normally returning good on any train to and including midnight train from Buffalo on Saturday following Tuesday tickets are sold. They will be good going on all trains on date sold.

Daily train from Chicago at 10:30 a.m., arrives Buffalo 2:05 following morning; daily train from Chicago at 2:30 p.m., arrives at Buffalo 6:45 next morning; daily train from Chicago at 10:30 a.m., arrives Buffalo 4:45 next afternoon.

All trains carry through vestibuled sleeping-cars. Individual Club Meals, ranging in price from 35 cents to $1.00, and no meal in excess of the latter figure, are served in dining-cars.

For sleeping-car reservations and all other information, call Chicago City Ticket Office, 111 Adams St., or write John Y. Calahan, General Agent, 111 Adams St., Chicago, phone Central 2027. Chicago Depot: Van Buren St. and Pacific Ave., on the Elevated Loop.

No. 7—20A2t
A Home in Colorado FOR

I have a fine Fruit-Ranch of 14 acres here at Fruita, all set to fine fruit, principally winter pears, prunes, pears, peaches, peaches, plums, cherries, apricots, plums, and about 700 grapes; 100 colonies of bees, mostly Italians, and 1000 bee boxes. I will sell with the place. The orchard is in fine bearing, being about 10 years old, and is clean and handsome, and of the black bee, one of the best 7-room ones, nearly new, with bath and water: a good new barn for two horses and two cows, and a brick hen-house and two good cellars, good lawns, and a very fine spruce, and also a paid-up water-right with the place, with an abundance of water at all times for irrigation. I am desirous of being near the town in my occupation, and will sell the place at a bargain. With the proper party the yield from the place this year will be about $2,000. It joins up to within 20 rods of the town site of Fruita, where we have one of the best high schools in the state, employing 7 teachers. It is only one mile to the depot, churches, school and post-office, and has telephone connections with all parts of the state. This is a good, healthy climate, and good society.

Address for terms and further particulars, J. C. CARNAHAN, Box 64, FRUITA, MESA CO., COLO. Please mention Bee Journal when writing.

American Bee Journal

May 23, 1901

Advert 1 - Advertisement for a home in Colorado with a fruit ranch and 100 colonies of bees.

Beekeeping:

Advert 2 - Ad for Bees Expelling Water from Nectar.

Advert 3 - Ad for Black Queens for sale at 25 cents each.

Advert 4 - Ad for Italian Queens.

Advert 5 - Ad for Good Wheels, with a description of their features.

Advert 6 - Ad for Excursions to Buffalo Expedition via Nickel Plate Road.

Advert 7 - Ad for Bee-Keepers' Supplies.

Advert 8 - Ad for Bee-Keepers' Supply Co., with details about their products.

Advert 9 - Ad for Bee-Keepers' Sale, with details about the prices and items available.

Advert 10 - Ad for Bee-Keepers' Sale, mentioning the types of bee boxes available.

Advert 11 - Ad for Bee-Keepers' Sale, mentioning the quality of the honey and bees.

Advert 12 - Ad for Bee-Keepers' Sale, mentioning the variety of products available.

Advert 13 - Ad for Bee-Keepers' Sale, mentioning the criteria for a good wheel.

Advert 14 - Ad for Bee-Keepers' Sale, mentioning the types of honey and bees available.

Advert 15 - Ad for Bee-Keepers' Sale, mentioning the quality and quantity of the honey and bees.

Advert 16 - Ad for Bee-Keepers' Sale, mentioning the locations and quantities of the honey and bees available.

Advert 17 - Ad for Bee-Keepers' Sale, mentioning the locations and quantities of the honey and bees available.

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Advert 47 - Ad for Bee-Keepers' Sale, mentioning the locations and quantities of the honey and bees available.

Advert 48 - Ad for Bee-Keepers' Sale, mentioning the locations and quantities of the honey and bees available.

Advert 49 - Ad for Bee-Keepers' Sale, mentioning the locations and quantities of the honey and bees available.

Advert 50 - Ad for Bee-Keepers' Sale, mentioning the locations and quantities of the honey and bees available.
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THE FINEST IN THE WORLD.

Our New 1901 Fifty-Two Page Catalog Ready.

Send for a copy. It is free.

G. B. LEWIS COMPANY, WATERTOWN, WIS., U.S.A.

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Excellent shipping facilities and very low freight rates for Southern and Eastern territories.

The Business End of the

NEW RUMELY SEPARATOR

Like all the "Rumely Goods" this is simply perfection. When coupled to our New Rumely Rear Geared Traction Engine they constitute a thrilling outfit that not only makes big money for the thrasher, but saves grain and money for the farmer. They are durable beyond comparison and when you buy them you are done buying for years to come. Take a little time to think about how you would pay you to own such an outfit, then write us for free catalog.

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Please mention Bee Journal when writing.

28 cents Cash ★ ★

paid for Beeswax. ★ ★

low, upon its receipt, or 30 cents in trade. Impure wax not taken at any price.

Address as follows, very plainly,

GEORGE W. YORK & CO., 144 & 146 Erie St., CHICAGO.

Marshfield Manufacturing Company.

Our Specialty is making SECTIONS, and they are the best in the market. Wisconsin BASSWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free illustrated catalog and price-list.

Marshfield Manufacturing Co., Marshfield, Wis.

Red Clover Queens

LONG-TONGUED BEES ARE DEMAND ed NOW.

O NE Untested Italian Queen FREE as a Premium for sending us TWO new subscribers to the American Bee Journal for one year (with $2; or, one Tested Queen free as a premium for sending us FOUR new subscribers with $4.00).

We have arranged with one of the oldest and best queen-breeder (having many years' experience) to rear queens for us the coming season. His bees average quite a good deal the longest tongues of any yet measured. The queen if you will use a direct from Italy, having imported him herself. Her worker-bees are large, somewhat leather-colored, very gentle, and scarcely requiring veil or smoke. They store red clover honey last season.

Orders for these "queens" will be filled in rotation—first come, first served—beginning about June 10th. It is expected that orders can be filled quite promptly, as a large number of nuclei will be run. All queens will be guaranteed to arrive in good condition, and all will be clipt, unless otherwise ordered.

CASH PRICES of these fine queens will be as follows: Untested, $1.00 each; Tested, $2.00 each. Send all orders to

GEORGE W. YORK & CO.

144 & 146 Erie St., CHICAGO, ILL.

Please Mention the Bee Journal when writing Advertisers.......

When it becomes cool the bees will shrink away from the space between the top-bars, and cluster on the combs above and below. So you need not have a colony full of bees in two stories. Now put between these two stories another story filled with dummies and Queens that will attract 10 percent more bees to "man*" the combs than it did before! I suspect 5 percent would be plenty.

Even if the loss were all be supers—1,000 to 2,000 cells, or 3-3 of the brood-chamber—I should still want the top-bar 3/8 deep. At one time I used, entirely, white, red, yellow, and mixed, eight sections; and when I put on a super I put in the middle of it a brood-comb from below. The bees very promptly accepted that super, but it did not answer to leave the brood-comb there very long. If I left it long enough the bees would be in direct contact with the sections, they would carry across some of the old comb, and the sections would be about as dark as the combs opposite. With 5 top-bars, which I used exclusively for many years, the same thing would happen to a certain extent if no slab honey-board was used, especially if the sections were left on some time before being sealed.

So if the prevention of burl-combs by deep top-bars be all a delusion—which I do not believe—and if there is a loss of 1,000 to 2,000 cells to a comb—a lesion which I very much fear—then I am believing— I still want 3/8 top-bar for the sake of having the sections so far from the brood-combs. The bees would not find it convenient to carry up a lot of black wax to spill the snow-white sections.

The Poison of the Bee.

The inflammation and other unpleasant sympotms which usually appear after a bee sting are often attributed to that sharp sting, so widely distributed in the animal kingdom, and known under the name of formic acid. This acid is, however, has not only the power of causing swellings, its utility to the bees is quite another character. Prof. Joseph Langer, of Prague, a little while ago, in the sections 2,000,000 of the poison-glands of 25,000 bees. This he found to be a clear liquid, soluble in water, with a slight acid, and a very characteristic smell, which, however, soon passes away; this scent can, therefore, be the poison. The formic acid which gives its peculiar acid reaction to the contents of the gland is also very eavénescence. The contents of the gland itself retain their poisonous properties, however, even when dried and subjected to heat. The poison is, therefore, suppose, a vegetative base, an alkaloid, in the most active poison-sens in the vegetable kingdom is known to be.

Prof. Langer proved that the poison has no effect whatever on a healthy skin; if, however, injected under the skin, all the symptoms of bee-sting set in. Should it reach the larger veins or arteries it causes, a general disorder of the system, which remains one of snake-poison. The weight of the poison injected into the wound made by a bee's sting is between 2-10,000th and 6-10,000th part of a gram. The largest part of this is in the formic acid, which is such an important factor for the well-being of the bees. This works as a poison, which destroys the honey, owing to its acid reaction. The bee allows a little formic acid to fall into each cell filled with honey before the closed top, so that the quantity is enough to prevent fermentation. Honey extracted from unsealed combs never known to bee unless 0.1 percent formic acid is added, which is all that is required. — Translated from the German by R. Hamlyn-Harris, in the Brittish Bee Journal.

Weight of Bees and Their Loads.

The following Stray Stray appears in Gleanings in Bee-Culture:

Alex. Astor reports in Reven Int., that he made an examination of 12,300 bees in all, and he gives in milligrams the weights of different kinds of bees. From this

1 I deduce the following table, showing the number of bees in a pound avoirdupois:

<table>
<thead>
<tr>
<th>Bees</th>
<th>Pounds</th>
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<tbody>
<tr>
<td>4604</td>
<td>just out of the cell.</td>
</tr>
<tr>
<td>4986</td>
<td>falling before a swarming colony (probably 2-3 days old).</td>
</tr>
<tr>
<td>2457</td>
<td>wax-workers.</td>
</tr>
<tr>
<td>3574</td>
<td>swarming workers.</td>
</tr>
<tr>
<td>4500</td>
<td>black workers in May-June.</td>
</tr>
<tr>
<td>5056</td>
<td>Italian workers in May-June.</td>
</tr>
<tr>
<td>5151</td>
<td>black workers in July-August.</td>
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<tr>
<td>5272</td>
<td>Italian workers in July-August.</td>
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</tbody>
</table>

According to that, the load of honey of a swarming bee is about 1/4 it's own weight. —This table is exceedingly interesting—the more so, as I think the figures very well the figures that have been given heretofore. It appears, then, that bees weigh more during the swarming season than that which weighs the most of any. This fact is as well as interesting. It appears, again, that in May, June, July, and August the black workers are heavier than the Italian. I had always supposed that the average Italian bee was, if anything, a shade larger or heavier than the black. Is it not possible that the black bees referred to were Carniolans, or of that race, and so weigh a little more, or that the difference of those in the relative weights, for we have to assume that the Carniolan is the largest bee of the species Aüsa mellifera; and we have also assumed that the little black bees of this country are not the same as bees—the smallest. With regard to the amount of nectar a bee can carry, it seems to me the figures I have here before me as without any in excess of one-fourth its own weight. There, I have just looked it up. Yes, Prof. Knowles says that a Carniolan weighs 0.001 lb. in a pound, and that 10,000 bees can carry a pound of nectar, this being the fewest number to carry an amount of nectar, according to this, than a bee can carry half its own weight in nectar. But Prof. Knowles estimates that on an average it will carry more than one-fourth its own weight in nectar; and he estimates with the above figures. But so far as wing-power is concerned, we know that one can carry one pound of nectar in its own weight, and that there is a difference of one-fourth its own weight between and there is a difference of one-fourth its own weight between and has dissected the honey-sac of worker-bees when they were filled with nectar, so that they almost drooped lower than the floor in that entrance. This was, at the time, about the size of a No. 4 shot, or perhaps a little larger.—Extr. in American Bee Journal when writing.

R. W. W. WEBER.

CHICAGO, May 7.—There is very little being done in honey as present with practically no demand for the extracted grades; several consignments for some time have been the receipt of rapeseed oil, I am told, which is being used by some of the larger concerns, with the result that honey prices are being held down. A little choice white comb is in demand, and there seems to be an improvement in the market for white honey. The prices of black honey are about the same as last year. There was a small fair at the recent convention in Nebraska, but the sales were not particularly good.

C. H. W. WEBER.

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[Ad: George W. York & Co., Chicago, Ill., are headquarters for Root's Bee-keepers' Supplies in Chicago. Send to them for their free catalog.]
American Bee Journal

May 30, 1900

Weekly Budget.

An appropriation of $6000 is to be used in helping to make an exhibit at the Pan-American Exposition. Up that way they know how to get up a good show.

Dis-eases of Bees and Legislation.

The title of a new nomenclature issued recently by N. E. France, State inspector of apiaries for Wisconsin. It treats of foul brood, its cause and cure; pickled brood, black brood, dysentery, etc. Under "Legislation" it gives the laws of Wisconsin relative to bees. It can be had free by the beekeepers of that State.

The Home Circle department is thus very kindly referred to by "Stenog" in Gleanings in Bee-Culture:

"Prof. Cook's talks for the home circle, now running in the 'Old Reliable,' constitute an excellent feature of it. They bear largely on the proper management of children, and home conduct in general. All who have Mr. York's newspaper will do well to read these lines of Prof. Cook's first thing, as they fit one for what follows. Best of all, we know that they speak from experience, and in his daily life is an expanse of what he enjoys."

French Honey-Caramels.

The Gazette d'Aleppe, a French exchange, gives the following recipe for making caramels, which it pronounces "incomparable." Rose water, 15 grams; powdered sugar, 100 grams; fine honey, 200 grams. Mix and boil, stirring constantly, until a drop of the compound, when cooled, is hard and fragile. Pour out on a buttered or oiled marble slab, and shape the mixture into suitable pieces by means of a teaspoon. So reports Gleanings in Bee-Culture.

Dr. C. C. Miller is nothing if not a crank on the subject of roses. Of course, any one who's kind of a crank is a delightful crank. In Gleanings in Bee-Culture he wafts this bit of rose perfume through a single straw:

"One rose in September is worth more to me than ten in June; as soon as the blossoms-buds show on the hybrid perpetuals I carefully pinch off every one except one or two of the most advanced on each bush. Then the bush is not exhausted with its June crop, so as to give no roses later. Of course, that will not do for June roses, but their stalks are cut back severely in spring, which makes the blossoms a little later, and perhaps a little finer."

Cuban Honey-Plant or Belleflower.

Mr. O. P. Poppleton, of Dade Co., Fla., wrote us as follows May 1:

Friend York — I send you to-day a photograph of my 'Belleflower' plant, taken last December, while it was in full bloom. It grows over the porch of my house. This plant is the source of the honey obtained in Cuba, and I am informed that it is also abundant in other Islands of the West Indies also in Porto Rico, "Pentas belladonna," common name, 'Agualmaido,' while in English it is usually known as "Belleflower." This is one of the Morning-glowes, probably the most abundant bloomer of the entire genus. It is confined to the tropics, as frost kills it to the ground.

The flowers are shaped like a church-bell, are about 1 oz. inches across, and are nearly all pure white, shading into purple and yellow in the bottom of the inside of the bell. In Cuba it blooms from the 25th to late in February. It is a very showy flower, and when in full bloom it looks, at a distance, almost like a snowbank, especially when it runs over hedges or fences. It not only yields large quantities of honey, but it is also the most delicious honey, not equal to the first, but better than the last.

The principal interest this flower has to American bee-keepers lies in the fact that it furnishes nearly all the foreign honey that competes with our product in our own markets. Those of us who have to dispose of our crops in the Eastern seaboard markets, are already feeling the result of its competition.

Mrs. Geo. Jackson, of Grand Traverse Co., Mich., is one of the growing number of very successful women who keep bees. The following paragraph from Gleanings in Bee-Culture tells something of the results she has obtained:

"In the fall of 1898 I had 18 very strong colonies, and in the spring of 1899 I had still 18 strong colonies. Well I feared and do still feel, proud of those bees. They commenced work the first day they were out of the cellar, and worked every pleasant day in May and June, until heavy frost came in the fall. One colony, the 'Queen' of my apiary, did itself proud. During the season we took 10 supers of well-filled and nicely capped white honey, each super containing 24 pounds. It did not swarm, and we had a heavy flow of basswood honey. The other colonies swarmed early, and June 30 I had 35 strong colonies. I did not get less than two supers of honey from any colony, and from many of them four."

Mrs. Jackson says that Mr. Jackson has given up all claims to "the only privilege of eating the honey." He is a wise man. Any man who has a wife that can get such results from bees as Mrs. Jackson has done, can do no better than simply to lay claim to his wife only, and then let her manage the rest. Her price is far above — well, say $200 red-clover queens?"

Manfield Parish's fine decorative design on the cover of The Ladies' Home Journal for June forms a fitting introduction to an admirable illustrative article, in which the most interesting features of this number are a double-page of pictures, entitled, "Where Golf is Played," showing some of the handsomest country club houses in America; a series of curious "Love Stories of the Zoo," told by Clifford Howard; the first installment of a fascinating new serial, "Elven," by Elizabeth Knight Tompkins; a touching full-page picture of "The Passing of the Farm," by W. L. Taylor; the queer experiences with "Some People I Have Married," by the Rev. D. M. Steele, and a vigorous article on "Women as Poor Pay," by Edward Bok. Numerous other articles of special and broad interest fill out the rest of the number. By The Curtis Publishing Company, Philadelphia, Pa. One dollar a year: ten cents a copy.
The Freight-Rate on Comb Honey was left unchanged by the Western Classification Committee at its recent meeting in California. We suppose bee-keepers ought to be grateful for this, but in all justice to comb-honey producers, the rate should be reduced. Perhaps with the proper effort on their part at some future time the reduction will be secured.

Steam-Press Wax-Extractors.—A late number of Gleanings in Bee-Culture occupies several pages discussing wax-extractors. It seems that for several years in Germany and France, and more recently in this country, wax-extractors have been in use by which the wax is pressed out by a screw-press, the press the all while being kept within steam, so that there is no danger of the wax charring as when taken from a heated plate and put in a press in a lower temperature. Some object that these steam-press extractors are on too small a scale for rapid work. Gerstung, a German editor, has invented a press to work in hot water, which he claims is better than in steam. It is possible that the solar extractor may have to take a back seat for something that will do more thorough work in getting the wax out of old combs.

Four Brooks in Michigan.—Geo. E. Hilton, president of the Michigan Bee-keepers’ Association, sends us the following concerning the four-brook law in that State, which he desires all Michigan bee-keepers to read:

To the Bee-keepers of Michigan.—So many letters are coming to me regarding the four-brook law in Michigan, that I will try, through the bee-papers, to answer in a general way, and save myself valuable time at this busy time of the year.

First, the law is in operation to-day, and the inspector is appointed. I feel very much relieved, I have made four trips to Lansing in behalf of the measure, and it required all the influence that myself and others could bring to bear to secure its passage, as its importance was so little understood. I have paid out about $50 in expenses, to say nothing of the time I have donated, which would amount to as much more. And now I want the bee-keepers of the State to take advantage of the law, and receive the benefits that may come from our efforts.

I went to Lansing last week, spending a portion of three days, and succeeded in having John M. Rankin, our State apiculturist, appointed as our inspector, and I know of no one that can better attend to the work, or who is more worthy of the position. The work is under the management of the State Dairy and Food Commissioner, Hon. W. B. Snow, of Lansing, Mich., to whom all communications should be sent. He is in direct communication with the Agricultural College, and will inform Mr. Rankin what is expected of him.

We have but 8500 to use this season, but as the necessity of the work becomes apparent we shall be able to get more. The disease has an alarming foothold in our State, and it behoves every bee-keeper in Michigan to do his whole duty in assisting in the extermination of this dread malady.

Trusting this will make everything plain, and save me many personal letters, I am

Very respectfully yours,
Geo. E. Hilton.
President Michigan Bee-keepers’ Association.

Mr. Hilton and others deserve the thanks of every Michigan bee-keeper, for their successful efforts in securing the passage of their four-brook law, and also for the appointment of Mr. John M. Rankin as four-brook inspector. Now, let all cooperate in the attempt to eradicate completely the scourge which Mr. Hilton says has already gained such a foothold in Michigan.

Other States should promptly follow the good examples set by Wisconsin, Michigan, Colorado, and some other progressive States that have been wise enough, and energetic enough, to enact laws for the purpose of protecting the bees from the deadly disease of foul brood.

Let us all hope that after the bees, the hogs, the cattle, and all other farm livestock have been fully protected, our legislators will wake up to the importance of protecting that "best crop of the farm"—the boys and girls—from the curse of the saloon. Up to the present time they are not considered of sufficient value in most States to overbalance the greed for ill-gotten financial gain.

Simkins’ Method of Introduction seems to be gaining in favor. Confine the queen lasting for 30 minutes, keeping her warm, and let your queen quietly in at the top of the hive, invading and following with a puff of smoke. This at night. Then do not disturb the colony for 18 hours.

Decay for Swarms.—Mr. Doolittle says in the Progressive Bee-keeper that years ago he hung up dried mullen tops that had been out over winter, for swarms to settle on, and three out of four swarms chose those settling-places. For those who allow natural swarm-ing he commends the following, which he cut out of an old newspaper:

"A good way to catch swarms is as follows: After each melting of wax preserve the residue of dirt, pollen, cocoons, etc., which is left after the wax has been pressed out, until enough for the purpose has been obtained, then will add to it one-half pound of resin and melt it all in an old vessel. Then having secured some old mullen tops, take an old spoon and spread some of the mixture onto one side of two or three, then keep adding more tops and of the mixture, until the whole covered together is a fairly good representation of a swarm of bees, when you have an excellent bee-bob. When the swarming season comes on, hang your bee-bob on the limb of a tree or a pole in the apiary, within the reach of your hand, and of the bees also, and surely every swarm will settle on it. For something to hang it up by, put in a good, stout wire while making, cementing it in at the center."

A School for Bee-keepers is one of the up-to-date things in Vienna, Austria. Government aid has been secured, ground purchased, and a building erected. The German bee-journal, Bienen-Vater, has a fine picture of the building, and another of the apiary. A chief course is to be held some two weeks, beginning in June, with a possibility of the same being repeated. Only 20 applicants will be received at these chief courses. Subsidiary courses will be held on 10 specific afternoons on different dates from June to September, allowing 40 to attend. Tuition is entirely free.
Contributed Articles.

Depending Upon Bees Alone for a Living.

BY C. DAVENPORT.

I have noticed that the question, "Is it safe for one to depend upon bees alone for a living?" is one that is frequently asked, and Dr. Miller has ably handled the subject a number of times, but perhaps a few words from me in regard to the bee-keeper’s livelihood will be considered out of place. I am one of the few who are specialists, that is, I have no other business or occupation of any kind except bee-keeping, and I have made a living and enough so I could stand a few failures without going to the poorhouse. But I am not bold enough to change the occupation, and it is not likely that I will ever do so. And while I should not advise a young man to take up bee-keeping as a life work, in my opinion there is no question but what a living can be made at it in a good locality, if one understands the business and is willing to work at it. There is, though, no need for a man with a family to depend altogether on bees for a living, for he should own at least a few acres where the home yard is located, so that a few cows and pigs, and a large flock of poultry, with 300 to 400 colonies of bees, would, in a good locality, insure a living for a family, and a bank account as well.

I am acquainted with a bee-keeper who has about the above number under his care, and has made something, about $1500; though this to some might be considered a small amount, here it is considered a large income, and by some would be looked upon as a small fortune. Though we are not as bad here in this respect as a man from one rival region who wrote to a firm in regard to their lowest-priced saw-mills. Soon after the information was sent, the firm received the following letter from him:

"Dear Sirs,—I ain’t a joiner but any saw-mill. What do yer take me fer? If I had $800 do what dear I wud want a saw-mill fer?"

It seems that in his locality $300 was considered enough so that any further requirements would rise to increase the amount was needless. And as with this man, some may find that it costs more to secure and properly equip 300 or 400 colonies for either comb or extracted honey than they think it does; and to make a success of bee-keeping at the present time, modern hives and apparatus have to be used. It is so now in any business or pursuit. To succeed one must keep abreast of the times, and the profession of bee-keeping is not as easily acquired or mastered in all the many details essential to success as many imagine, for practically in few if in any other pursuits is there so much conflict of opinion as there is in ours. So many of these important details must be settled and determined individually, for the methods and appliances that work well with some, may with others in a different, or even the same, locality, be a failure. For instance, about the worst investment I ever made in our fixtures was for 40 wood-zinc queen-excluders. Do not ask why I did not purchase the patent excluders, for I use a large number of them, but they are all-zinc. I know that many prefer wood-zinc to all-zinc, but with me they are worthless.

The way I remove an excluder from a hive is to insert the thin edge of my hive-tool under it, and strip it right off. When this is done here with wood-zinc, the very thin pieces of wood that hold the zinc strips to the wood partitions are also stripped off, and unless this is done, they come to pieces. It is the amount of character or stickiness of the propolis gathered in my locality that causes this. Even with the all-zinc-wood-bound ones, the thin part of the wood frame that holds the zinc soon peels off, and the frame is made for them that will hold to be stripped right off, no matter how badly stuck to the hive and top-bars they are. Of course, one could use enough care to remove anything without injury, but I have not time for this. During the busy season I have to make things move quickly, and it is money worse than wasted for me to invest in, or keep any appliances with which much unnecessary care has to be used, or that requires needless time to handle.

To illustrate again, last season I was explaining to a bee-keeper the great superiority of hives that did not have an entrance cut in the hive itself, which allowed them to be quickly hived up, moved, and be ready for use. He replied that if entrances were cut in the hives, it was desired to tier them up, they did not take long to stuff in rags. It takes more time, though, than I can spend for them. "When the bees are not to be stuffed with rags, it soon goes to the wood-plot. Not but what they can be used so as to help secure as much surplus honey as those which are not defensive, but with me the time lost in fussing with them is soon worth more than the cost towards the hives, and the time saved by me. For, if I must overcome this trait. And after, they have put anywhere from 15 to 30 pounds of white honey in the brood-chamber which should have been in sections, instead of then being willing to work in sections, they are determined to swarm, and I do not, with me, do as much section-work as do the swarms of brown bees. With the latter I can secure practically all the white honey in the sections, whether they swarm or not.

But in my opinion there is as much difference in brown bees as there is in Italians. For extracted honey I prefer Italians; they will gather more honey, go a greater distance, and protect their hive and combs from the ravages of the moth-worms much better than will brown bees, and this is no small advantage.

Some claim that moth-worms never injure strong colonies of any kind of bees, but this is a mistake, for the combs will be injured, and hundreds of eggs, larvae, and hatching brood, will sometimes be destroyed here by moth-worms in strong, thickly colonies of brown bees.

Southern Minnesota.

Short-Cuts in Extracting Honey.

Read at the Wisconsin State Bee-Keepers’ Convention, at Madison.

BY FRANK MINNICK.

Solomon says, in Ecclesiastes 1:9, "The thing that hath been is that which shall be; and that which is done is that which shall be done; and there is no new thing under the sun." In passing through the historical records of our State, and after some years ago, I say that the hand of an Egyptian mummy, and wondered if it had not wrought in accord with Solomon’s words; or, in the words of the poet with a line of my own added,

"Perhaps this pretty hand now pinioned fast,
Has loathed glass to glass of Pharaoh’s glass;
Or dabbled his but elegy Queen Dido’s dyes;
Or handled Langstroth or similar hives which are first-class."

But whatever may have been, or whatever of lost arts are buried in the sediment of the Nile, or wherever they may be, we are where we are. Historians look into the past, poets into the future, but we are to deal with the present, so let us get down to business.

Very often the shortest way across is the longest way around, but I wish to call to your minds a few of the short-cuts I have discovered in reading a few workhave culture, and in the 20 short years that I have made bee-keeping a means of gaining a livelihood.

In the first place, it is very desirable that the bee-yard be as large as is in some parts of the country where the bees live in such a way as to swarm toward each other, and the rows far enough apart to leave plenty of room for the "honey-carriage," and a space to work in where scarcely any bees are flying. It is also well to have a lower than the best yard, for one can wheel very much more down hill than up.

After handling many different sizes of combs I have settled down to what the "father of American bee-keep-
ing," our beloved and lamented Langstroth, considered the very best—his 10-frame hive, in brood and extracting departments. I have worked my winter repositories (which are cellars) into extracting-musums, and they are very cool and pleasant on a hot summer day. I have discarded screen-doors and ventilate through screen-windows. Bees will not accumulate on a wooden door and rush in with you by the thousands.

Place the extractor on a platform from two to 4 feet high, and dig a pit so that the honey goes by gravity from the extractor through the strainer to the keg. My strainer-box is made after the Rambler pattern, which is a tight plate, but fairly near the top. The cheese-cloth which I use for a strainer is rolled up on one end and stretched to the other, as it becomes clogged. It is rolled by means of a ratchet-wheel on each roller, held in place by a stake into which the roller will down into. I have also a tin strainer above the cheese-cloth, which catches all the coarse stuff.

For an uncanning—can I use a 200-pound honey-keg with the cells placed on the platform in a box with a bend and nail it together so it will drop down into the bottom of the keg; then make another one that will fit inside of the first one; place unprinted wire screen-cloth on the larger hoop, pressing the smaller one down into the work, which is held in place with a few pieces of lath makes a fine strainer for the uncanning-can; and a hole made in the bottom allows the honey to drain out.

For a frame to hold the comb while uncanning if a strip across the top of the keg 12 inches with a nail driven through each end, between the hoop and stave, to hold it steady; but before I nail it down I drive an 8-penny wire-nail about 6 inches from one end from the upper side, for a piece of wood to hold the hoop and stave. I have this point on which turns our fortune (or misfortune, I sometimes think) holds the frame at almost any angle desired without slipping, and I can reverse it. All these motions which are necessary in uncanning are accomplished with one hand without lifting the comb.

I know of no better uncanning-knife than the Bingham & Hetherington. I used to lay the knife on the strip on top of the keg with the handle projecting over the edge, but usually found one who upsets the "shaver," and I was acting in that capacity one day, when, in handling a heavy, slippery comb I let it drop on the projecting handle, which caused it to jump at me like an animal thing; as poor as its aim was it made a "shar" cut" in my ear, and drew forth rich, royal blood. So now I drive a small nail part way into the end of the handle beside the shank, and hang it inside of the keg.

The Porter bee-escapes are a great invention. I try to get them on at least 24 hours before the first honey is to be extracted, and generally use the same one who upsets the "shaver," and try to have enough to keep us running all day, so I put the escapes on another lot immediately so that they will be ready to extract the next morning.

Now coming to the pleasantest part of bee-keeping, with veal laid aside, sleeves rolled up, and my honey-kegs previously tested with boiling water, I am ready for a big day's run. As the combs are uncanned they are placed on the platform in a box with a tin bottom, from which an active, careful boy runs them through a Cowan extractor. The empty keg is placed on scales under the strainer-box, which will sink at the desired weight, and cause the honey-keg to close automatically, by the spring of the side of the keg, and the frame.

The keg is quickly removed and replaced by another, and so the work goes merrily on, and I am content.

 Shall Bees Be Taxed?—A New Yorker's Opinion.

by Friedemann Greiner.

It is my opinion that every patriotic person, and all good citizens, should be willing, nay, anxious, to pay their just share of taxation, bee-keepers included. If our patriotism makes us liberal only in the expenditure of cashed-up property, and of the time and labor which we might celebrate the anniversary of the Declaration of Independence worthy (?) or perhaps the victory of the Republican party, or any other political party, then our patriotism is not worth much, and leads us astray. If our patriotism does not prompt us to come forward with our treasures, our stored-up papers, mortgages and notes, and demand that we are justly taxed for all we possess, as a reciprocity act for the protection we enjoy, then we would better not make much ado about our patriotic feeling. I am sorry to say that a great many people, even those of high rank, try in every conceivable way to hide their possessions from the eyes of the assessors and tax-collectors.

I am not sure that taxation will ever be equitably adjusted. The situation to-day is practically the same as in the many centuries gone before. History shows that the poor classes of citizens have always been oppressed by the strong and rich classes, which in turn again gave rise to the so-called revolutions. In other words, the common people would endure about so much, but when the pressure became too great, then they kicked. Of this I am sure, that the Christian spirit will so penetrate the heart of each individual, and the masses, that this earth will become more heaven-like, and that self-sacrifice will be driven out; but before that time will come the world will not reach this state of things. Let this be as it may. I do not wish to speak out and avoid being taxed on my bees. What I do object to, is to be picked out of the large number of wealth profiteers and owners as the only one to pay. I am in favor of having all kinds of property taxed, have brains taxed, etc. We did not succeed in having a national income-tax law passed—it was declared unconstitutional. Let us try it again—it is a just and wise course, and the same. Those that have shall give, ought to give!

If I am going to be taxed on my property am I not justifiable in demanding that my neighbors shall also be taxed? Everyone has his property and a large number of my neighbors has six fine horses; their market value is $500; nothing said of the single and double, light and heavy harnesses, wagons single and double, carriages, reapers, binders, etc; he has a head and body of hogs, with a value $800; then he has 100 sheep with a market value of $800 dollars; a herd of swine, valued at $100—all in all, his stock has a value of $2100. Let it be understood that at an open sale his stock would probably bring that amount of money, at least. But a few days ago I asked him how much tax he paid on this nice investment. Well, what do you think? Not one red cent!

I am a bee-keeper, principally. My stock of bees consists of 75 colonies, with 300,000 bees, $300, no more. Of course I would not sell them for that, not even for twice that amount. Besides the bees, I keep one horse and two cows, valued at $150, which concludes the list of my stock. In all it represents in value $450. So much tax I do not consider, unless the wealthy neighbor is exempt on his $2100 stock investment?

When all other personal property is enlisted on the assessors' list and lawfully taxed, then I will cheerfully consent to have my bees listed, also I understand in some parts of the country bees partly assessed, to furbish watches, pianos, other musical instruments, carriages and stock of all kinds. Of course, where this is the case bees should not escape.

But there is another standpoint from which taxation of bees may be viewed. The cane-sugar interest in the South, and the beet-sugar interest in the West and North, are fostered by the Government to such an extent that even a premium or subsidy is paid to sugar manufacturers on every pound of the market. Honey is sugar. Why do we bee-keepers not receive a subsidy on the honey we produce? A great deal of honey goes to waste in the flowers year in and year out. It can not be said that all honey is gathered, as until the bees are ready it is not through the mile. The honey, if left in the flowers, does no one any good. Uncle Sam ought to encourage bee-keeping, to the end that all this honey might be gathered and saved, instead of wasting, producing 25 cents a pound.

And, finally, there are thousands and millions of blossoms that need fertilizing every year. Many fail to set fruit for lack of pollen-carriers. More bees, even if they gathered no honey for us, would be an advantage to the fruit tree growers, wheat, corn, and potato growers. For the sole purpose of fertilizing fruit-blossoms. For this service the bees ought to receive pay and protection, or rather the bee-keeper ought to receive from the Government a certain amount premium, say 25 cents, or more, for each colony kept, instead of being taxed for them. This idea is not a new one, by any means. The people of the middle age valued the service the honey-bees rendered, and did pay a premium for keeping them. I believe I mentioned this
fact several years ago in a longer article on the history of the bee.

That interest in bee-keeping was manifested in a later age by that great king and statesman of Prussia, Frederick, living during the 18th century. His order was, that every minister of the gospel in his kingdom, every order of monks, and all monasteries, must keep a certain number of bee colonies, and every crown tenant paying 150 thaler rent had to keep 10 colonies: those paying higher rent 20 colonies. For every colony less than that number five thaler penalty had to be paid. Each farmer that had more than an average of four colonies, from that number down to one colony, according to the number of acres of land he owned. Failing to meet these requirements, about 50 cents had to be paid for every colony not kept, as the result of which, the queen was required to go to every colony left, and above the required number!

From this it will be seen that Frederick must have been convinced that bee-keeping offered many advantages, and produced great benefits. In this understanding he was far ahead of our time, and any suggestion if a good results could be obtained.—D. C. Roberts, Colorado.

Yes, we practice artificial swarming exclusively, though we do not call it by that name. We call it “division of colonies.” Swarming is anything like swarming. True artificial swarming is done by removing a swarm of bees, the queen in a forced way, either by drumming the bees out from one hive to another, as formerly practiced with the box-hives, or by shaking enough of the bees with the queen to a new box.

I must say, however, that if we were practicing bee-culture for comb honey with the usual eight-frame hive, such as is recommended by many bee-keepers, we should be far from recommending artificial swarming, but since we are trying to devise means to prevent the natural swarming in the limit of our power. From repeated acknowledgments of comb-honey producers who use small hives, I have concluded that this method of bee-keeping produced rather too much increase in ordinary seasons, and that a better method was a method by which less increase could be had.

By our methods, we produce extracted honey almost exclusively, with large hives, always supplied with a sufficient amount of empty comb to prevent the desire of swarming, except in extraordinary seasons. The only desire increase, usually in sufficient amount to make up for winter losses, in each apiary, we follow the artificial methods.

As to the production of as much honey with a colony that has been divided by any manner whatever, either natural or artificial, as with a colony in which all the bees remain at their post, that is out of the question. The bees that are taken away, or that leave with a swarm, go to making that swarm prosperous, they harvest honey for its brood, and for the building of its comb, and, while doing that, they surely can not be expected to produce surplus honey. But if you are in a location in which two crops may be expected—such as is very rare in this country, if the second crop is a very safe probability, then what you may lose in the first crop by dividing, will perhaps be more than repaid by the product of the extra colony which you have brought into existence. You are exactly in the position of a man who is bringing up a family. While his children are small they are a strain upon his energy, for he must support them, educate them, train them to the duties of life, but when the children are grown, they are a very great help instead of a drain upon his resources. If you begin the season with 25 colonies of bees and seek no increase, you may have a very fair crop, but if you double their numbers, though you will have no crop during the early summer, the fall crop will probably be double what it would have been had you depended upon the original number of colonies for your supply.

There are many methods of making divisions or artificial swarming. Nearly every writer describes his own plan, and they are all good, in a greater or less degree, if they follow the first principles of the trade—of leaving colonies queenless the least possible time.

For the new method of queen-rearing, among which the Doolittle method stands conspicuous, it is not very difficult to rear queens from the very best mothers to supply all swarms made. Or, if this be thought too difficult, queens may be purchased from reliable breeders, especially in the South, for a small price. Thus swarms may easily be supplied with very good, choice queens, and little time is lost.

The plan which we follow, and which proves the most economical, is to rear our own queens from colonies which are not likely to give any surplus. This, of course, applies only to an apiary in which the colonies are not all intended for forced increase. If we must have increase at the exclusion of everything else, then let us use every colony of sufficient strength to further our purpose. But if we want an increase of say only one-third, we will aim to leave the most populous colonies intact, taking the brood and bees from colonies which have bred up too fast to make a crop. This must not be understood to mean that every weak colony may be divided, for there are sometimes colonies of bees which fail to breed up, from divers causes, and which remain weak till after the honey harvest. These are of no value, and must be taken out of our reckoning.

But we have colonies of bees that breed up promptly and plentifully at the opening of spring, and begin the harvest with as full a force of field-workers as is possible for our hives to hold. We have at a small expense, and where there are colonies which have been delayed in their breeding by different circumstances, are still quite prolific, and find themselves with a large amount of brood, but with less field-workers ready to take care of it. Our plan is, to take the small colonies that are behind-time for the harvest, and it is to them that we look for the supply of brood for our divisions. There is nothing lost in the way of a crop by dividing them, for they would only just begin the harvest of a swarm, and the brood and bees that they can furnish will give us quite a good many “swarms” that will have enough to make preparations for the second crop. Thus, if there is any chance for honey, our best colonies will harvest the first, and the small colonies will have the second.

But if we breed our own queens, no other considerations should deter us from using the very best colony for breeding the young queens. Prolificness and hardness first, then durability, and lastly, reliability. Reliableness is also a consideration. But if we breed mainly from pure Italians this quality will be a matter of course with every one of our best colonies.

A vigilant eye must be kept on the divisions. Until the bees get a great deal of honey, and the combs are all built, they should not be left to their own devices more than a week at a time. In this way only can we expect to succeed.

Hancock Co., Ill.

Six

"Long-Tongued Bees—Fad or Fallacy, Which?"”

By E. R. Root.

On page 293, I find an article by Mr. G. M. Doolittle under the above heading. “Of late years,” says Mr. D., “some of our bee-papers start off with some new idea, or some old one revived, and in a little while the heads all bloom seem to get twisted... which, a few years later, is dropped, with hundreds and thousands of hard-earned dollars wasted over the hobby or fad.”

A thousand dollars—that’s a big sum, and thousands of thousands of dollars—that’s a very big sum. All fads that have been dropped that have cost anywhere near such sums. Reversible frames? We sold, perhaps, more than any other; and yet we did not sell, all told, $300 worth of them. Self-hives? About 250, at 20th. But we must have some failure fads in order to get those that are a success.

Did Mr. Doolittle never ride a hobby, or push a fad? Well, let’s see. Did he not champion wide frames for sections, that we had to get with 17 years ago? And now they are used by very few, including Doolittle. Was he not one of the very first who started the fad for tall sections? Did any one waste thousands of dollars on short-haired bees? I can not recall one. He started the fad for rearing queen-cups, and the good show a good Queen-cups. Did he not waste thousands of hard dollars on that? But the fad may be dropped for drone-comb queen-cups. He helped boon, years ago, in his pamphlet, “The Hive I Use,” the gallop hive; and some of his followers, as I happen to know, wished afterward they had not followed him, because they had on their hands
a lot of odd-sized hives. But now Mr. Doolittle says the Langstroth is just as good as the Gallup, and has the advantage of making thought bear. And that reminds me that Mr. D. has decried other fads which he has since adopted. He condemned, for instance, thick-top bars, on the ground that they were burr-catching. But he has been compelled to use them. He also ran against the idea of warning, that there are not positively sure that the amount of honey a colony will gather is in direct proportion to the length of the tongues of its bees. But, as you say, there is nothing wrong in selling them. If one wishes beauty, he has a right to pay for it, and the breeder to sell it; but when Mr. Doolittle condemns others for pushing, I fear he has the same mania himself.

He is selling the Prominent with a promise of bringing in more honey—he should not forget that there may be others who may be equally honest in advertising and selling long-tongue bees.

He apparently questions the propriety of charging $10, $15, or even $20 for queens. If so, it is wrong for him, but perhaps in a lesser degree, to charge $5.00 for his best queens. It may be that no single bee is worth $25. I have no quarrel with any one who so thinks. I know this: We refused a five-dollar offer of a breeder to sell red clover bees right to sell stallions, Jersey bulls, dogs, and roosters of high blood, at big prices, is it awkwardly wicked to sell queen-bees at ten and twenty-five dollars? Certainly not; for Mr. D. has said that the queen is the pivotal center of the colony, and in the same way an extra-golden one is the pivotal center of a whole apiary.

He quotes Stengel, in "Pickings," as saying that no one claims that the long-tongued bees would be any better except of red clover honey. He is on to say if this is correct, "then these long-tongued bees are of no special advantage to me nor to two-thirds of the acreage of North America. I never claimed that the long-tongued bees would be any use to me..." There is no access in bee-culture. The fact is that there are other honey-plants that have deep corolla-tubes. I refer especially to the Compositae family. Then there are certain corolla-tubes in the heads of alaski that are too long for the bees to reach to the bottom; and there are certain tubes of even white clover that are somewhat long for the tongue-reach of the average bee. If there are other honey-plants that have deep corolla-tubes, then practically all of Mr. Doolittle's arguments fall to the ground. He certainly knows, however, that in his own bee-paper, the United States is decidedly different, especially in the South; and he must not judge the whole United States by the vicinity in and around his place of residence in Onondaga County, N. Y.

He says, further, that he finds breeders in the extreme Southern States, such as Florida and Texas, advertising long-tongued queens, "as just as if those long tongues were a great desideratum for that Southern country." Why, Mr. Doolittle, is it not a fact that most of the Southern bee-queens are sold in the North? Can't you see, for instance, how a manufacturer of stump-pulling machines, located on the prairies of Illinois, might sell such machines in localities in other States where such machinery would be in demand?

The quotations Mr. Doolittle makes are, in fact, from one of Mr. Hutchinson's advertisements, from some of my own writings, and from a statement or two in the American Bee Journal. 100% of these statements were:

"To give misleading statements, or those that are actually false, is something that our bee-papers of the present day should not stoop to do—not even when the motive of gain kornered its advertising." Why, Mr. Doolittle, is it possible that Mr. Hutchinson, the editor of some of the other bee-papers, and all these other brethren whom you have quoted, are putting out "statements..." that are actually false, just to "sell"...? "gain"? I can not think you believe that. They may be misled; they may be mistaken; they may be wrong in their opinions; but falsifiers for gain, never.

The next point is whether it is necessary to "call a halt," I partly agree with you; but it seems to me, Mr. Doolittle, in view of what I published on page 295 of Gleanings, that you are somewhat late in the day. After making all those quotations, and putting them in such a way as to give the impression before the readers, not that those of us who sold long-tongued stock had quite lost

our heads, you might, in all fairness, have given other quotations from the same writers that hold up the danger-signal. For example, on page 285 of April 1st Gleanings, I said:

"There is danger that many who get queens of this blood (long-tongue) will be disappointed, and in the end the whole business be prejudiced. The reason for warning...is not positively sure that the amount of honey a colony will gather is in direct proportion to the length of the tongues of its bees..." In any case, we do not love our local "bees.")

Again, on page 401 I published something more in the same line. I did not give these editorials because I thought it was necessary to call a "halt," but only to draw attention to certain phases of the question that were liable to abuse, and to prevent, if possible, probable disappointment.

Mr. Bond is not repeating that the red clover is not the only plant, by any means, that has long nectar-tubes. Second, that, if we succeed in getting long-tongue stock, we shall have bees that will get more honey out of alaski, as well as more honey out of red clover, and they might be the answer to the beehivists who have been telling us for years past that clovers have a stocky, vigorous growth. I have seen the corolla-tubes of alaski as long as the tubes in ordinary red clover in common seasons, and I have seen the nectar-tubes of red clover, which are the same length as those of them—too deep for the average bees to reach the bottom of.

I desire to say that I believe Mr. Doolittle is in his position; but he has allowed his prejudices to warp his judgment, I fear. I bear no ill will toward him, and hope he does not toward me.

No. 5. Practical Lessons for Beginners in Bee-culture.

BY J. D. Gehringer.

Continued from page 295.

"Now, Mr. Bond," I said, after returning with him to the hive chosen as our object lesson, "right here is a practical illustration of what may be accomplished in the direction of increasing the chances in bee-culture. This hive has done wonders so far this season. In fact, it has stood first-rank ever since I first started it with its present queen.

Bee-books tell us that a queen should be superseded the third or fourth year, because at that age queens begin to decline in egg-laying power. I have seen this seemingly orthodox deliverance asserted, re-asserted, and elaborated in the bee-books by bee-keepers whose orthodoxy one would scarcely venture to call in question. But neither bee-books, nor orthodox bee-keepers, are entirely reliable in all things; owing, however, to the fact that many things come to our notice by practical experience and observation, as we pursue each his own theory or plan, that are unique in the sense of being new, or without precedent. My experience with this colony for three years proves that this assertion, which may seem to some like an unjust aspersions, is neither rash nor egotistical.

Well, to illustrate: I took from this hive, this morning, before you came, four supers of 25-pound sections each, all well-filled and beautifully finished, and nearly as white as snow. The fifth super—the one I took off a little while ago—is also full of honey; but, as the sections are not all sealed over, I leave it on the hive until the bees complete their work in it. But, in order to provide honey-storing room for them I shall give them a fresh super directly.

"Now, you see, here is a honey-yield from one colony of five supers, or 140 pounds—all white clover honey. And, the white clover yet being in fairly good condition, there is a prospect of at least one more super being filled and finished: making six in all. Then there is the late honey; the nectar from the alfalfa, of which there is a super for me, and store from 30 to 40 pounds for themselves to winter on."

"Excuse me, Mr. Gelting, for expressing my opinion, but isn't this about the finest honey stock I've ever heard of?"

Mr. Bond was leaning against the apple-tree under which was the champion colony when he made this slangy remark. When I turned to look at him in order to interpret. The beehive on his face was covered, and the honey in his dress not only covered his other honey, but his face, too. He had removed his bee-vest, with his hat, and was...I thought rather nervously—mopping his jovial face with his red pocket handkerchief. It was evident that he had quite forgotten his previous precautions. I had put through them just then, however, for I had not yet opened the hive, but was standing near it with my
frame-prying instrument—an old chisel—in one hand, and smoker in the other. I saw a merry twinkle in my friend's blue eyes, but otherwise he looked supremely unconscious of having said anything at all funny of improper.

"Mr. Bond," I do, said I, "do you at all think they would allow the poor old bee-queen to live, and proceed from the time it was put into winter quarters. At the top edge of is seen the figure 4, which denotes the number of the colony.

"Why don't you put the number on the front of the outside," queried Mr. Bond.

"Because it is better to number the colony instead of the hive," I replied. "When a certain number is made once painted on the outside of a hive I can't very well change it to another number, though I may have the best of reason for wishing, and a rainy day the larger the excellent bekeepers who do paint the number on the outside of the hive, and they have the right so to do. But I think a better way would be—if they must have the number on the outside—to paint it plainly with the Queen designated on the front of the hive; then it would be easy to change them from one hive to any other when occasion required it.

"Your idea looks reasonable and sensible to me," remarked Mr. Bond. "But," he continued, "will you please tell me what kind of an occasion would require the change you speak of?"

"One such occasion would be, when the colony casts a swarm," I answered. "Take, for illustration, the swarm we have just hived. The hive it came from is number 9, on the card inside the cover. That number designates the colony, or more correctly, the queen. But the colony left the parent hive, and the queen went with it; hence, I take the record-card from the old hive and tack it inside the cover of the hive the swarm is in. In that way I keep track of the mother-queen as long as she lives, without confusion, and with the least possible trouble. But there is another reason why I transfer the number from the old to the new hive. If I do not do this, I shall have to get back to it to look after that drone-brood, and to do one or two other things that will be found necessary, I think, within a week—or I don't think we can more than finish the lesson I have for you here this afternoon.

"Why, you don't intend to keep me here till dark, do you?" anxiously inquired Mr. Bond.

"No," I answered. "And that is just the reason why we can't finish the lesson to-day. You see, I make it a rule in my classes never to molest my bees, in any way, after sunset.

"That's queer," remarked Mr. Bond; "I had a notion the night-time was the best to monkey with bees. My father thought so, for he never touched a hive during the day, except to hive a swarm."

"That merely proves that you and your father knew nothing about the nature and habits of bees," I replied. "I know lots of people who think a cloudy day is a better time than a sunny one for bee work on or among the bees, supers, looking for queens or drone-brood, or exchanging and interchanging brood-frames—bears without an novice on a clear, warm day. The bees are then nearly all busy about their own business, and the warm weather is in the fields. Hence, there are less stings and less labor for the manipulator, and less annoyance for the bees. There is only one exception to this, when regarded as a standard rule, and that is a case in which I am going in the apiary. In that case all regular work among the bees must be suspended until the fraises is settled, and everything is restored to its normal state in the apiary. I will tell you more about robbing and robbers some other time. We must hurry and get on with the lesson in hand.

"Well, you can see that this record-card indicates the age of the queen, and that she is full-blood Italian. It also shows that she is clipped.

"Clipped?" queried Mr. Bond, doubt and wonder in the tone of his voice as he spoke the word. "I don't understand what you mean by that."

"I suppose you don't," I replied, "but I haven't time just now to explain. Besides, should I proceed to do so I would probably forget where I am in the course of our lesson.

"Well, the next thing the card shows is the interesting fact that the colony has sealed a number of several frames in February: and the next, that it cast a large swarm April 12; and the next, that before the end of the month the colony was doubled up."

"What's that?" interrupted Mr. Bond, eagerly, coming a step nearer.

"Never mind now, Mr. Bond; it's quite a little story, and a very important thing to know—but I'll have to put you off for a full explanation because it's getting late.

"What I am trying to do is, in an orderly way is that proof which I mentioned concerning the honey-yield from this hive. But first—lest you lose a part of the lesson this card teaches—notice, please, the next items on record:—February 12: 20; Second frame was removed. Following that item you see here a record of dates when the five supers were put on, successively.

"Another thing: Please notice there is a little card on this record—this super'—directing Mr. Bond. to address to the super which I was preparing to remove from the hive when the swarm interrupted us.

"Well, on this card, as you see, is the number of the colony; and next, the number of the super in the order it was placed on the hive. The other four standing in the honey-house are marked in the same manner as this.

"This is the special proof I wanted to direct your attention to in order to satisfy you that bees can, and do, perform wonders in honey-gathering when they have a first-class chance."

"What do you call a 'first-class chance'?" inquired Mr. Bond.

"Now, you've asked a hard question," I replied. "A hard question in the sense that a full, comprehensive answer would cover nearly the whole range of successful beekeeping. I can, therefore, give you only a crumb, as it were, of the whole loaf.

"The first factor in the first-class chance, in this particular case, was, an uncommonly rich growth of white clover, yielding nectar very profusely and continuously for a long time. And another, plenty of young bees in the hive to gather the honey in this; in this case, I think, the super was put on April 12, and thousands more crawling out of their cells every day.

"But the bee-keeper also has a share in the first-class-chance program, if he knows his business and attends to it, and that is, he must know exactly when to give the colony supers; and he must watch very closely to be sure that they never lack honey-storing room above the brood-chamber while the honey-flow is on.

"These are, I think, the main points. But numerous other things are important also, which, if ignored, or neglected, or not recognized, will cut an abnormally large hole in the honey crop, whether the crop is from one or 50 colonies.

"Do you put all the supers, needed by a colony, on at once?"

"I glanced at my friend sharply, when he asked this question, to see whether he was earnest or in fun. Satisfied that he meant it seriously, I answered:

"No, indeed, Mr. Bond. I put one on first. When that is about full, and I see that the bees are sealing the sections over, I take off and put an empty one in its place, replacing the full one by putting it on top of the other. Thus I continue to put on supers as needed, Mr. Bond."
Questions and Answers

Conducted by
DR. C. C. MILLER, Marengo, I1.
(The Questions may be mailed to the Bees Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail—Errors.

Perhaps a Starving Condition.

I have wintered my bees all right, but I have noticed for several mornings that the full-grown young bees come out until the ground in front of the hives is covered with them; and they won’t go back to the hive, but crawl around until they die away. These bees must either go out at night, or very early in the morning.

ANSWER.—It is possible your bees are in a starving condition. If you find no stores in the hive, feed at once. Sometimes a colony swarms out in spring because short of stores, or for some other reason, and if the queen does not go with them they return to the hive leaving the young bees crawling about on the ground. The most you can do is to see that they have stores, and keep the hive as warm as possible by shutting up any cracks and allowing entrance for only a few bees at a time.

Carrying Queen-Cells a Distance.

Can queen-cells one or two days before hatching be taken three or four miles if left on the comb? Have you ever tried this?

ANSWER.—Yes, I have tried it successfully a number of times. I have taken to an out-apiary a queenless colony with a good queen-cell on each frame, put each frame with its adhering bees in an empty hive as a starter for a nucleus, and obtained good queens thereby. I suppose, however, you mean to take the queen-cell without bees. That I have also done occasionally with success. The cell should be well advanced, and must be kept warm and not subjected to severe jarring. Pack in cotton in a little box, and carry the box in the vest pocket or some pocket close to the body so it will not chill.

Poisoning a Neighbor’s Bees a Crime.

1. When I cook and prepare poison like Bordeaux mixture, etc., for my plants and shrubs on my own property, and my neighbor’s bees come and eat it, are killed thereby, can I get into trouble for it?

2. When my neighbor’s bees come and rob mine, kill them and take their honey, and I, in a chemical way kill the robber-bees on my own property, is there anything wrong in it? If not, this protects my property?

ANSWERS.—1. The man that cooks poison that his neighbor’s bees may get is cooking trouble for himself, most decidedly. The idea that a man can do wrong to others just because on his own property is a pernicious mistake. If a man comes on my property that I don’t want there, and he has no business there, and I may order him off; but if I shoot him because he doesn’t go I’m sure to get into trouble. Still more have I no right to destroy my neighbor’s bees when they come on my property, for bees have a right to come and eat food when they want it, and if I put poison where they will take it I am responsible. There is, however, no danger in spraying plants and shrubs unless they are in bloom, and an intelligent man will understand that it is of no use but a harm to the plants to spray at that time. When not in bloom, there is no danger to the bees, because the bees visit the plants only when in bloom. Of course if the poison were sweetened the bees would visit them any time, but the sweetening would be of no use to the plants, and a man that would sweeten the poison for the sake of poisoning the bees ought to suffer the full penalty of the law.

2. Most assuredly there would be great wrong in it. If your bees come to rob my bees, it is not your business to keep them away, but it is my business to manage my bees so that no other bees will rob them. If I leave honey standing around so as to start robbing, then I am to blame and have done a wrong to myself and to you. If I have weak or queenless colonies, I must protect them or unite them, so robbers will not trouble them. Set it down as a fixed principle that if I allow your bees to rob mine, I am the one to blame, and it is a damage to you to get your bees in the way of robbing, and if I then try to poison your bees I am stooping to so mean a thing that the law ought to handle me pretty roughly.

Extracting Propolis.

I have quite an amount of propolis scrapings on hand. What is the best way to extract or melt it?

ANSWER.—I suppose your object is to get the beeswax out of it. I’m not sure I know the best way. I once took a dripping-pan filled with it, put it in the oven of the cook-stove, and when all was heated for some time poured or dipped off the wax. Possibly if water was added before heating, the wax would rise to the surface and the propolis sink to the bottom. Then when cool it would be easy to lift off the wax.

Simpson Honey-Plant in Kansas.

Would the Simpson honey-plant do any good in this dry climate? The cloeome does well here.

ANSWER.—Very likely it will grow well enough, but it would be worse while to sow it in waste places only. It is probably, not held by the one now that it would pay to occupy tillable land with it.

Management for Increase.

I have six colonies of bees which I want to increase to nine, and not allow them to swarm. Three are black and three are Italians, and I want to increase the Italians. My plan is this: Drive the bees with their queen from the Italian hives to new hives with full sheets of foundation, and place on the old stand, and place the old hive in the place of one of the black colonies, removing the colony of black bees to a new place. Do you think this is a good plan for dividing? Do you think it will keep them from swarming?

MISSOURI.

ANSWER.—Yes, the plan will work. The change should not be made late in the day, lest so few bees enter the hive of brood that it be chilled. Do it early in the day, or still better, the time the bees are out for a play-spell. It would, of course, be better if you could give a queen or queen-cell to the queenless hive, for only field-bees are there, and they are not the best to rear a queen. If moved, however, at time of play-spell, there will be a young bee that has been driven from its queen (and you would not do to wait late for fear of swarming) there is danger that the removed black colony will soon become strong again and swarm. It will help to prevent this if at the time of removal you shake off into the queenless hive all the bees from three or four frames. If you leave them to rear their own queen, these young bees will be an advantage in that regard. But there may be danger of swarming from the queenless hive when the cells mature, so you might cut out all cells but one.

“The Hum of the Bees” is the name of the finest bee-keeper’s song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a “hummer.” We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at $1.00.

The Chicago Convention Picture is a fine one. It is nearly 8x10 inches in size, mounted on heavy cardboard 10x12 inches. It is, we believe, the largest group of bee-keepers ever taken in one picture. It is sent, postpaid, for 75 cents; or we can send the American Bee Journal one year and the picture—both for $1.60. It would be a nice picture to frame. We have not counted them, but think there are nearly 200 bee-keepers shown.
The Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses.

By E. E. HASTY, Sta. B Rural, Toledo, O.

ACTIONS OF BEES AT SWARMING-TIME.

And so B. Ginner wants to know if bees pile up in front of a swarming hive in weight enough to touch off a mechanical alarm? And how would you handle an alarm? Bees have forty different ways of swarming. I should not be surprised to see several ounces clung together on the ground in front; but once in fifty times would be sufficient to expect it, I think. Usually the bees aren't concerned; they are mostly swept out in the rush; and many of the bees crawl around awhile before they can get the use of their wings. Machinery would have to be made pretty delicate to spring with their weight; but I guess the thing is possible. If B. G. will rig a second entrance somewhere about a half way in the rear end of the bottom-board, I think he can get all the power he needs by means of it. The idea is to have a long crack there almost wide enough to let out bees, but not quite, and a swinging plate on which the joint push several dozen bees could be utilized. At ordinary times a bee doesn't want to get out except at the habitual place; but in the usual forms of swarming the sentiment seems to be any way to get out, or any where. Page 293.

THE LAYING CAPACITY OF QUEENS.

That Langstroth experiment on page 248, where queens are made to do their work—some thirty, sixty, and some a hundred fold,—and the colonies turn out accordingly three months later— it is striking and instructive; yet there is danger of predating far too much from it. The queen that dropped only one egg may have been just as good a queen as the one that dropped twenty. It is not only possible, but probable, that each of the queens, with the exception of the first, was laying at just about the rate that the workers were able to care for the eggs. If I am right, no queen in the season will win much in advance of the wishes of the workers. Far be it from me to wish to nullify all the conclusions of the paper referred to. Two things remain after we have made all proper allowances. Stronger colonies will not keep a bitch as good for the requirements of a fair colony. To supersede them is of course just the proper thing to do; only don't make mistakes about the facts. The other thing is that some queens may not waste too much time about an immense colony in which most queens would fall far short. These presumably are of extra value; but their phenomenal laying exhausts them quickly, and they are not likely to last long.

BEES AND FRUIT-BLOOM FERTILIZATION.

Anent the articles of Thaddeus Smith, on pages 262 and 280, denying fruit-fertilization by bees—we can make believe we are Boers, and he can be a Britisher without making believe; and thus we will have a splendid chance to learn courtesy and fair conduct toward adversaries. He's right that pretty much all that class of experiments are inconclusive in which boughs or trees have been covered with fine netting. In thus preventing insect pollination other modes of pollination are also hindered, if not prevented altogether. Our folks must mend this defect and experiment some more. Apparently neither himself nor his friend are well posted in insect lore. We greatly need a skilled naturalist in Michigan in May among the islands of Lake Erie. Quite possibly he would see with half an eye that the sheltered location keeps off predatory insects, and that nectar-loving insects are abnormally thick there. Moreover, from climatic and other causes, these islands are among the choicest spots on the globe for fruit culture. The excellence of results without bees does not show all it seems to. Still, a chance for some competent and friendly hand to show how much better results can be attained without the presence of the honey bees, and your berry bloom, and see how many of us can "pick him in" on his reckless assertion (page 280) that the blossoms of pectillate strawberries do not secrete nectar. Look for bees, of course, but especially look for very small insects.

HEALTH AND BED-CLOTHING.

On pages 248, 29, Prof. Cook has a splendid article on the health of the dear ones at home. I did not attempt to say over again his good precepts, but rather (as possibly is too much my habit of late) "mouse" to see if I can't find a little heresy somewhere. He advocates plenty of bedclothing. He says it's a safe eight hours, and I think of the very prevalent evil of too much bed-clothing. Are we not getting somewhere near the bounds of heresy when we ignore such an evil—as if we should say, Folks ought to care for food, and to think about it? It's half in vain to have pure air outside the "kiver" if underneath, next to our persons, the air is thick with excreted gases and thin of oxygen. And that's the state of things which must exist when the clothes are bathing over us. And is not the result a torpid skin—almost as bad as weak lungs? Or, am I wrong about this whole business?

The Home Circle.

Conducted by Prof. A. J. Cook, Claremont, Calif.

Because You Keep in Tune.

There is a harm in going thru' all God's works of love. It rises thru' the heart of a man, and in his breath a song. And if your heart desires a part, morning and eve and noon, in the wide chorus, sing your best, and always keep in tune.

The roles close beside your ear may grate discordantly. And sometimes all the world around seems to be out of key. But hold the note you know is true, sing clear and sweet, and soon Others will join the melody because you keep in tune.

PRIMILLA LEONARD.

SUCCEEDING BY READING.

I am sure we are all glad that Mr. Hutchinson visited the Coggshalls, and gave us the beautiful picture of the home. The remark of W. L. Coggshall to Mr. Hutchinson is so pregnant with sense and truth that I wish to take it as a text on this occasion, — "The man who reads is the man who succeeds." I have always remembered something I read of Beecher's years ago: "Show me a man's library, and tell me of the company he keeps, and I will tell you the man's character." It has often been remarked that we owe our civilization to the discovery of the printing-press. Sure it is that without the stored-up wisdom which we have in the blessed books that grace our homes, our progress would be very much less rapid. I think I said in a previous number of these "Home Circle" papers that I wished I was able to put the Youth's Companion into every home in our country. I have also said that there were three things I would strive to develop in the child from the very first—as soon as he could lisp "papa" or I could make him understand my voice. These truths are: (1) to love and (2) to read, and (3) to add now that I would also strive to interest the child in reading, good reading, from the very earliest moment. The little nursery magazine should be among the child's first possessions, as soon as it can enjoy pictures or tingle with pleasure at the story. This should be followed by saint Nicholas and the Youth's Companion. Of course, the child can not read these at first, but how delightful it is for father and mother to sand along the Sunday papers to the child. Surely, the Sunday, and surely a little time each week-day can not be better spent by either parent than by giving it to the children with some good book or paper as the third party. If we commence thus early, I think there will be rarely any difficulty in interesting any child of ordinary intelligence in the child book or paper. In case the child does show indifference, the parents should tax invention till they succeed.

I know of one little boy who was quite a trouble to his parents in his very early years by a discounting indifference to book and paper. He would enjoy their reading to him but was very slow to read for himself. A visit to some little friends who possessed a menagerie of white mice, interested him greatly, and he would at once read to them like pets. The parents, of course, were interested in his desire and suggested that he find out where he could buy them, what they would cost, and suitable cages or homes for the little rodents, when they should once be secured. The result was that the little fellow hunted the papers over for advertisements regarding white mice. The parents seeing
here an opportunity at once secured the papers which treated of paper work, and delighted to note that not merely the advertisements but everything about the prospective pets was not only scanned but thoroughly read. The pets came, were housed according to the latest rules and improvements, and were kept under constant observation, and their attractiveness, but the taste for reading commenced in the scanning of the advertisements, ever remained. These parents never see white mice but they feel grateful for their share in the development of a healthy reading which has every advantage to their boy.

Mr. Cogshall’s implied reason for reading—that it brings success—is certainly one not to be neglected. We all remember “Sedan” and the speedy undoing of Louis Napoleon. I have seen it often stated that the greater intelligence of the Frenchman, compared with the Frenchman, is the result of that momentous conflict between the two great nations. I have been greatly impressed as I have visited among our farmers, not only in Southern California, but also in the East, to note how the best success in the field and orchard always were hers in hand in a good library, and excellent papers in the home. It is true that in the past, frugality, native sense, and a close attention to business, would often bring success even to the unlettered. But that day is gone with the days of the past, and we are living reading the weakening to the wall. This is becoming as true in agriculture as in other lines of business. Very soon the man that succeeds must know the best and practice it. He must be fully up to the times. To do this he must possess himself of the best and must be the reader of the same. What has given such sections as Western New York, Northern Ohio, Michigan, all of New England, their supremacy in the way of progress and advancement? I unquestionably it came from the fact that they are predominantly a reading people. The home-table gave to the home circle the best of books and magazines, and such papers as The Country Gentleman, Rural New Yorker, and American Bee Journal took no second place among the literary works in these homes.

In speaking to our people of Southern California, I often hold Mr. Hay, our Secretary of State, as he has managed the intricate problems of State Government in the past few years. We have been so honored if he had not been a man of widest view and broadest sympathy. In this case the whole world is to feel the influence and receive an uplift because of the wide-reaching strength of a single mind. It goes without saying that Mr. Hay could not have taken the proud place which he occupies except for the fact that he was a man of widest reading. His culture stopped not with his home affairs, but he shows that he understands the temper and relations of the瓦, the people, her nature, her mind, her habits, her life in the world, and her best interests in other. It is, then, one of the best assets that we derive from wide reading, that our view is broadened and we are not disturbed by the petty things of life, but are able to grasp the rich things in life, so that we are able to plan and work for the greatest good of all.

Every right-minded person loves companionship. Even the dear Master, in those bitter hours in the garden, was sorrowful when the disciples fell asleep and could not watch with him in that terrible hour. I better see a good man and a good woman treading life’s pathway alone that I do not feel sorrowful, and wish that a better fortune had granted to them the dear companionship which is the brightest crown of the best home circle. Even the most favored of us can not always have our loved ones about us. Ithaka, cruel circumstance, often forces separation whether we would or not. Then it is that the mind, as a very angel of mercy, who has not driven loneliness from our homes and hearts at least by a short-lived forgetfulness as we have chosen for our companion the treasured words of some great author. That great and best-loved American—Abraham Lincoln—it is reported, had but two books in the long preparatory days of youth—the Bible and Shakespeare. Yet what good use he made of them. The one made him companion of many of the greatest and greatest hearts that ever filled the world. It did did better than this, it gave him a heart that reached out even to the most lowly of God’s people and was ever alive to the needs and sufferings of those about him. Except for reading, and these two great teachers, who were so good companions during the long, proxie days of Lincoln’s boyhood, we should have been poor indeed, for we should not have had Abraham Lincoln to put the superlatively gliding upon the pages of our nation’s history.

The ability to entertain one’s self, and to be happy even though all our friends depart from us, is certainly one to be treasured among the best of our possessions. A library full of the masterpieces of literature, and a taste and desire to seek out the best they have for us, will do more than any else in the world to drive ennui and the gloom of loneliness from the heart. We may, through the pages of those noble books, at times, find a friend when we have no friends, a comfort when there is no comfort, a courage when we have no courage, and a strength when we have no strength. It is a problem, and one less a puzzle, to many of us to know how to keep the children interested in the home, that they may not know of the evil or be enticed by the sinfulness that the street and even worse places are ever reaching out to lure the children by the wayside. I remember once, a few summers ago, I was dropped at Yucca, one of the most desert places of our great mid-continent desert. Numerous others were alike unfortunate. I think I never knew more yarning in a single day or more complaint against fortune. Yet it was the old hard-bound volumes, describing the natural history of the country and the numerous object-lessons right at my feet which vividly illustrated the word-pictures of the book, made the day all too short. It was with regret that I greeted the evening and the coming train that was to bear me away.

The greatest good from books, is the soul uplift, for this is immortal. Space permits me only to mention it here.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very readily afterward get their subscriptions, for which we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

Queenie Jeanette is the title of a pretty in sheet music size, written by J.C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

The Premiums offered this week are well worth working for. Look at them.
AMERICAN BEE JOURNAL
May 30, 1901.

QUEENS!

Improved Golden and Leather-colored Itali- cans are what Home Breeders want. We have one of Root's best long-tongued Red- Clover Breeders from the St. Louis, and a Golden Breeder from Dubuque, who says if there is a BREDER of golden bees in the U.S. worth five, this one is worth that sum. The above breeders have been added to our already im- proved strain on the occasion of this season. J. L. Gandy, of Humboldt, Neb., wrote us on Aug. 31st, 1900, saying that the colony having one of our queen's was already stored over 400 pounds of honey (mostly comb), he states that he is certain they were bees reared on Red Clover, as they were the only kind in his locality and favorite. A. L. Root's folks say that our queens are extra fine, while the editor of the American Bee Journal has good reports from our queens from time to time. We have files upon the subject of queens for sale.

After considering the above evidence, you need only ask yourself, what are your Queen needs each year? Give us a trial order and be pleased. We have years of experience in mailing and rearing queens. Safe delivery will be guaranteed, and instructions for introducing sent with each lot of queens.

QUEENS NOW READY TO MAIL.

Prices before July 1st:

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<td>Extra selected tested</td>
<td>best that money can buy, 4.00</td>
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Black Carton: with your address printed on it in a Consignee (except for $1.00 per for $2.75).

Address all orders to H. G. QUINN, Parkertown, Ohio. Parkertown, Ohio. Send for Catalog. Contract by this ad. will appear twice per month.

Please mention Bee Journal when writing.

Bee-Supplies

We are distributors for ROOT'S GOODS AT THEIR PRICES for southern Ohio, Indiana, Illinois, West Virginia, Ken- tucky, and Missouri. Also MUTH'S SQUARE CLASS HONEY-JARS. Desc A. H. WEBER, 214-48 Central Ave., CINCINNATI, O.

Do you want a High Grade of Italian Queens? Go to CHERRY STRAWBERRY queens. D. J. Blocker, Esq., Parkertown, Ohio. Dear Sir:—Your quotations on 46 untested Italian queens for delivery, May 13, 1901, are at hand. It being the first offer out of sev- eral companies, and, besides, you having promptly favored me with queen's last year, you may, in appreciation thereof, have the order. Yours truly, L. KREUTZER.

Prices for May and June:

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SAFETY ARRIVAL GUARANTEED. Please mention Bee Journal.

D. J. BLOCKER. Parkertown, Ohio.

Northern Italian Queens! Reared from Imported Drones. Our stock is so carefully bred and selected, according to our long years of experience, that from our drones and other bee diseases. Prices: 1 untested Queen, $1.00; 5 for $4.50; 10 for $8.00; imported Queens, $6.00; fair imported, $5.00.

A. L. PIKKARD.

BEE-HIVES

Sections, Shipping-Cases—Everything used by beekeepers. Only the best shipping facilities in the world. You will save money by ordering from us. Address, Minn. Bee-Keeper's Supply Co., Nicollet Island Power Bldg., Minneapolis, Minn. Please mention Bee Journal when writing.

TENNESSEE QUEENS! Five fine of Choice Tested Queens reared last season and this year, daughters of select imported and select American breeders, reared 3½ miles apart, and mated to select drones. Each of these untested Queens, from same breeders, either from 2½ to 4 miles, have been owned by beekeepers within 3½ miles, but few within 5 miles. 2 years' experience on these bees. Contracts with dealers a specialty. JOHN M. DAVIS, 6A Spring Hill, Tenn.

Bee-KeePER'S Supplies.

Just received a consignment of the finest up- to-date HIVES and SECTIONS we have. A line of Bee-Keeper's Supplies on hand. Bees and Queens. Catalog free.

THE A. I. ROOT CO., H. G. ACKLIN, Manager.

LONE STAR APIARIES.

Price of imported Mothers:

-1-50-1.50

Price of imported Drones:

-1-50-1.00

Send for Circular. V.


If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send 25c.

Prof. A. J. Cook, Claremont, Cal., for "Bee-Keeper's Guide." Liberal Discounts to the Trade.

Please mention Bee Journal when writing.

A Word to the Wise Bee-Keeper

Is the title of an essay on queen-rearing. Send free to all applicants. Address:

HARry ALLEY, Wenham, Mass.

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BEE-HIVES

Sections, Shipping-Cases—Everything used by beekeepers. Only the best shipping facilities in the world. You will save money by ordering from us. Address, Minn. Bee-Keeper's Supply Co., Nicollet Island Power Bldg., Minneapolis, Minn. Please mention Bee Journal when writing.

To make cows pay, see Sharpe's From Separators. Book "BEE keepers" C. A. H. WEBER, Westchester, Pa.
was in 1917. Since then, as one ever knows who raises California bees, they have had a series of dry years. That being the case, no industry has suffered worse than apiculture, and, to illustrate, I will cite a few of the bees that have come under my personal observation. I will begin with my own apiary: At the close of the season last I had 12 colonies of bees, but sold all but 6 of them. Since then I have bought 201 colonies, and at the beginning of this season I had 14 colonies. I have cared far better than the average, and will give a short table, omitting names, and using letters to designate my respective apiaries in the five counties of Southern California that I know of—their conditions in 1907 and in 1917.

1907
1917

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<td>Mr. L. 100</td>
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I could go on, but it is unnecessary. This is sufficient to show something of what the loss has been in California; and it is not all, for the honey-producing plants have suffered also, many of them having die.

I think the majority of the beekeepers who have any bees left will try to build up their apiaries, but I have heard of a project that is run for extracted honey will be at the expense of the honey crop.

Up to the present time we have had so much cloudy and cold weather that my bees have stored comparatively little honey, and if any one can, under the new existing conditions, see the project for a large honey crop, in California for 1917, I vote him the prize.

Since writing the above I have received an offer of 4 cents per pound for 1½ tons of nice sage honey. How does that strike you?

J. W. GEORGE.

Riverside Co., Calif., May 7.

Nectar Going to Waste in Michigan.

The bees are very busy on fruit-bloom and dandelion. Bee-keeping is in its infancy in this locality. There are thousands of acres of cherries, peaches, plums, and other fruit-plants in the region, but they have never been used for the benefit of the bees by florists. I am 23 years old, and commenced bee-keeping at 17. I am very much interested in it, and have an apiary of 200 to 300 frames, and I have a good many in keeping.

EMMETT COYET.


Transferring from Box-Hives to Movable Frames.

Some time ago some gave instructions for transferring bees and combs from box-hives to movable frames. I am not in favor of it. I have tried it, and called for thorun through the hoes in the frames into the edges of the combs, thus pinning the bees in the frames. I had a pair of scissors, and even if I had I have a way that I like better, and I think others will. I also have been in colonies in getting the combs to stay in, and it makes them much stronger, too. My plan is as follows:

When the bees have the same as for putting foundation in them. Then cut a piece of board a scant 3/4 inch thick that will fit into the frame. I use a frame a half an inch longer than the frame, and this makes a board of convenient size. say 2 inches larger

| ITALIAN BEE AND QUEENS |

Having been 2 years rearing Queens for the trade on the best known plans, I will continue in the best.

PRICES:

- One Untested Queen $1.00
- One Tested Queen $1.50
- One Tested Queen L.50
- One Breeder $2.00
- One Combs, 40 lbs $20.00

Belgian Hares

Choice, pedigreed and common stock: young-sters, $1.00 per pair. Write for description and prices.

DEAL
Clara's, Page City, la, Iowa.

Please mention Bee Journal when writing.

FREE IF YOU NEED

A Portable Fence, try the PAGE: It can be taken down and reapplied any number of times.

PAGE WOVEN WIRE FENCE, ADAM S. M.

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Wool Markets and Sheep

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I use a PROCESS that makes EVERY ESSENTIAL necessary to make the best and MOST desirable in all respects. My PROCESS and AUTOMATIC MACHINES are my own inventions, which enable me to SELL FOUNDATION and WORK WAX INTO FOUNDATION For Cash at prices that are the lowest. Catalog giving Full Line of Supplies, with prices and samples, free on application. BEE WAX WANTED.

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BINGHAM SMOKE.

BINS, to order, 4-inch, $1.75; 5-inch, $2.00; 6-inch, $2.50; 7-inch, $3.00; 8-inch, $3.25; 9-inch, $3.75; 10-inch, $4.25; and larger, $4.75 each. Bins are packed in Ashtabula so that they are not damaged in transit.

BINGHAM SMOKE never loses its value, dry or wet. In the case of a smoky season it will always be, Bingham & Hamilton, Youngstown, Ohio. The name will be on the No. American Bee Journal, or send for Circular B. T. F. BINGHAM, Eastham, Mass.

Please mention Bee Journal.

1901—Bees-Keepers' Supplies!

We can furnish you with The A. I. Root Co.'s goods at wholesale or retail at their prices. We can have you off freight, and ship promptly. Market prices paid for beex. Send for our list catalog.


Lost 8 Colonies—Dandelon in Bloom.

I had 60 colonies of bees last fall, but have lost eight of them up to the present time. The bees in bloom, and fruit-trees will be in a few days if it gets warmer. It is quite cool and windy today, and the bees will be in a few seconds.


Bee-Sting Remedy.

I noticed in the Bee Journal an inquiry for a bee-sting remedy. I use iodine, and if applied once the sting will be dulling and the pain will cease in a few seconds. This remedy can be used even on the youngest child.

WALKER CO., AILA, May 14.

Uniting Weak Colonies in Spring.

This is considered by many experienced bee-keepers hive's labor lost. J. B. Hall, in the Canadian Bee Journal, has this to say:

This I have found from practical experience is waste of valuable time. It is all very well to do it as an amusement, but for profit never unite two or three, or ten weak colonies. See that they have emptied their comb, have shut down, and give them a good letting alone, and they will be sure to pull through. If you want ten, and you have only five, there is only one queen left, and that may be the poorest queen of the lot. You have not only the four for the cell, but you have destroyed the good queens, and very likely have a poor one left, and you have nothing but your queen. Don't unite in the spring, let them pull through if they can; if they don't, you have the hive for something better when the warmer season comes. That is my experience after 25 years. I used to unite them, and when I put them together they made a very good colony of bees, both in honey and combs, and in three weeks from that I had only one colony of bees, and, therefore, I think my time was wasted. You know as well as I do, that those bees are old, and will live a few weeks only, and they don't pay for the labor of uniting them with a colony that has a queen. You may lose your queen by
Our Specialty is making SECTIONS, and they are the best in the market. Wisconsin BASSWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free Illustrated catalog and price-list.

Red Clover Queens

LONG-TONGUED BEES ARE DEMANDED NOW.

One Untested Italian Queen FREE as a Premium for sending us two new subscribers to the American Bee Journal for one year (with $2); or, one Tested Queen free as a premium for sending us four new subscribers with $4.00.

We have arranged with one of the oldest and best queen-breeders (having many years’ experience) to rear queens for us the coming season. His bees average quite a good deal the longest tongues of any yet measured. The breeder he will use is direct from Italy, having imported her himself. Her worker-bees are large, somewhat leather-colored, very gentle, and scarcely requiring veiling or smoke. They stored red clover honey last season.

Orders for these fine, long-reach queens will be filled in rotation—first come, first served—beginning about June 10th. It is expected that orders can be filled quite promptly, as a large number of nuclei will be run. All queens will be guaranteed to arrive in good condition, and all will be cliped, unless otherwise ordered.

CASH PRICES of these fine queens will be as follows: Untested, $1.00 each; Tested, $2.00 each. Send all orders to

GEORGE W. YORK & CO., 144 & 146 Erie St., CHICAGO, ILL.
left the bees no place to store the diseased honey, and forced them to keep it until they removed it and disposed of it.

All of these plans and methods I studied out 25 years ago last summer and fall, when I had over 1,000,000 bees in my own apiary for foul brood.

When foul-brood matter is drying down it glows with a bright light, which is visible within the cells, and there it will remain as long as the comb lasts, and during honey-flows the bees must draw off these cells, and after that foul brood is spread through the colony in proportion to the amount of honey that is fed. From the diseased cells to the sound larve.

In the honey season, when we are taking the combs out of the diseased colony to cure them, the bees (dining on the unsalted honey so handy with no unloading to do) rush into the open cells and take all the honey they can. Most of the diseased cells are full of unsalted honey (as they usually are at such times) the bees will get pretty well filled up with diseased honey before all the combs are removed. To cleanse the bees of this honey I give them starters of comb foundation, and in four days the bees make then into little pieces of comb and store the diseased honey in them. I then take the combs out of the colony and treat them with the bees made in the four days and give them full sheets of comb foundation, and before this is worked on. I complete the process. This is the safest and most practical method for all classes of bee-keepers to follow, and one that never fails. It is one thing to have an apiary of foul brood and quite another to do it and make more or less increase and have all colonies in grand condition when the season begins.

When I am examining an apiary I mark each colony according to the condition I find it in. If I see sick colonies on the front of the hives that are strong in bees and have only a little of disease; two crosses on those that are loaded with disease, and three crosses on those that are weak in bees and badly diseased. In the evening, in the hives, I take off the combs with the bees that have the three crosses on, and shake the bees of every three into an empty hive, so to get rid of the dead bees. Next day I will then remove the combs out of the hives that have one cross on and shake the bees right into the comb.

Where I find only a few of the disease colonies that have large quantities of nice, sound brood, I save this brood with some bees on it and set them back in the hive with allowed then set these backs a little distance from the others, and when the crowd of brood is hatched I go in the evening and shake the bees into a single hive and treat them and give them a queen.

All caring and treating of diseased colonies should be done carefully. I have no reason to have any swimming out and mixing in with others, or bees returning to the old stands after being with their fresh ones. This same method of caring can be carried on at any time from May to October, when the bees are not gathering any honey, by feeding plenty of sugar syrup in the evenings to take the place of a honey-dew.

All the combs and pieces made in the four days could be disposed of by me, Wm. McEvoy, in the Canadian Bee Journal.

Standard Bred Queens.

Acme of Perfection.

Not a Hybrid Among Them.

IMPROVED APIS ITALIANS.

World-wide reputation, 75 cents each; 6 for $4.00.

Long-Tongued 3-Banded Italians

honey, apiary of colonies store they each and that the crosses place. removed then shake these into the place. and these sound... have made colonies on... increase on, every year... makes of comb, apiary of comb and... sound... cross... into the place. and... three crosses on... and shake the bees of... I set these backs... and shake the bees into... when the crowd... crowd of brood is... go in the evening... shake the bees into... All the combs and pieces... in the Canadian Bee Journal.

The DUPLEX AUTOMATIC DALL BEARING WOVEN WIRE FENCE

100 Different Styles of Fence. — It seems almost past believing that one little machine which can easily be handled and moved about can carry off the work of weaving over 200 yards of fence and kinds of farm, lawn, poultry and ornamental fencing. This is, however, true of the Duplex Ball Bearing Woven Wire Fence Machine. It is manufactured by our advertising partners, the Kettisman Brothers, of Muncie, Ind. The cut shown with this article gives a very good idea of the machine and its method of operation. It also shows one style of farm fence in course of construction. The Duplex will handle satisfactorily any and all sizes of wire, using large wire for materials and weaving on 100 to 700 smaller numbers of wires. It will also weave perfectly a fence with desirable barb wire at top and bottom, a style of fence needed in the southern states, and held in great favor in certain localities. Fence may be made of any desired height up to 50 inches. As to capacity, this will vary somewhat, depending upon many things, but the manufacturers state it conservatively at from 40 to 120 rods of farm fence per day. The Standard Duplex Machine makes a fence up to 48 inches high as stated above, but at a small additional cost special machines may be had which will make fence 48 and 50 inches high, respectively. The Duplex is well and honestly made of good material, and being the like ordinary care will last indefinitely. Kettisman Brothers are also large manufacturers of Ornamental and Gates. These fences are made entirely of wire and iron in the greatest variety of form and graceful design. They are so constructed that they will turn all sorts of materials with a style of fence which will enhance rather than detract from the beauty of the enclosure. The ornaments are built of solid iron and rails greatly set off and increase the beauty and strength and value of the fence. Write these manufacturers and tell them what you want in fence machines, ornamental fencing and gates and all classes of material, and be sure to mention the American Bee Journal when writing to them.

ALBINO QUEENS

If you want the most beautiful queens that have ever been raised... you want the most... You want the most... queens... three Test... and more... queens... and which... Attested Queens in... $1.00. Tested, $1.50. 11A26 J. D. GIVENS, LlBON, Tex.

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HONEY AND BEEWAX

MARKET QUOTATIONS.

Chicago, May 20.—Market is nominal in all... little comb sells at $1.50c... in America... No movement of any conse... in, extracted, all dealing seemed to... one... it:... little... 70c... depending on... Little fancy white clover and basswood sells at 70c... honey;... 56c. Beeswax steady at 30c.

Detroit, May 21.—Fancy white clover, 140;... No. 1, 130c; dark and amber, 1081c. Ext... to:... dark and... Nov. 29c. Exchanged from 68c.

BLOKE, SCOTT & LEE.

OMAHA, May 1.—Cream sells 10c. in 24-frame cases, per case, $1.40; No. 1, $1.25; amber, $1.50.

PETEY EKOS.

NEW YORK, May 3.—We report square market over all and of a very low level. There is no signs of any... honey is... still here is... forthcoming, which is... for a higher price. Values are mostly nominal now, and it is only a few fancy classes that... QUOTATIONS. We quote:... Beeswax white, 15c; No. 1, 15c; amber, 116c; buckwheat, 30c; white, 20c, and... very little inquiry. Old crop of California light amber, which was selling... as low as 14c a pound f.o.b. coast, which... is... the sale of other grades to a lower volume. The price of Beeswax has... to arrive at from $28c.

HILDEBART & SEGELSEN.

BUFFALO, May 18.—Faney 1 lb. clover, 156c; dark very dull indeed, 80c. Berries hurt sale of honey now. BATTIRROR & CO.

KANSAS CITY, May 4.—Practically no shipment in. Market very low, the latest getting $5.50 to $5.65 per case of 12 sections No. amber, which is about $1.50. Light amber, which is very low, at 25c.

W. R. CROMWELL PRODUCE CO., Successors to C. C. CROMWELL & CO.

ALBANY, N. Y., May 16.—Cream... very dull. Very little call for anything but... alone, of which there is a scarcity. EXTRACTS.

SAN FRANCISCO, May 15.—White clover 110... dark, 68c. Ext... dark, 76c. Light amber, which is 56c. Beeswax, 26c.

No large quantities of new honey have yet put in an appearance, but the anticipation of heavy receipts at an early day is imparting a weak tone to the market. The prices are not possible, however, at current quotations, and dealers may find it necessary to pay better prices than now nominally current before securing any considerable portion of this year’s crop.

$10.00 A Good Bee-Ranch and General Farm IN SOUTHERN CALIFORNIA.

24th Address, G. C. GLENN, San Diego, Calif.

SUWALDO, the HONEY BEE, Prince of the Apri... service. Low Freight Rates. NEW CATALOG FREE.
We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR
Hives, Extractors
OR ANYTHING YOU WANT IN THE BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.
Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of The American Bee-Keeping free. Address,

THE W. T. FALGONER MFG. CO.,
JAMESTOWN, N. Y.

W. M. GENISH, East Nottingham, N. H., carries a full line of our goods at catalog prices.

Order of him and save freight.

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LEARN TO SING
AT HOME by my thorough method.
With my complete course I guarantee to train and cultivate your voice, to teach you to read music, to teach you to write, and to sing. The most musical education arranged especially for home study. Has Highest Endorsements. Beautiful Score. Suitable for Lovers. Arranged by

Prof. C. W. Whaley, Kalamazoo, Mich.

SWEET CLOVER
And Several Other Clover Seeds.
We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

\[
\begin{array}{|c|c|c|c|}
\hline
\text{Clover} & \text{Color} & \text{Price} \\
\hline
\text{Sweet} & \text{white} & \$1.25 & 5.00 \\
\hline
\text{White} & \text{yellow} & \$1.20 & 5.25 \\
\hline
\text{White} & \text{barred} & \$1.50 & 7.50 \\
\hline
\text{Japanese Buckwheat} & \text{white} & \$1.00 & 4.00 \\
\hline
\end{array}
\]

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and packing.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street.
CHICAGO, ILL.

I ARISE
To say to the readers of the Bee Journal that

DOOLITTLE... has concluded to sell QUEENS in their season during 1901, at the following prices:

\[
\begin{array}{|c|c|c|}
\hline
\text{Queen} & \text{Price} \\
\hline
\text{Unregistered} & \$1.00 \\
\text{Registered} & \$2.00 \\
\text{Registered & Tested} & \$3.00 \\
\text{Tested} & \$4.00 \\
\end{array}
\]

Circulars giving particulars regarding each class of Queens, conditions, etc. Address,

G. M. DOOLITTLE.
Borodino, Onondaga Co., N. Y.

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Pan-American Exposition
...AT BUFFALO...

THE A. I. ROOT CO.
will have an Exhibit showing a
COMPLETE LINE OF BEE-KEEPERS' SUPPLIES.
Also some NEW GOODS that have not yet been advertised. The exhibit will be conspicuously placed in the Gallery of the Agricultural Building.

If you have never seen a
Ball-Bearing Cowan Honey-Extractor,
Here is your chance.

We expect that HUBER ROOT, the youngest member of the Root Co., will be the man in charge of the exhibit. He will be pleased to meet all our old friends, and make new ones wherever possible.

Gleanings in Bee-Culture
Will contain a very interesting series of articles on Queen-Rearing, giving New Methods and Short Cuts. There will also be a series on

BEES IN LAW.

E. R. Root will tell of his trip through Texas, Colorado, Oregon, and California. Better subscribe now.
Six months' trial subscription for only 25 cents.

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are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO.

Send them for their free Catalog.

AMERICAN BEE JOURNAL
May 30, 1901.
Prof. A. J. Cook.—(See page 351.)
Weekly Budget.

When Lilacs Bloom.

When lilacs bloom, the winds grow still;
The velvet deepens on the hill;
The bee turns gaily as she greets
With long-drawn, happy, kiss the sweets
The lavish, love-flushed blossoms spill.

The daisy does her whitest frill:
The orbic his gladsome trill
Sings loud, and oft his joy repeats,
When lilacs bloom.

Then lives with careless rapture fill:
Then hearts with joy of living thrill;
And fancy weaves her golden cheats—
Ah! who would doubt the fair decrees?
No room for reason, thought, or will,
When lilacs bloom.

JESSE F. O'DONNELL.
In The Chatanqua.

Mr. G. SPEERMAN, says the British Bee Journal, probably has the largest apiary in Great Britain, containing more than 300 colonies.

Mr. A. P. Raymond, writing from Clark Co., Wis., had these kind words to say:

FRIEND YORK:—I am still reading the American Bee Journal, and am much pleased with the manner of your handling bees time to time in its bright pages, and which make it more enjoyable, if such a thing be possible.

I sincerely appreciate the successful efforts you are making to keep it up to date and abreast of the times.

A. F. Raymond.

Prof. A. J. Cook, the editor of the department of "The Home Circle" in this journal, is a man who has long been before the bee-keeping public. We think we can hardly do better than to copy what the "A.B.U. of Bee-Culture" has to say concerning Prof. Cook and his work:

Albert J. Cook was born Aug. 30, 1842, at Ossisco, Wisconsin. He was acquainted with the man will not be surprised to learn that his parents were thoroughly upright. Chas. Cook had a daily reading of the Bible, with comments by the father, reinforced by the constant example of a chaste, honest, and industrious daily life, left its impress for life on the character of the son.

At the age of 15 he entered Michigan Agricultural College, where he graduated at 22, having been obliged during his course to suffer the sharp disappointment of suspending study a whole year on account of sickness, his health having been rather delicate during his earlier years. Upon his graduation he went, on account of poor health, to California, where for three years he labored very successfully as a teacher. He then studied a portion of two years at Harvard University and Harvard Medical College with Azizzas, Hazen, and Dr. O. W. Holmes as teachers, and was later instructor at Michigan Agricultural College, and in 1885 Professor of Entomology and Zoology in the same college.

He is a life-long reader and is doing work unique in character, for he instructs the students, not only about insects in general, but about insects in particular. One incident that graduates goes all over the theory of bees, studies the bee structurally from tip of tongue to tip of sting, and goes through with all the manipulations of the apiary—that is, if there is any honey to manipulate; handles the bees, clips queens, prepares and puts on sections, extracts, etc. Probably in no other institution in the country, if in the world, would such a thing be produced. The reason only is here is because the good people don't stand together and cast it out. Some day they will unite, and then—good-by to the greatest vice, crime, and poverty breeder in the world. We believe every reader of the American Bee Journal is ready to join in the final overthrow.
Renewing Queens.—Bee-keepers differ in opinion and practice as to the matter of renewing queens. Some say it is best to leave the matter entirely to the bees. In a state of nature they always renew their queens when they have attained an age of perhaps not more than three years, in rare cases allowing them to become four or five years old. Others say it is best to have only young and vigorous queens, never tolerating a queen more than two years old, while still others put the age limit lower yet. They say, "Breed only from your best, and never allow a queen to reach an age of two years, and your stock will be constantly improving."

All agree that it is right to breed from the best, but it is not always easy to tell which is best if an age of less than two years dooms a queen to death. A queen would hardly be replaced earlier than some time in June, and the harvest of that year would be largely the work of the progeny of her predecessor. So that leaves only the harvest of one year to judge from, and that is not so good as more, for accidental causes sometimes come in the way of deciding that would not occur a second year.

The matter of wintering is to be considered. There is no doubt a difference in colonies in this respect, and a queen whose bees should winter well for three or four winters in succession, other things being equal, should have the preference.

It is possible that longevity should be considered. It is well known that sometimes a colony exceeds the average in storing, while at the same time its queen has not reared as many young as the average, and some think this is because of a difference in longevity, a worker living a week longer than the average, for a bee is not expected to do more than four weeks of field-work, usually. It is also true that some queens live longer than others under the same conditions, some queens doing as good work in the third year as the first. It is not unreasonable to suppose that if a queen is longer-lived than the average that her workers will share in that characteristic. So it might be safer to breed from a queen that had done good work for three years, and such queens would not be known unless superseding were left to the bees.

Still another point in favor of leaving the matter of superseding to the bees is that it interferes the least with the work of the bees. When a new queen is given by the bee-keeper, it may be so introduced that there will be very little interruption in the laying, but there will be almost certainly some degree of interruption, and it may be serious; whereas, in the case of superseding by the bees there need be, and generally is, no interruption, mother and daughter often laying for a time side by side.

Along with all this is the fact that it is a good deal easier for the bee-keeper to leave such matters to the bees, and so it is no great wonder that many of the most experienced say that superseding is a matter that rightfully belongs to the bees.

Scientific Breeding.—Arthur C. Miller, in Gleannings in Bee-Culture, broadly hints that editors of bee-books and authors of bee-books are ignorant upon the subject of heredity and scientific breeding—the charge which he is probably pretty safe in making; but the reading of his article does not add much to the reader's stock of knowledge upon the subject. About the only paragraph that gives any instruction up the subject is the following:

"Thoroughbred is not 'crossbred,' as any high-class stock-raiser will testify. Thorough breeding is careful, scientific in-breeding (do not confound this with in-and-in-breeding); and when alien blood is introduced the result can never be foretold with certainty, the chances being toward atavism, the reverting to a previous type."

Even that does not explain the difference between in-breeding and in-and-in-breeding—merely says they must not be confounded. The seeker after the difference who goes to the dictionary will not be helped much, for he will find one of the definitions of "in-bred" to be "in and in-breeding." But Mr. Miller's object is probably merely to call attention to the prevailing ignorance, and in that view of the case his article is timely. Never, probably, was attention so much drawn to breeding for improvement of stock, and Mr. Miller is quite right in saying, "It is high time we began to be scientific in our work. The haphazard, guess-at-it-rule-of-thumb ways have prevailed altogether too long."

Introducing Virgin Queens.—George W. Conrains says in the Australasian Bee-Keeper: "A virgin queen can be introduced with safety if there are queen-cells in the hive, but just running her in." Editor Pender replies in a footnote:

"Virgin queens can not be introduced with any certainty of success when more than an hour or two old. Any colony, having queen-cells started several days, will receive a virgin queen that has just emerged, and often such queens will be accepted by bees if allowed to run into the hive immediately the laying queen is removed, but there is so much uncertainty the practice is not usually adopted. Try a virgin say 12 hours old and I think you will fail every time."

It may be remarked that on this side the globe there is good authority for saying that a virgin queen just from the cell (not one that has been held in the cell by the bees) will be kindly accepted in any colony, whether queen-cells are present or not, even in a colony with an active laying queen. That is meant in the broadest sense, that such a queen will not be disturbed in any colony whatever, and yet such a statement without any additional word would be very misleading. Put such a virgin in a hive with a laying queen, and although she may be received ever so kindly, you may find her missing a day or two later. It looks as if the bees did not recognize any royalty about her till she attains a few hours of age after which she will not be tolerated. If, however, it is late in the season, when supersedes are likely to take place at the close of the harvest, then the bees may take the new-comer and allow her to dethrone the old queen.

Securing Control of a Territory is sometimes an easy matter, and sometimes not so easy. In making plans for extending by way of out-apiaries, Harry Lathrop says in the Bee-Keeper's Review that his first step would be to secure a suitable location where he would lease a small piece of ground in a sheltered nook, and then says:

"Having secured the land for a term of years, I will erect a small, cheap building that will serve as a shop, extracting, and bunk room. A cellar will be dug, in sloping ground, of sufficient size to winter 150 colonies, which would be the maximum number that I would expect to keep in that yard. I would fence and clean up the ground and make it as neat and handy as I could at a small expense. Then I would buy up all the bees that were for sale on the field, and begin to form my apiary . . . One can usually buy at a fair price what few bees the farmers have on such a field."

Perhaps, and yet in many cases the very fact that farmers knew a man was engaged in establishing an apiary of considerable size would arouse in them the thought that more was in bee-keeping in that locality than they had supposed, resulting in an immediate rise in price. Indeed, it has very frequently been the case that the establishment of a prosperous apiary has induced others to go into the business to a considerable extent who never thought of such a thing until they saw the establishment of that prosperous apiary.
CONVENTION PROCEEDINGS.


By Dr. L. D. Leonard.

The Minnesota State Bee-keepers Association held a convention Dec. 5, 1900, at Minneapolis. The meeting was called to order by H. G. Acklin, the chairman of the executive committee, the president, J. F. West, being ill; and, therefore, unable to be present.

After preliminary exercises, Vice-President G. H. Pond took the chair. The first business of importance was the report from a special committee, composed of Wm. Russell, H. G. Acklin and J. F. West, on the adulation of honey. This committee had collected samples of honey from different parts of the State, and took them to the Dairy and Food Commission for analysis. It is due to this society, through the efforts of this committee, that the Dairy and Food Commission have taken a more active interest in the suppression of the adulation of honey during the last year, than they ever did before.

Ques.—Is it well to extract all the honey from the brood-frames at the end of the white honey season?

Mr. Turnbull would not extract from brood-frames at all; Mr. Shepherd said the same; Mr. Perry would take part of the honey out; Mr. Boswell thought that in small hives one should not attempt to extract from the brood-frames; and Mr. Acklin believes in extracting from the brood-frames, and that sugar syrup is better for the bees to winter than honey.

AFTERNOON SESSION.

This session was held jointly with the Horticultural Society, which was holding a convention in Minneapolis at the same time. Dr. L. D. Leonard reviewed the literature relating to the mutual relations of bees and horticulture, and the following paper was written by Pres. West, on the same subject, and was read by Mrs. Acklin:

BEE-KEEPING AND HORTICULTURE.

There are a great many things which are of interest to the bee-keeper and horticulturist, and if I were present I think I should find much new to interest you, applicable to both occupations; but to write them is another thing.

I take for granted that every up-to-date horticulturist believes that bees are great agents in fertilizing, and that they are a great benefit where cross-fertilization is a benefit and is desired.

Flowers, as a general thing, are secreted only in such flowers as are incapable of self-fertilization; while those capable of being fertilized through the agency of the wind secrete no nectar to entice the bees. As examples, we see wheat, oats, barley and herds-grass, all capable of being fertilized by the rustling of their stalks by the wind. All the crows and buckwheat must be fertilized by insects. The poet puts it thus:

"Bees kissing the flowers; they sip its sweet, But make the buds more fruitful and better to eat."

Prof. Bailey, of Cornell University, a very eminent horticulturist, says bees are much more efficient agents in pollinization than wind, in our fruits, and their absence is always delectious.

Mr. Morton B. Waites, of the Division of Vegetable Pathology of the Department of Agriculture, says many varieties of apples require cross-pollination, and there are differences of opinion as to whether some of the varieties (from decide experiments), plant mixed orchards, or at least avoid planting solid blocks of one variety, and be sure there are sufficient bees in the neighborhood to visit the blossoms properly.

Mr. A. C. Perry, horticulturist commissioner of Tulare County, California, gives an instance where he has an orchard of several hundred acres. He says that bees and fruit go together; that he can not raise fruit without bees; and that he has them all over his orchard.

A Mr. McIntyre, in a horticultural meeting in California, relates his experience in starting an orchard, which was very large. It was started 35 miles from any bees, so far as he knew; when his trees were only a foot high, they blossomed but he did not receive any fruit. As the trees did not bear fruit he was advised by other fruit-men and horticulturists to get bees, which he did, and his orchard bore profusely, and he said he had bees all around his orchard. Where there is a large area of orchard, clover, or blossoms of any kind, which require insects to fertilize them, Nature has not supposed a large number of insects to perform the work, hence the necessity of keeping bees. I have about four acres of strawberries. In the season of 1899 and 1900, when they were in bloom there was so few flowers for the bees, that I was unable for visits from bees and insects, they were literally covered with bees, and my berries were never so perfectly fertilized. Generally there are not many bees to be seen on the vines.

My market and money-making berries are the Warfield, fertilized with the Bedderwood. I have the plants in rows four feet apart and about two feet in the rows. I now the vines after the season is over, stir up the mulch and burn it away. Last year there is a good white squash which put 4± big loads of rye-straw on my bed; the straw made me $800. That is, I cleaned up that after paying for picking at one and one-half cents. The crop was about one quarter of a crop and without a heavy mulch I would not have had anything, it was so dry. We had no spring rain, and none whatever until I was about through picking. I never saw such a sight of blossoms, and never saw so much fruit set on vines as there was on this bed. If the good Lord had given me three times the usual rain in the spring I would have had an immense crop.

My land is a black, sandy loam, with clay subsoil, and with good rains in April I can raise a fine crop of berries, the seeds of which set so many berries, that I have more than one quarter as many as the Bedderwood. I have tried, on a small scale, a great many kinds of berries, but never any that will make the money as the two-named, Mr. Mclntyre, as well as I can learn, has raised more than one about one-half as much honey. The learned editor of the Gleanings in Bee-Culture, Mr. Ernest Root, thinks he has discovered the reason, and I am inclined to think that he is on the right track. Time will tell. To-wit, the difference in the length of bees' tongues. In measuring many tongues he finds there is a great difference in the length. In measuring the tongues from Dr. Miller's two best queens—those that produced the largest quantity of honey per colony—one measured 100 and the other 80, making the average 90. A Kentucky man sent some bees, and their tongues measured 30-100 and 21-100 and one measured 28-100. It takes long tongues to reach honey in red clover down to the sand and in many other varieties of blossoms. Mr. Root is right, the man who has a queen that will produce bees with tongues 23-100 long, or longer, uniformly, has a Klondike right at home.

Perhaps Prof. Lugger, of the State experiment farm, would help the bee-keepers of Minnesota by measuring the tongues of bees sent him for that purpose. This matter will be thoroughly tested next season, and probably decided, and if there is anything in it I would like to see some Minnesota bee-keeper win the prize.

I am often asked, Does bee-keeping pay? Mr. N. C. Alford, of Colorado, says it paid him. He kept bees for eight years and cleared $6,000, after paying for all the bees and supplies and money spent for labor and seed. He also owned 1000 acres of land and 500 head of cattle. The alfalfa fields of Colorado furnish an immense amount of bee-pasture, and Mr. Alford is not the only enterprise man who has made big money in keeping bees in Colorado. Twenty-four maiden ladies arrived at Denver on one train recently to engage in apiculture in that State.

In some localities in other States, during the past season, bee-keepers met with great loss by having their bees poisoned by those who wanted to get rid of bees. It is by no means to be laughed at, when we see the number of bees killed in bloom. This matter was thoroughly discussed, and it seems from letters received from the experiment stations in Missouri, Indiana, New York and Ohio, that such trees should not be sprayed when in bloom. Laws have been passed in some States to prevent the spraying of trees when in bloom, and bees are visiting them. Spraying just before and just after bloom seems to be sufficient. This is a matter that should be understood by the horticulturist, and apiculturist, par
ENTERED AS SECOND-CLASS MATTER AT ANNA, OHIO, UNDER ACT OF MARCH 3, 1879.

AMERICAN BEE JOURNAL

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CONTENTS

Contributed Articles

Transferring Bees From Box-Hives—Pollezing Fruit.

BY G. M. DOOLITTLE.

A CORRESPONDENT says he has purchased several colonies of bees in box-hives, and wishes Doolittle to teil him the best method of transferring them to frame hives. The majority of our practical bee-keepers of the present day believe that what is known as the "Heddon plan" of transferring is the best, taking all things into consideration, so far given.

This plan is as follows:

Drive the bees from the box-hive and run them into a hive furnished with frames of wired foundation, the furnished hive to be placed on the stand the colony had occupied. A bee-fencing, while the box-hive with its comb of brood and honey, with the few adhering bees, is to be placed close beside the new hive. In 21 days after, when all the brood shall have emerged into worker-bees, drive the bees against the box-hive, drive the bees against the hive, and, after destroying the queen with this last drive, or the one in the colony driven before, according to which is the more valuable, unite the bees with those first driven out, thus getting the bees all on nice, straight combs, and in good shape to give a good yield of fine honey.

The combs are now taken out of the box-hive, the honey extracted from them, and they are rendered into wax to help in making more comb foundation.

Now, while the above is the best known plan where the combs in the box-hives are crooked or poor, and the season of the year that when the bees are securing honey from the field, yet if the combs in the box-hive are good, straight ones of the worker-size of cell, or we do not have the funds to buy nearly in the same time, before the bees have much brood or are getting honey from the fields, so that they will not draw out the foundation readily, then, decidedly, the old plan or method given in nearly all the standard works on bee-culture, is the proper one. In the above, when as good, straight worker-combs, made the wax from them into foundation, wired the frames to keep that foundation from sagging, and then "transferred" the foundation into those wired frames, with an amount of labor nearly equal to that required to transfer the original combs, all for the fun of saying we had used a plan of transferring different from that of Quinby's and Langstroth's day.

Straight worker-comb, properly transferred into a frame, after being fastened by the bees, makes just as good a frame of comb as is the one finished from foundation; and a frame properly filled with comb, without any wires in it, is just as good for all practical purposes, as is the one having wire in it, while the wire is a positive nuisance, if, from any reason, holes get in the combs from moldy pollen, mice or anything of the kind, so that we wish to put in a "patch of worker-comb to keep the bees from building in drone-comb. I do not wish to be considered cranky, but when a thing savors of more money out than profits in, I have always felt it a duty, as well as a privilege, to enter a mild protest, after which I am not to blame if any see fit to use anything recommended which may result in a financial loss.

BEES AND FRUIT-POLLINATION.

I have read twice the article by Thaddeus Smith, on pages 279 and 280, and the second reading only emphasized the impression of the first, which is, that he says, "I am set for the defense of facts," it seems entirely to ignore them or else is wholly ignorant of many things along the lines of which he is writing, that have transpired during the past. I will take space to speak of only two or three.

He wholly ignores those experiments made by Gregory, of Massachusetts, the great squash-grower, wherein he proved positively that not a single squash could be raised where insects were excluded from the female blossoms of that plant. And yet all Mr. Gregory did was to place netting which would have admitted millions of those "infini-esimal particles of pollen which Smith tells us are the ones which float in the air and do the work of fertilization, those without the aid of insects. If the pollinators were only stirred up with a stick, or by a breeze created by the bees' wings, in which case bees and insects may help a little.

Then he ignores the Wenham episode, which, through jealousy, excluded all the bees from that township, during which exclusion fruit was nearly if not entirely lost. The bees, no doubt, are the cause of the loss.

And he can not have forgotten the importation of our humble-bees into the continent of Australia, at a cost of thousands of dollars, after which importation clover seed obtained in fair quantities, when none before perfected. And with these little facts within easy reach of his understanding—

That "it will not do to fly about, and such claim "is all conjecture based upon preconceived theory." I believe that Mr. Gregory and history are as unimpeachable witnesses as any which Peter Island can produce.

I do not care to notice Mr. Smith's trying to "hold me up to ridicule," for any intelligent reader would know from the drift of my article in the March 14 American Bee Journal, that only nectar-bearing insects were intended, where I said insects of the "order of the bee," and another up to ridicule does not count anything in an argument.

Onondaga Co., N. Y.

Swarms Selecting a Location—Historical.

BY A. P. RAYMOND.

A KNOTTY problem has been discussed in the American Bee Journal, regarding the time when swarms select their future home, whether before or after emerging from the parent colony. There are many questions pertaining to bees that, at the present day, we can answer with absolute certainty. There are more, perhaps, that we have been guessing at for many, many years, and as far as we can see, regarding them as were our grandfathers, 100 years ago.

The above question is one of those "stickers" that I think will never be solved until some bee has been educated to talk and tell us the facts and figures. After reading "By the Winkie's" ideas on this subject, I thought I would consult John M. Weeks, whose work, published in 1836, I have in my library, and I found that he was probably as near the truth regarding this matter as we are to-day, after a lapse of some 64 years.

Prof. Cook thinks (page 530-1900) that their future tene-ment is selected by the bees before swarming, but after issuing; they first cluster and wait until the queen, he says, "is at hand," and then "winkie's" ideas on this subject, I thought I would consult John M. Weeks, whose work, published in 1836, I have in my library, and I found that he was probably as near the truth regarding this matter as we are to-day, after a lapse of some 64 years. After reading "By the Winkie's" ideas on this subject, I thought I would consult John M. Weeks, whose work, published in 1836, I have in my library, and I found that he was probably as near the truth regarding this matter as we are to-day, after a lapse of some 64 years.
Let us give it up and admit that we do not know a thing about it.

By the way, speaking of John M. Weeks, few living apiarists know that such a bee-keeper and author ever existed, and yet I think he should have a place in history alongside of Father Langstroth and Moses Quinby. He began keeping bees about the year 1800 in Salisbury, Vermont, and struggled along with log-gums and straw-skeps with varying success until somewhere along the line the beginning of his 80th year he thereupon patented a hive which was, in the matter of convenience, far in advance of anything before in use.

In 1836 he published a treatise on bees and their management—a very meagre and probably very widely distributed, for two reasons: First, meagre transportation and advertising facilities; and second, the work was unpopular, because the author did not accept any of the then prevalent theories in connection with bees prevalent at that period, but gave them solid facts, which, even today, relating to bees, seem stranger than fiction.

There were no railroads in Vermont at that time, and it was 13 years afterward before the State could boast of one, in fact it had been only six or eight years since the locomotive made its first appearance on this continent, consequently the mail service was also very poor at this time.

According to Mr. Langstroth’s biography in the "A B C of Bee-Culture," this work appeared two years before (Mr. Langstroth) became the owner of his first colonies. I almost wonder that Mr. Langstroth, who was scouring the world for bee-literature at this time, never crossed across this work. As proof that he did not, I will quote from his work, page 24:

"My attention has been recently called to an article in the Ohio Cultivator for 1848, page 185, by Micajah T. Johnson, in which, after detailing some experiments, he says:

‘When there is nothing more to be done to the queen, and not having the means of destroying the drone, the killer and the moth-worms soon take possession. I believe no colony is destroyed by these...’

‘...Killer and moth worms, and the diseases to which the queens are subject. This seems to be the earliest published notice of this important fact by any American observer.'

Now hear what Mr. Weeks says, 13 years before this, on page 51:

"Large colonies, that never swarm, are never destroyed by the moth unless they lose their queen, melt down, or meet with some casualty out of the ordinary course of managing them. The colony of bees are so numerous that their combs are all kept well covered during the moths season, so that no killer can enter and deposit his eggs."

Quoting from Mr. Langstroth’s biography in "A B C":

"Mr. Langstroth at that time (1858) had never seen or heard of a book on bee-culture; but before the second year of his bee-keeping, he did meet with one, the author of which doubted the existence of a queen."

Now, Mr. Weeks not only admitted the existence of a queen, but he feared them, and had a method of his own of introducing a new one:

Mr. Quinby in his work mentions T. B. Miner as being the author of a work on bee-culture which appeared probably a very short time before his own. Without a doubt, Mr. Weeks’ work is the earliest treatise on bee-culture ever published in America, and I am convinced by his knowledge of bees, and the methods he employed in their management, that they were acquired only after years of untiring perseverance and hard study.

He seems to have done all in his power to advance and promote the interests of bee-culture—the art he loved so well; but the people were not as ready to accept the true facts as we are to-day, consequently his labor was, to a large extent, a failure, and this may explain why he did not get the management at that early day being attributed to luck, and the almost universal answer to the query, "Why, don’t you keep bees?", was, "I have tried them but they don’t do well for me."

No amount of reasoning could induce them to undertake another trial.

Considering all the obstacles that lay in his way, and the difficulties he had to overcome, I think that Mr. Weeks made a good fight, and he should not be entirely forgotten. Peace to his ashes, and all honor to the memory of W. M. Weeks.

Clark Co., Wis.

Queenie Jeanette—The Queenie of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

Out-Apiaries—Their Management for the Prevention of Swarming.

By F. GREENER.

It does not lie within the scope of this article to advise nor to discuss ways and means to bring our colonies up to the number required, and the reasons are obvious, that at least the majority of our colonies have already attained that state of development.

The principal drawback in running out-apiaries is that the bees are apt to swarm, and that the swarms are apt to go to woods. The way to prevent this management be as such to prevent all swarming.

We might run our out-yards for extracted honey, giving plenty of room to both queen and bees, always supplying empty comb, etc.; there would then be no swarming. However, we were too busy to convert our yards, so we can find a more ready sale for it. Giving plenty of room alone does not have the desired effect, and we must adopt a different management. It would be of great advantage to have only young queens in our colonies—we would then not be troubled with swarms out of their season, which appear frequently, when colonies supersede their queens. All swarms that would appear during the regular swarming period we try to head off. We seldom have any indication of swarming this year, so much sooner than June 15.

Nearing this date we watch a few of the best colonies, and when we find them constructing queen-cells our operations must soon begin. Hives and supers must of course be gotten in readiness before this time.

About June 20—some years not till June 25—I go to the colonies most likely to swarm and take them. First I give a little smoke at the entrance, then rap on the hive. I aim to give the bees time to fill themselves with honey. The hive is now opened; it may be set to one side first and an empty hive taken in its place. This latter should contain six Langstroth frames or their equivalent, supplied with starters only. This super is placed on top over an excluder, which, however, may be taken out after a week’s time. The danger of a queen entering the super is generally past after a week, and the diver may be needed on some other hive, and may be removed.

After the bees have all filled themselves they are not apt to offer any resistance, and, without using much smoke, I now shake all the bees from their combs in front of the entrance. I have "an eye" for the season, and its condition. After she has gone in with the majority of the bees, I place an entrance-guard over the entrance. Sometimes these shaken-off swarms leave their hive after their mother has gone in, and then the last thing you want is that the entrance-guard gets out of order.

The entrance-guard is to prevent such an occurrence; it should be removed when making the next visit. The apiary is gone over in this fashion, always selecting the strongest colonies first to be manipulated or stated. A visit takes care each time.

If done as I have directed, but moderately, the section-cases on these treated colonies will fill up surprisingly, especially if we have filled the sections with comb foundation, and, unless the season continues through a very extended space of time. Even a powerful colony, given this brood from week to week, will not think of swarming—they are kept too busy taking care of the young. They become very populous and also store much
honey as the brood hatches, which may be extracted after all brood has hatched.

Should we have full sets of eggs of white honey, and a second set of drilling colonies to shake off, I practice using one set of these heavy combs instead of a hive full of empty frames. I never hive a young swarm on empty combs—not in my locality. I give either empty frames with starters or solid honey-combs. The honey in the larvae will fill up to some extent, so a second hive is needed for breeding; but of course the honey must be of good color or it will spoil the looks of the nice white clover or basswood honey the bees may be storing in the sections at the time.

Some bee-keepers advocate and practice hiving young swarms—and shaken-off combs that come under the same heading—on frames of foundation. Aside from getting perfect combs I can see no advantage in this practice. Foundation in the sections pays well, however.

In the spring—just after-aparly I take the colony that has two or three extra brood-chambers and move it to a new location; the two uppermost brood-chambers, neither containing brood enough for queen-cells, if it has not died out, will make a good queen-cell in a protected space. Of course we must be sure that the queen is in the part moved. If we have placed an excluder on, a week previous, we can be very positive where the queen is. The queen must always go to the new location with the colony. It is the desire of all colonies as well as to all colonies not working in sections.

If it should seem desirable to reinforce any of the shaken-off colonies, a hive full of brood, after it has stood over winter, is the best sweet of choice. I will take it, bees and all, and place it over an escape on top of the colony to be re-inforced.—American Bee-Keeper.

Ontario Co., N. Y.

The Dzierzon Theory of Parthenogenesis—Digestion.

BY PROF. A. J. COOK.

It has always pained me to read anything reflecting upon the one of the greatest discoveries ever made in natural history, that of Dr. Dzierzon, of Germany. The thoughtful bee-keeper may wonder at this remark. He says we may all note that virgin queens lay eggs and that these prove fertile. Yet they always produce male bees and none other. Old queens also frequently become wholly drone-layer. Laying workers are exclusively drone-producers. Surely, if we think carefully upon all these facts we would not wonder that the theory of parthenogenesis in regard to the queen of the honey-brook drone bee was taken so thoughtful a bee-keeper as was the great German priest. Strange others had not made the discovery before Dzierzon did. Yet we would have supposed the circulation of the blood would have been easier of discovery. Yet it was a physical one, if physical, by Harvey is considered one of the greatest of the ever made.

It is also easy for us to prove the correctness of the Dzierzon theory. Every extensive and observant bee-keeper has had intimates in his apiary queens that have failed to mate. He has noted that these queens would lay eggs, and he has also been disgusted to note that the entire progeny were drones. Whenever we read, then, that some apistarch of an experimental turn of mind has removed the eggs from drone-cells into worker-cells, and vice versa, and in so doing has changed the sex, we have a perfect right to put a large interrogation point after all his statements. Like the matter of mating in confinement, we may well write it off as that, if true, but undoubtedly not true.

Dzierzon’s theory is a very great one, and all praise is due the great German bee-keeper.

As the readers of the bee-papers know, the Dzierzon theory has recently been called in question in over and over again by no less authorities than P. Dickel of Darmstadt. He was the editor of the Nordlinger Bienenzeitung. He holds that he experiments prove that normally all eggs were fecundated. He claims to have transferred eggs from drone to worker-cells and vice versa, to the advantage of these latter classes of bees. The reverse he also claims to have found true. It will be remembered that von Siebold and Leuckart proved by microscopic examinations that Dzierzon was right in his conclusion. Dickel understands that the great scientists is no longer to be accepted. He says truly that the sperm-cell or spermatozoon would not be seen except at a very early stage in the development of the egg, and that very likely these observers made their investigation so late that they would not have noted the sperm-cell although it may have been there at an earlier period. This is true as Dickel states, yet it is also a fact that in case of fecundation of eggs the sperm努r is destroyed in the sperm-nucleus and the starlike body known as the sperm aster. These are obvious, and their presence makes certain that a sperm cell was previously in the egg.

Recently Andrew K. Y. Dzierzon, in Anat. Anzeiger, gives the results of three years’ investigations. Weismann urges that there is no ground to doubt that von Siebold saw seminal filaments (even two to four in a single egg). Blochman, also examining microscope eggs of the honey bee, failed and these results have been confirmed later by Petrunkevitsch. These, however, von Siebold could only have seen in the freshest eggs, which were all taken from worker-cells. He has made a similar observation of the sperm aster in drones. In the stage of the first maturation spindle, the nucleus of the sperm-cells is either without radiations, or else the sperm filament has not been transformed into a sperm aster. In the stage of the second maturation spindle, the sperm cell can be recognized with certainty. In the second spindle stage, however, the radiations of the sperm aster are complete, and there is no danger of either overlooking or misinterpreting them. Petrunkevitsch sectioned one hundred and twenty-three sperm-cells, and twenty-nine of these were worker-eggs, and twenty-three showed the sperm nucleus with evident radiation. On the other hand, not a single sperm aster was found in any of the ninety-nine eggs from drone-cells. The result from the study of sections of eggs taken in the second spindle stage was still more conclusive. Of the sixty-two eggs taken from worker-cells, there was no mistake regarding the presence of the sperm aster. Weismann and Dickel, however, in handling these cells, could not state with certainty that these contained the significant radiation. As every bee-keeper knows, occasionally a worker-bee comes forth from a drone-cell. As I show in my Bee-Keepers’ Guide,” the queen adds or withholds the sperm-cell at will. She may occasionally make a mistake. As I show in my book, she often does when she first commences to lay, as we frequently find at such times, drones scattered through the brood. Weismann also says that occasionally a worker-bee may occasionally make a mistake in depositing drone-eggs is no marvel. In the case where Weismann found the sperm aster in the egg from a drone-cell, no doubt the queen made such a mistake when she laid the eggs. Weismann, after using these cells, made an examination and found the sperm aster; he concluded Weismann’s views are fully confirmed—normal eggs laid in drone-cells are not fecundated, and that those laid in worker-cells are always fecundated.

Dickel makes the observation that as soon as the queen lays these, workers alter the cell and busy themselves in some kind of manipulation. He thinks that they add saliva. In case he is correct in this observation, his conclusion that this has something to do with determining sex doesn’t hold when it is killed at the time of these third maturation spindles. These are covered at once after being laid, so that the bees can not visit them, they will not hatch even though left where the warmth of the hive would seem to make the conditions favorable. It has been suggested that in the case of eggs already lived with saliva the moisture may be prevented which would otherwise prevent their hatching. I think there is some doubt about this, but in any event the determination of sex is in no way dependent upon these eggs being left in the cell. The worker or queen workers will result; if not, we may as surely expect drones. The determination of the queen or workers is unquestionably dependent upon the quantity and quality of the cells which they work.

Dickel urges that there is a difference between drones produced by laying workers and those produced by queens, and he believes that the former are functionally imperfect. I doubt whether this is true. He says Weismann says that he sees no proof that it is so. There is, however, a slight though constant difference in the development of the eggs from the two different sources. This being true, it would not be surprising if we should find that
Questions and Answers.

Conducted by Dr. C. C. Miller, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller directly, when he will answer them here. Please do not ask the Doctor to send answers by mail—Editors.)

Drones Reared from Laying-Worker Eggs.

In examining my bees this spring, I found one queen had died during the winter, and a laying worker was busy. Will the drones produced from that laying worker be a fit specimen for a queen to mate with?

New Jersey.

Answer.—Instead of one laying worker there were probably many. As the eggs that produce drones are always unfertilized, I know no reason why the unfertilized eggs of a laying worker might not develop drones. Yet I should rather not depend upon drones reared in such an abnormal way.

Workers With Drone-Eyes.

I send you a sample of bees that have heads like drones. These bees are just from the cells. The queen is one year old that produced them. They have fertilization generally, as you will see. Just about one-third of the working force are like these. One head is all right, like others. This is something I never saw before.

Texas.

Answer.—The case is one beyond my knowledge—workers with eyes like those of drones. Are you getting up a new breed of bees with hyperactive powers of vision?

Prevention of Swarming—Other Questions.

1. We wish to increase our apiary to 200 colonies this season, and thereafter we desire to prevent a further increase. Will you give us the most practical method of the prevention of increase? We wish to know that method which is both safe and practical. We use the 10-frame, simply hinged. Would it be practical to allow the swarm to come out and hive it in the usual way in a “hiving-box” on the old stand, take the parent hive away under a tent, cut out all queen-cells, take it back to the old stand, shake out the swarm in front of the hive, and then give them plenty of super room and ventilation?

2. Our hybrids seem to be inclined to swarm more than our pure Italians. Is the hybridization generally?

3. We would ask your approval or disapproval of a ventilator bottom-board as follows: Cut a hole through the bottom-board about the center 8×10 inches. Over this hole tack wire-cloth, and underneath the wire-cloth place a frame of peptone that will close the hole or open it at will. This slide may be drawn to any extent as the heat of the hive may demand. Would such a device retard or discourage swarming? We have just constructed one such bottom-board and placed it under a populous colony. We find that, when the slide is drawn, the number of fanning bees is diminished. Our hives are on individual stands, about 12 inches from the ground. We regard this bottom-board as a perfect remedy in a case of robbing. The hive-entrance may then be closed completely, and the slide drawn to give the bees plenty of air. The colony that is doing the robbing may be served in like manner. This will stop the robbing at once.

4. Which are the better honey-gatherers, the hybrids or the pure leather-colored 3-bodied Italians from imported mothers?

North Carolina.

Answers.—1. The probability is that the bees with your plan would immediately start queen-cells and swarm you. You have better success to remove the old queen and cut out all queen-cells but one. As you wish to know a method that has succeeded, you might try this: Just before queen-cells are started, lift the old hive off the stand and put in its place a hive with foundation or starters; find the queen and put her in this empty hive; put an excluder over, and then set the old hive with its contents over the excluder.

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and perhaps get interested in subscribing. We will be very glad to supply such with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

The Premiums offered this week are well worth working for. Look at them.

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 drones from laying workers were unable to furnish sperm-cells that would fertilize the eggs. That the drones from the two sources may differ would not be exceptional, as there is a wasp which has two kinds of drones. It is not known, however, whether or not these drones have a different parentage.

Artificial Parthenogenesis.

The interesting experiments of Morgan and Loeb, which show that by the addition of certain salts the unfertilized eggs of sea-urchins may be made to develop more or less completely, have attracted very general attention among biologists. Recently, some further experiments by Pieri and Winkler have been made in somewhat the same direction. These scientists took the sperm, shook the same up in either sea or distilled water then filtered it and allowed the filtered sperm to fertilize unfertilized eggs. As a check, other unfertilized eggs were allowed to mature and treated the same way, except the decocation from the sperm was withheld. Many of the eggs to which the sperm extract had been added, partially developed, which was a result of none of the others. It was found that the sperm extract made in sea-water was more efficient than that made in the distilled water. To any one who has studied marine organisms, this is no surprise. These experiments are an interesting testing of bee-keepers. It would seem that in certain cases other stimuli than sperm-cells may induce the commencement at least of development. How it is that the drone-eggs develop without any stimulus at all is still a mystery which possibly may never be solved.

What is Digestion?

I am surprised at what the Editor states in the opening paragraph on page 361 that Dr. H. B. Cowan has no doubt about my criticism of his definition of digestion. I doubt if Mr. Cowan claims to be a physiologist. He quotes in giving his definition of digestion. He certainly quoted from a very able physiologist. Mr. Cowan, however, that this physiologist and no other would defend the definition. In all our physiologies we find a chapter set apart for the discussion of the subject of digestion. This chapter follows itself to the explanation of how food is fitted to be absorbed, and not to be excreted as debris and the like. Digestion is done partly in the stomach and completed in the intestines. In the stomach the gastric juice is the agent of this digestion, and the proteids, like the albumins of the food elements, are affected. These are changed into peptone—a substance which differs from all other albuminoids in being very osmotic. Other nitrogenous substances will not dialize, that is, they will not pass through the tissue membranes. Digestion is to change substances so that they may pass through and escape from the stomach into the blood. In the intestines, starch, sugar, and the fats, and possibly protoplasm, are digested in the stomach, are digested. The agent in this work is the enzyme diastase, which has three distinct substances, one of which digests the starch, one the fats, and the other, the proteins. This, then, is digestion.

Assimilation is quite a different thing. Another term for this is anabolism or constructive metabolism. This work goes on everywhere in the body. It is the changing of the nutritive elements into tissue and is the direct work of the cells which are found in all the tissues of the body. Where anabolism is very active, there the cells are very numerous, as seen in brain and muscle. Where the constructive metabolism is less active, there the cells are less abundant, as noted in bone and cartilage.

If you will consult any physiology, or inquire of any of our leading physiologists, he will no longer remain in doubt regarding the correct definition of digestion. True, our dictionaries do speak of assimilation, as though it might be akin to digestion. Physiologists do not put it in this sense. Los Angeles Co., Calif.

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and perhaps get interested in subscribing. We will be very glad to supply such with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

The Premiums offered this week are well worth working for. Look at them.
2. Perhaps so; but there is not much difference.
3. Anything that allows entrance for more fresh air is a help toward prevention of swarming, but the same end would be more easily and more fully attained by raising the hive on four blocks.
4. Some of the hybrids will be better, and some not so good. The pure stock will be more uniform and more permanent in character. The pure stock is better to breed from, and will not run out so easily as the hybrids.

The Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses.

By E. E. HASTY, Sta. B Rural, Toledo, O.

TALKING BEES 400 B. C.

One would say that every intelligent bee-man, ancient as well as modern, knew that it took honey to rear drones, as well as more of it to feed them after they were reared. The two different sizes of comb-cells in the hive are too common to be ignored except by pronounced dumbbellers, and it's easy to conclude drones too big to be reared in worker-cells. I would say then that perhaps it's not quite certain that Socrates knew of apiculturists who habitually practiced producing drones by creating drones by doing it, but I may have been not much more than a dream of his active mind, that if he kept bees he would save honey by cutting out drone-comb could be got at. Drone-comb is not used in the modern hive. All the same, it is interesting to hear a man talk bee-manipulation correctly four centuries before Christ. Page 254.

MORE ANENT THE SCORE-CARD.

Mr. Greiner, on page 262, laudably tries to fix things so judges of bees at fairs can not ignore the drones. He hardly gets there. Drones will still be mostly ignored, except in the special item. Suppose we change:

Color and markings of workers and drones.
Size of workers and drones.

and make it:

Color, markings and sizes of workers (10-10-16) * 35
Color, markings and sizes of drones (5-5-5) * 15

KEEPING YOUNG QUEENS CONTINUALLY.

The reform chieftain of keeping young queens continually in every hive runs against quite a "hesitate," against two hesitants, in fact, when Doolittle and J. B. Hall both emphatically denounce it. But if you do remove old queens for that purpose, be sure and destroy all cells capped at five days. Page 265.

HAVING SWARMS A LA GERHING.

And so Teacher Gehring would have his class hive bees by placing swarm and limb carefully in front of the entrance, as close as possible, and then blissfully watch results. I would respectfully put in a pretty strong protest. No doubt that succeeds nicely oftentimes; but, if I am right, a large percentage of swarms will refuse to move in as they ought—will just remain in a provoking-to-patience pile partly on the front of the hive and partly on the limb. When the same falls a member of the department, when it's just as easy to succeed all the time? I don't say you can always succeed in making them stay, but you can practically always succeed in making them run in. The fever does not die down in the department. With a big pot-spoon dose the hive—small doses and often. After awhile increase the dose, and anon fall to shaking instead of spooning. But keep most of the bees on the limb until they are running in lively. Most important of all, keep poking the entrance clear as often as it threatens to get blocked up. Waiting for stationary bees to start up is mostly a humbug. Make 'em "git fudder" right straight along. To some extent, and with due moderation, the smoker can be used to hustle them; but too much of it makes them fly badly. A brush of green twigs, to whip them and sweep them and stroke their backs, is better. And always smoke a cluster of bees gently just what you can without making them fly! before you do anything with them. Just about as bad practice to manipulate swarms without smoke as it would be to open hives without smoke. Both can often be done; but what's the sense of it? Our smoker dog doesn't charge anything for barking, and why should we bark ourselves—or go barkless, with three thousand thrusts thrust through our bark? Took me about half my bee-keeping life to get this much of horse-sense through my noodle.

GIVING CELLAR-BEES A FLIGHT.

Whether it is profitable or unprofitable to give cellarbees a winter flight is an important question. It is not easy by writing it. It would seem to me that the most profitable, My impression is that the heavy old chaps are mostly in the negative. May I be counted wrong. F. W. Hall's experience, page 268, seems quite decidedly in the affirmative—This quite healthy Irish bull I'll rest a bit from my afterthinking.

The Home Circle.

Conducted by Prof. R. J. COOK, Claremont, Cali.

SOUL-GROWTH FROM READING.

There was one advantage—the greatest one—which comes from reading that space crowded out of our last "chat" in the Home Circle is to refer to the moral uplift—the soulculture. We all agree that valuable as is bodily vigor, and desirable as it is mental growth and power, both pale before spiritual development and influence. The outcome of Samson's colossal muscle was to pull down; Shakespeare's incomparable mental grasp which so enriches our literature and quickens thought, did not lift the whole world to a higher plane. Christ's life, which touched the spiritual that is in man, raised the whole world to better thought and purpose, and the transcendent glory of any soul to be able to lift spiritually a brother soul. It is the most blessed gift that any of us can receive, to gain inspiration towards a more Christlike life. The reading of good books is the mightiest force in moral development and spiritual uplift. May I speak of our own magazine? We have about 200 students. A majority of these (61 gentlemen and 42 ladies) are engaged in voluntary Bible study. Many of these not only meet with one of their number, selected for special fitness as leader, for an hour each week, but all study the lesson for a half-hour each day, many taking the time just before breakfast. I believe that there is no one thing that promises more for the real success of our College than doing this fact—nothing that so surely bespeaks a useful future for our students.

To spend an hour each day in close mental touch with Elijah, with Paul, with Christ, gives an equipment for life that is beyond estimation. The inspiration that comes from reading good books secures to the world such nobility of soul as was in Lincoln; such purity, sweetness, and such wealth of vital, moving spiritual force, as came to us in Longfellow and Whitman.

Soul-culture is the richest adornment that any person can possess. Soul-culture makes a great people, a worthy nationality. Soul-culture alone can rightly solve the China and Philippine problems. The reading and study of good books with this friendly inspiration with the good culture. Mr. Cogshall, none of us can overestimate the value that ever comes from the reading and study of our best literature. Whatever we do, let us not neglect the matter of reading in the home circle.

BOOK AND MAGAZINE CLUBS.

It is good to have several of our best books, magazines, and papers—more than many of us can afford to subscribe for. May I tell how we manage this of like the daily papers, which usually takes about ten minutes of my attention each noon-time. I cut the price in two by taking it with my next neighbor. Do all in our home circles know how much they lose by not joining the good club with the good neighbors? We all have the very best neighbors in the world. Many of us do not know it because we do not know them.

To digress: Three of my neighbors and I own a cow together. Such friendly partnerships make a pleasanter neighborhood atmosphere, and I believe brighter home circles. Eight of us neighbors each take a magazine. Thus, we have the Century, Atlantic, Scribner, Popular Science Monthly,
Harper's, The Forum, North American Review, and an art magazine. These are passed each week, and each one has its magazine to keep in the end. I take and keep one magazine. I have the reading, or opportunity to read, eight of our best magazines. I feel rich in this arrangement, and I am glad to suggest that many of our home circles enrich themselves in some such way.

Our book club is another of our neighborhood co-operative institutions, which is now several years of age. This has a still larger range. Eighteen of our neighborhood "home circles" profit by this admirable arrangement. We all wish to see, possibly to read, surely "to thumb over," all the best books of the year. We each pay $1.50. This secures 18 books. We all unite in securing the volumes, and as we are all alert during the year, we are likely to make a good selection. We rarely secure a book that we regret later to have purchased. There are one or two such each year. We each keep a book two weeks, and on last date the day we receive it we sell each day that a book is kept beyond the specified time requires a fine of 5 cents. At the close of the circuit the books are sold to the members by auction, and always bring in more than half cost.

I recommend this, or some kindred plan, to all our home circles. It is very popular, and deserving so, with us. I presume I read about one-fourth of the books, and "thumb over" all of them. Mrs. Cook reads many more, and daughter Bertha some more than do I. Thus we get as a family quite an insight into the best that is written in America and England each year.

Anything that incites those in our American home circles to read more and more thoughtfully the best books and papers, should receive the fostering care of all of us. May not our bee-keepers profit by something like our magazine plan? There is always something in each of the bee-papers that is valuable to each of us. There are articles in each, and some number of each, that some of us do not care for at the time. To have them all would be a signal gain. In almost every neighborhood are there not five bee-keepers that get mail at a single post-office? In such case, five magazines or journals could be taken, and by a convenient exchange all have all. If such an arrangement could be generally carried out, can any one doubt but that it would be a substantial gain to our industry? When any one reads, and so handles his business more wisely, all are gainers. The slowly, unlettered bee-keeper, or even a child, that desires to purchase the book. The up-to-date, thoroughly-read bee-keeper advances the market, as all first-class products are sure to raise prices.

The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.

HOWARD M. MELBEE,
HONEYVILLE, O.

This Cut is the Full Size of the Knife.

When ordering, be sure to say just what and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made of a strip of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, drone, and Workers, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are made of first-class English spring-steel, and the handles are plated with the finest English plated steel. The bolsters are made of German silver, and will never rust or corrode. The rivets are plated steel; the linings are plated brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

The best good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the knife may try to live on; otherwise it will be destroyed, and the chance is you will not see it. A good friend of the bee-keeper, or anyone else who is interested in bees, would please have his or her name and address on the handle of the "Novelty Knife". It is a good knife, a good friend of the bee-keeper, and yourself, and the greatest advertisement you can have for bees.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side? The accompanying cut gives a faint idea, but cannot convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending as $1.00 to NEW SUBSCRIBERS to the Bee Journal (with $3.00). We will club the Novelty Knife and the Bee Journal for one year, both for $2.50.

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144 & 146 Erie Street, CHICAGO, ILL.

COMMITING SCRIPTURES TO MEMORY.

My fortunate boyhood's home circle was richer, better, for hearing the Bible read each morning. I would not have had that part of my early culture omitted for a fortune in what the world calls riches. I, to-day, can hear the words and comments of my dear father, though he has been dead for years. These memories are a priceless legacy. I could not deny my children what had been so precious to me. So I have always read daily from the "Book of Books." I have often wondered if my words read, and my comments, would be such a benediction to my children as were my father's to me. Some parts of the dear Old Book are so incomparably precious that we have learned them by heart. Thus we have the Ten Commandments, many verses from Isaiah, the 1st, 2d, 8th, 19th, 23d, 24th, 121st, and 117th Psalms, the Beatitudes, Romans 12th, and 1st Corinthians 13th, etc. We often, instead of reading, repeat them. It is a blessed help on the way to success with bees.

The book we mail for $1.25, or club it with the American Bee Journal for one year—both for $1.75; or, we mail the book free to premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

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Farm Wagon Economy.

The economy of this proposition is not all found in the variable price of the wagon itself, but in the great amount of labor it will save, and its great durability. The Electric Wheel Co., who make this Electric Handy Wagon and many famous Electric Wheels, have solved the problem of a successful and durable low-down wagon at a reasonable price.

A Report from Massachusetts.

This is more of a market-gardening country than anything else, with dairying as a sideline. There is no buckwheat raised to speak of, and very little white flax. About 50 colonies, I should judge, are kept within a radius of two miles from here. Are "kept," I say, but most of them keep themselves. They are in box-hives owned by people who never saw a bee-paper, and would not look at one if they could, because their fathers never did. In extra-good years they sometimes get a little surplus honey, but in poor years their bees starve. I find it a very healthy colony in a new hive for $2.50 last spring (hybrids, I should think), from which I took 29 pounds of fine comb honey. The colonies were very white and well filled out, but the honey was rather dark, almost of a greenish color, but very thick. I do not know what it could have been gathered from. The bees did not swarm last year, but will probably do so this year, and I hope it is just a bad year. They have wintered well on the summer stands.

Mrs. E. C. Fox.


The Rural Californian.

Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by an expert bee-man. Besides the paper also the best articles on California Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.

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Read what J. L. Parent, of Charlton, N. Y., says: "We use about one of your Combined Machines. Last winter, 50 half hives with 5-cd. cap, 30 boxes, 20 racks, 300 boxes, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., and we are going to do it all with this Saw. It will do all you say it will." Catalog and price-list free.

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A live, up-to-date Farm Journal with a General Farm Department, Dairy, Horticulture, Livestock, Poultry, Bees, Veterinary, Home and General News. Edited by one who has had practical experience in every department of farm work. To introduce the paper to new readers, it will be sent for a short time to Non-Subscribers. One year for 25 cents. Sample copies free. Advertiser Advertising Medium in the Central West. Address, MODERN FARMER,

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A Foster Stylographic Pen...

This pen consists of a hard rubber nib, the point of which is a round point, and writes as smoothly as a lead-pen. The nibs of the pen are made of platinum, alloyed with iridium—substances of great gravity which are not affected by the action of any kind of ink. They hold sufficient ink to write 10,000 words, and do not leak or blot.

As they make a line of uniform width at all times they are unequaled for ruling purposes.

Pens are furnished in neat paper boxes. Each pen is accompanied with full directions, filler and cleaner.

Best Manipulating Pen on the Market. 19,000 Postmasters use this kind of a pen. The Editor of the American Bee Journal uses the "Foster." You should have one also.

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Send two NEW SUBSCRIPTIONS to the American Bee Journal for one year, with 50¢, or send 80¢ for the Pen and your own subscription to the American Bee Journal for one year: or for $1.25 we will mail the pen alone.

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Excellent shipping facilities and very low freight rates for Southern and Eastern territories.

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Where they have direct steamboat connections with Massachusetts, Rhode Island, Connecticut, New Jersey, Delaware, New York, South Carolina, Georgia and Florida, and low freight rates.
As this is a main branch, order from any catalog or quotations given from Medina.
Also booking orders for healthy ITALIAN BEES, shipped this month. Full colonies, 5 frames queen, $6.00. Wholesale rates on application.
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20 cents Cash * * This is a good time to send in your Bees-wax. We are paying 26 cents a pound—CASH—for best yellow, upon its receipt, or 28 cents in trade. Impure wax not taken at any price.
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Wisconsin BASSWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free illustrated catalog and price-list.

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Red Clover Queens

LONG-TONGUED BEES ARE DEMANDED NOW.

ONE Untested Italian Queen FREE as a Premium for sending us TWO new subscribers to the American Bee Journal for one year (with $2; or, one Tested Queen free as a premium for sending us FOUR new subscribers with $4.00).

We have arranged with one of the oldest and best queen-breeders (having many years' experience) to rear queens for us the coming season. His bees average quite a good deal the longest tongues of any yet measured. The Breeder he will use is direct from Italy, having imported her himself. Her worker-bees are large, somewhat leather-colored, very gentle, and scarcely requiring veil or smoke.

They stored red clover honey last season.

Orders for these fine “long-reach” queens will be filled in rotation—“first come, first served”—beginning about June 10th. It is expected that orders can be filled quite promptly, as a large number of nuclei will be run. All queens will be guaranteed to arrive in good condition, and all will be clipped, unless otherwise ordered.

CASH PRICES of these fine queens will be as follows: Untested, $1.00 each; Tested, $2.00 each. Send all orders to

GEORGE W. YORK & CO.,
144 & 146 Erie St., CHICAGO, ILL.

they will worry and gnaw, and if there is a possible chance they will rush out and cause trouble. I remove them regardless of strength; some of the hives may be full of bees, but there will be no danger of crossing, or crossing.

The most important thing to be considered in moving bees is which way the combs shall be plied—toward the brood or acrosswise.

Many of the readers will remember our good old friend and bee-master, J. H. Townley, who in the early ’80’s gave us, as well as many others, our first lessons in keekeeping, and who advocated placing the combs lengthwise. But after years of practical experience on all kinds of roads of billy, stony, up-and-down, trotting the horses, etc., I find that combs placed crosswise is the safest method. There are more or less rats, sticks, stones, etc., on any road, while up or down hill one always walks a horse or team.


Prospects Good.

Bees are doing well. Clover is plentiful. Prospects in general are good.

Stephenson Co., Ill., May 16.

Bees Working on Dandelion Bloom.

Our bees have been doing very well the past two weeks on dandelion and other bloom, some colonies having 50 or 60 pounds of surplus honey in the extracting combs. A northeast wind and rain prevails at this time, while the honey is evaporating in the traditional. If the weather does not end in a killing frost there will no doubt be an abundant flow of raspberry and other honey as the weather is warm enough.

H. W. CORNELISON.

Washburn Co., Wis., May 23.

A North Carolina Report.

We have an apiary situated in eastern North Carolina, which is being run for comb honey. Last year the spring opened with 75 colonies in very poor condition, owing to the fall bloom being cut off by storm the August 20th. Last year was one of best honey-years ever known here, and our 75 weak colonies built up and gave us 800 pound sections of honey. About three-fourths of this was white honey.

We wintered our bees last winter in single-wall hives with the top removed, with the loss of a single colpy, except that two were found queenless. This brought this out this spring, with 122 colonies. While this was the smallest number of colonies of any kind in condition, April was a cold, wet month, and the bees pulled through under difficulties.

The apiary is situated in a pine thicket bordering on a farm. The trees are 50 or 60 feet high. Hence we have to clip our queen until we may be able to control the swarms. We have had 24 swarms up to date.

Occasionally a queen will emerge with her wings, which is the result of superseding. One such came out today and lit in the top of a pine 50 feet high. We were anxious to bring her down, fearing other swarms might join her. We tried jarring the tree with an ax, thinking that she would get off of sprad, and alight lower; but she resisted our efforts until we despaired of being able to capture her. We then shot at her, as one would an "outlaw," five shots from a Winchester repeating shot-gun brought her to the ground, together with many of her followers.

BAXTER & FARNELL.

Pauline Co., N. C., May 18.

A Colorado Lady's Experience.

I bought 16 colonies of bees and united to 13, a year ago last fall. This was too large a start, according to all the advice I could get, but I wanted to go in that deep. I spent about $80 on bees, new hives, etc., and last year I spent $100 on all sorts of supplies. The bees have yielded honey enough to pay for themselves and the cost of keeping them. I now have 36 colonies in fine condition, so I think it has been a success.

I have read so many bee papers and books that I am just bursting with information, but
ITALIAN

BEES AND QUEENS

Having been 25 years rearing bees and queens for the trade on what I believe to be the best known plans, I will continue to rear them on the same.

PRICES:
- One Untested Queen .... $ 1.00
- One Tested Queen .... 1.00
- One Fecundated Queen .... 2.00
- One Cambrod Insects ..... 1.25

Belgian Hares

Choice, pedigree and common stock; youngsters, $5.00 per pair. Write for description and prices.
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Clarinda, Iowa

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has a hobby which is the sheep-breeder and his industry, first foremost and all the time, a very interesting. Write today.

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GUS DITTMER, Augusta, Wis.

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Bingham Smokers never lose scent—always ready, 25 cents each. Smokers for sale by the dozen always will be. Bingham & Hethington, McCormick Knives, South Chicago, Ill., No. 30, American Bee Journal, or send for catalog. They can be found.

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1901--Bee-Keeper's Supplies!

We can furnish you with The A. I. Most bee goods at wholesale or retail at their prices. We can ship you freight, and ship promptly. Market price paid for bee wax. Send for our list catalog.


when confronted by a live bee, or a practical situation; I feel real ignorant and helpless. I had such a queer experience in introducing queens last year. There was no pasteboard over the cage, and there was no queen, so I knew they would not lose their grip, and I had an imperfect queen. I didn't know that. either. None time before, I knew their queen was dead, and gave them a frame of eggs, which were 'too old, I think. I was assailed by the bees, and I was in such an ill humor that I had not the time to notice the change. Then I returned again, and I was in such a state of mind that I was not able to discover that neither queen had been replaced! I waited three days longer, and then the bees were not kicking about. I found out then for the first time that they had a drone queen.

Looking in the other hive, I found the queen still imprisoned, and so I let her out myself. Two weeks later both hives were full of young queenless drones, and I was afraid the quantity! Neither colony was worth requeening, apparently, but I wanted to try an experiment. Then I was very anxious for fear the brood would chill and the queens wouldn't go through the winter, for I saw they were weak. I fed them and put them up snug and left them. Now they are running with bees.

Imprisonment didn't seem to injure those queens. I am afraid I will lose track of them when they swarm. I have never tried clipping, but do not think they are Miss Josephine Field,

Las Animas Co., Colo., May 12.

The Uses of Honey.

Mr. Herman Cook, of Wyoming Co., Pa., sends us the following, taken from the New York Tribune, contributed by J. F., of Preston, Conn.:

The ancient regarded honey as a celestial food, and they used it at all religious ceremonies. The Egyptians used it as a remedy for various diseases. To judge from the Bible, honey was considered as delicious and as pellable as milk and flour, and it served them as an excellent medicine for the cough, asthma, and fever, etc. For the Arabians, honey is of great importance, as it is known in the Koran by the story of the man who one day asked a bee what to do for his brother, who was suffering great pain, and about to die. The prophet prescribed honey, and the bee answered him. After a short time, however, the man returned and told Mahomet that the remedy, instead of alleviating the evil, only made it worse. But the prophet answered, "Go home and continue to give honey to your brother, for tied speaks the truth, and your brother's body has lied." And the man returned prepared after a continued use of the remedy.

The ancient Greeks used honey as a means to prolong life. Pythagoras lived only on honey in order to keep healthy his body as well as his mind. Other examples are those of Democritus, who lived 154 years, and Anacreon, who died at the age of 115. Both were very fond of honey, and consumed it in various mixture.

Therapeutically, honey is much employed in diseases of the mouth. It is known that these delicious properties have been discovered only after the application of honey in combination with alun or borax. When children are teething, it is found they are very relieved with a decoction of marshmallow (the root of Althaea officinalis), or saffron with honey. For pains in the throat, a mixture of honey and lemon juice is an excellent remedy. As curatives are further known the thymus, eucalyptus (tublar and honey), and the salutary wine (cherry, knapweed, white wine and honey). Also the application of diluted honey to burns, blister; (in this case the honey is combined

"THE GARDEN BOOK."

A NEW BOOK ON GARDENING,

BY T. GREENE.

This is a new book on gardening. Mr. Greiner has for 30 years been practicing and practising the gospel of good gardening with marked success, and I think he has now finished his work. Thirty years of actual soil-contact by a man who loves his work and follows it in all its details has not failed to make him a great gardener when it comes to teaching others. In the "Garden Book" he writes in simple language about things that will work in a most entertaining and instructive manner.

The man who has a garden, large or small, and the man who intends to have one, will be equally interested and profited by a study of its pages. It is one of those books which inspire its readers to reach out for better results through more thorough work, and is in line with the previous writings of Mr. Greiner, which have done some real work in the garden interests of the United States. The book is handily printed, price is one dollar, and comes in a handsome paper, containing 12 practical illustrations. It is for present reading and right for every-day reference.

Prices, postpaid, 50 cents; or with a year's sub-

inscription to the American Bee Journal, both for $3.00; or we will mail it free as a premium for sending one NEW SUBSCRIBER to the Bee Journal for a year with FREE.

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141 & 144 Erie Street,
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Ten Days on Trial.—In the past several years certain manufacturers and others, with that knowledge and understanding of the honey-producers, have been sending out all sorts of things to the farmer to be tried by him and paid for only after he is convinced of their merit and satisfied with the bargain. So far as we know, however, the Kalamazoo Carriage and Harness Co., of Kalamazoo, Mich., is the first firm in the United States to make such tests. The plan is to send articles which appear in their catalog to anybody, anywhere, on 10 days free trial. The purchaser or-
derers the vehicle he may wish, and when it is shipped, he goes to the railroad station, hires a wagon, and drives in the car in any legitimate way and subject to any test arising.

If at the end of that time he is satisfied with the job, he simply pays the catalog price for it. If not, he ships it back to the factory,

This appeals to us as being about as fair and open a method of doing business as it is possible to imagine, and certainly a most gracious compliment to the beekeepers and the farmers of our country. It gives them the oppor-
tunity to see for themselves what they are buying and to test it in every way before being obliged to pay for it. Certainly the manufac-
turers, who will offer their goods to people on such liberal terms, have unbiased confidence in the value of their wares. And this is exactly what we want under these conditions, that the Kalamazoo Carriage and Harness Co. made only first-class vehicles, and trimmed and finished them only in the most splendid and enduring manner. Our readers who are in need of a vehicle or hardware of any kind should write them at once for illustrated descriptive catalog. They mail it free.

Please mention the American Bee Jour-

nal when writing.
with oil of turpentine, inflammations, and in many cases of veterinary practice, are almost generally known.

To preserve the complexion there is nothing better than honey-baths, which, a hundred years ago, were much in use among the ladies of the stage, and have to-day again come into vogue in Paris.

Spring Feeding in the Fall.

The Canadian Bee Journal reports that very practical beekeeper, J. B. Hali, as saying:

"As far as spring feeding is concerned I am a lazy man, and I have found it is better to give the spring feed in the month of September. I do have a few colonies that have advorved in the past, never open your colonies until the fruit blossoms, unless there is something wrong with the bees. If you want to know their strength, and can not tell by the noise they make, tip up the hive and look underneath—do not break the quills. You may not know the difference of a crop of honey or no honey. You open them in the spring to see if they are queenless—what good can you do them if they are queenless? Let them be.

Money Not the Highest Success.

W. A. Gilstrap utters some good sense in the Bee-Keeper's Review when he says:

"Many make more than a living at home, mainly from bees, who could make more money to scatter their time and business all over the country, as they would have less of life's real success than at present.

"To illustrate, you can find places, isolated perhaps, where you can make more money with systems of outapiaries than you are doing at present; but you would necessarily have to be away from home more, would be working away from your family, and would not yield as much self, than your present capacity. To make the suggested change would be very unwise.

In-Breeding.

The opinion is commonly held that without occasional introduction of fresh blood one's stock will run out, and that continued in-breeding means final decay. Under usual circumstances the opinion is probably correct, but it should be known at the same time that in-breeding is a perfectly justifiable method of management which may produce very desirable results. The editors of Gleanings in Bee-Culture say:

"Very recently my attention has been called to a series of articles in the Journal Bulletin, the subject of in-breeding to get prize-winning stock. I was surprised to note how the breeders of high-class Jersey blood in Illinois in one or two instances that a mother had been bred to her son, and sisters to brothers, for the express purpose of accentuating certain desirable traits. I observed, further, that this practice has been carried on to great advantage for many years. Breeders have been those who learn from the breeders of other fine stock. But we have one difficulty to contend with, and that is, that a partial strain of a queen mates to a particular strain of drones."

In the same paper J. H. Gerbracht says:

"I think I will say a word right here about in-breeding. There is not in existence to-day a single strain of superiority of either cattle, hogs, or chickens, in which this principle has not been employed to secure a fixed type. The true line of horses, for example, can be maintained only by the most careful and scientific line-breeding. Crosses between different strains produce just the same unreliability and tendency to degeneration as crows of distinct breeds do, except in the few cases where a breed or strain, through the exercise of most unusual good judgment, the two strains happen to 'nich' well. In cattie and swine breeding, the infusion of one-eighth new blood is considered enough to off-set whatever ill effects close in-breeding may produce, the idea being to use the least possible amount to maintain the vigor and stamina with as little disturbance of characteristics as possible, and if cross-breeding a bee breeder depends to a great extent on his ability to do this accurately.

In-breeding, particularly in the varieties which have variegated plumage, in-breeding and line-breeding are the only ways by which any effect of crossing is observed, and some breeders boast of not having gone outside of their own yards for breeding-stock for 30 years. Of course, the results are sometimes the same as those attained by some breeders of five-banded bees—good to look at, but of no utilitarian value; but this is by no means necessarily the case; and the best lay- and most vigorous-growing stock we have to-day is from this same line-breeding."

Assaulting the Bees.

A writer in Bahminton says that in India, about eight miles from the town of Jabalpur, is a place called The Bee, from the fact that swarms of the insects live there and defend their holding against the world. Shocking are the tragedies which have resulted from affection of the skin made by the bees. But every time that they have had their heads above water, the insects settled upon them in clouds, and they chose drowning to a more horrible death. Bees and, even the lordly tiger, have paid the same penalty for their indiscretion. Says the Englishman who describes the affair:

"I determined to invade the home of the bees, and I began by designing a suit of defensive armor. It was a suit of leather, with a cap, tied round the neck with tape, a bee-veil to be tucked into the garment, riding-boots, gauntlets, and two pairs of gloves. Each of these suits was in my opinion, as well as in the opinion of the bees. I was bow served by the tailor, so that there should be no chink or crevice.

"Abraham, a native, I armed and carrying a bucket and two coils of rope, were to climb up to the back of the hills so as to get above the bees, and were to attack them in charge of the boat, ascended the rocks. He went to the bank of the river, which was under the point of attack, and made haste to the place.

"Abraham and I climbed to a well-considered height, and then I left him and crawled cautiously forward. I could hear a sort of alluring hum, dominating the noise of the water beneath, and my nostrils were filled with that sweet smell which is made up of honey and bees.

I decided that the point of attack was about Standard Bred Queens.

Acme of Perfection. Not a Hybrid Among Them.

IMPROVED STRAIN GOLDEN ITALIANS, World-wide reputation. 75 cents each for $4.00. Long-Tongued 3-banded Italians bred from stock whose tongues measured 25-100 inch. These are the red clover bustlers of America. $1.00 each, or 6 for $5.50. Safe arrival guaranteed. W. F. MUTH & CO. Headquartes Breeder of Beekeepers Supplies, S.W. Cor. Front and Walnut Sts. Catalogue on application at 10 cents, 0. Please mention Bee Journal when writing.

ALBINO QUEENS. If you want the most gentlest and prolific Queens—If you want the gentlest bees for your most honey-gatherers you ever saw—try my Albino. Untested Queens in April, $1.00; Tested, $1.50. J. D. GIVENS, LIBERTON, TX.

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Mention the American Bee Journal.
The Bee-keeper’s Guide; or, Manual of the Apiary,
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PROF. A. J. COOK.

400 Pages—16th (1899) Edition—18th Thousand—$1.25 postpaid.

A description of the book here is quite unnecessary—it is simply the most complete scientific work ever published on the subject. Fully illustrated, and all written in the most fascinating style, it is sure to be a welcome addition to the library of every bee-keeper, and to the library of the whole bee-world to require any introduction. No bee-keeper is in any sense complete if he does not possess a copy of this library complete, without The Bee-keeper’s Guide.

This 18th and latest edition of Prof. Cook’s magnificent book of 400 pages, in neat and substantial binding, is now being issued gratis to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

Given for TWO New Subscribers.

The following offer is made to present subscribers only and is non-premium also is given to new subscribers for the Bee Journal for one year:

Send money to our office to the Bee Journal (with $1.50), and we will mail you a copy of Prof. Cook’s book FREE as a premium. Prof. Cook’s book alone sells for $3.50, or we will fill it with the Bee Journal for a year—both for only $1.75. Begin cultivating your connections for two NEW subscribers to the Bee Journal for a year, and then get the book as a premium. Let every body try for two new subscribers.

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One Home in Colorado for Sale

I have a fine Fruit-Ranch of 14 acres here at Frutta, all set to fine fruit, principally winter fruits, prunes, plums, prunes, prunes, pears, plums, cherries, prunes, prunes, and about 400 grapes; 100 varieties of peaches, mostly Italian, and about 100 fine Belgian hares that I will sell with the place. The orchard is in fine bearing, being about 10 years old, and is clean and free from weeds. The house is a good 7-room one, nearly new, with bath and water; a good new barn for two horses and one cow, and two barns for two cows; good brick kiln; those two cellars, good lawns and shade. I have a good turn with the place, with an abundant supply of water and an abundant supply of water and an abundant supply of water. I have a good turn with the place, with an abundant supply of water and an abundant supply of water. The price of the place this year will be about $2,000. It joins up to within 20 rods of the town site of Fruita, where we have one of the best schools in the State, and employing 7 teachers. It is only 1/2 mile to the depot, churches, school and post-office, and has telephone connections with all parts of the State. This is a good, healthy climate, and good society.

Address for terms and further particulars.

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Please mention Bee Journal when writing.

Catnip Seed Free!

We have a small quantity of Catnip Seed which we wish to offer to our readers. Some consider catnip one of the best foliage plants. We will mail to one of our regular subscribers one ounce of the seed for sending us one New subscriber to the American Bee Journal for one year, $1.00; or we will mail to any one an ounce of the seed and the American Bee Journal one year—both for $1.00; or we will mail an ounce of the seed and one year’s subscription to any one of our agents. Our stock of this seed is very small, better order soon.

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We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR

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WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than others make. New Catalog and copy of The American Bee-keeper free. Address,

THE W. T. FALGONER MFG. CO.,
JAMESTOWN, N. Y.

The U.S. Department of Agriculture furnishes White Clover, Alsike Clover, Sweet Clover, Buckwheat, etc., at low prices. Ask your wholesaler or Seed Department of your Post Office. The following are our prices (white) per pound.

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Prices subject to market changes.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

- 10 lbs. $1.00
- 25 lbs. $2.50
- 50 lbs. $5.00

Prices subject to market changes.

Also some NEW GOODS that have not yet been advertised. The exhibit will be conspicuously placed in the Gallery of the Agricultural Building.

If you have never seen a Ball-Bearing Cowan Honey-Extractor,

Here is your chance.

We expect that HUBER ROOT, the youngest member of the Root Co., will be the man in charge of the exhibit. He will be pleased to meet all our old friends, and make new ones wherever possible.

**Gleanings in Bee-Culture**

Will contain a very interesting series of articles on Queen-Rearing, giving New Methods and Short Cuts. There will also be a series on **Bees in Law**.

E. R. Root will tell of his trip through Texas, Colorado, Oregon, and California. Better subscribe now.

Six months' trial subscription for only 25 cents.

**THE A. I. ROOT CO.,** Medina, Ohio. (U.S.A.)

GEORGE W. YORK & CO., 144 & 146 Erie Street, CHICAGO, ILL., are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO, and would be pleased to send samples or new lists of material on which you may be interested.

Pan-American Exposition

... AT BUFFALO ...

THE A. I. ROOT CO.

will have an exhibit showing a COMPLETE LINE OF BEE-KEEPERS' SUPPLIES,

Also some NEW GOODS that have not yet been advertised. The exhibit will be conspicuously placed in the Gallery of the Agricultural Building.

If you have never seen a Ball-Bearing Cowan Honey-Extractor,

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Weekly Budget.

Mr. W. J. Pickard, of Richland Co., Wis., called on us recently, and reported quite discouraging prospects at present in his locality. Their 400 colonies require feeding to tide them over until the blossom flow.

Mr. Huber Root, who so faithfully and successfully managed the stereopticon at the Chicago convention last fall, will have charge of the exhibit of the A. I. Root Co. at the Pan-American Exposition. He is the youngest of the A. I. Root family, we believe.

The W. T. Falconer Co. and the A. I. Root Co. will have exhibits at the Pan-American Exposition, in the Agricultural Building. These exhibits will be conspicuously placed in the gallery, this gallery being reached by means of a traveling stairway. The two exhibits are placed together in the same booth, as were, facing each other—Cleanings in Bee-Culture.

Opposers of Long-Tongue Bees—one of our subscribers writes that it is a "silly statement" that some bees' tongues are longer than others, but it may turn out to be a very important thing for bee-keepers, and then there may be some unpleasant eating of crow. One curious thing is that the bitterest opposition to long tongues comes from the same quarter where the mostfrantic efforts have been made to get bees from India just because they have longer tongues. Long tongues may not be of any consequence, but then they may.

Let us wait and see.

Mr. R. G. Haun is one of our faraway Western subscribers. When sending in the nice picture of his apiary, shown on the previous page, Mr. Haun wrote us as follows:

I am 70 years old, and have always led an active and laborious life. Several years ago I gave up the ranch to my two sons, and that left me nothing to do, which I consider a bad thing, even for old people. In looking around for some sort of employment suited to age and acquired habits of life, bee-keeping seemed to be the thing. First, because I dearly love it, and, second, because it would make money financially.

Several attempts had been made to introduce beekeeping into the Kittitas valley, but each had proven a failure, and I was the first one to succeed in getting them to winter all right, and improve a fair yield of honey. Our honey is of the finest quality when one knows how to secure it. Our first yield in the spring is usually pention from willow, then we have fruit-bloom and dandelion, and our surplus comes from white clover. After that there is not much of a market, and I would like to see on my place one has long-tongued bees that can work on red clover.

I aim to keep from 40 to 50 colonies in 8-frame simplicity hives, and get an average yield per colony of between 40 and 50 pounds, spring coming on as well as it did last year, the bee-business here, namely, excessive swarming, dampness and mould in winter, and a poor market for our honey, our market being flooded with cheap honey from outside. When I first started in the business I produced one third of a pound of honey, and now I am producing extracted honey, which candies almost immediately after being extracted.

I believe that swarming may be partially checked by giving plenty of ventilation. I do this by inserting the bottom of the body and bottom-board, making the space one inch to begin with, and enlarging it as the season advances, to a 3-inch opening in front. Then in real hot weather I give ventilation at the top.

I extract before the combs are all capped over. Honey from fruit blossom and dandelion is a little strong, and somewhat bitter. This honey, when extracted, soon candies, and I let it stand as hard as possible, then setting it on the stove in a vessel of water, heating it pretty thoroughly, then set it away until it again comes; after three days' operation, and set it away in open cans covered with netting to keep out the flies, and it is not long until I have a very fine quality of honey that sells readily, and gives good satisfaction. I peddle my honey in the home market. At first I had trouble in selling it, as nearly everybody was afraid of adulteration. But as soon as people came to know me, and that I produced the honey in my own apiary, the adulteration scare helped me to sell it.

One day I opened a jar of honey for a lady to sample, and found a beeg's leg in it. Several children were standing by, and I, as a joke, said, "You see, this is genuine honey; here is a beeg's leg in it." I made the sale. I went up the street a little further, and when going to home I found a little girl sitting there running into the yard, shrieking. "O mamma, come quick; here is the man with genuine honey with beeg's legs in it!"—R. G. Haun.

The Bee-Keepers' Society of Erfurt, Germany, will hold its 50th anniversary this summer. An interesting exhibition is planned in connection with this convention or celebration. Bee-keeping of a hundred years ago is to be shown. One hundred hives and fifty or more colonies of bees will be on the ground, and will be prepared and started for the heath in Thuringia at the close of the festivities. A portable apiary of 30 colonies (wanderwagon) will also be on exhibition.

Mr. F. Greiner reports this in his cleanings in Bee-Culture. The oldest bee-keepers organization in America is only about 20 years old, and it has had its name changed several times though only "married" once, we believe. The next meeting will be held in Buffalo, Sept. 10, 11, and 12. Are you going to attend?

Mrs. Geo. Jackson, in the Bee-Keepers' Review, speaks thus about boys and girls taking up bee-keeping:

"I, too, believe that bees combine best with bees: therefore, get more bees. If you have children to help, keep more bees. Bring up your boys and girls in the business. Have them work, study and think, the same as they would in preparing for any other profession or trade; for it is distinctly a business of itself, and a paying one, too. Then, why let your boys and girls get away from the good of out-paperies; plenty of profit. I believe there is a better opening in bee-culture to-day for a young man than in almost any other line. It is equally good for girl or boy."

Advanced Eggs—An amusing mistake occurs in the Progressive Bee-keeper. A subscriber asks how soon after a swarm has issued it will be advisable to take away the queen to let the colony rear a queen. The editor replies not to disturb the old queen till four frames are filled with eggs, that in this case, once in the egg-laying position, to know that some think that such advanced eggs as the bees would choose will not make the best queens, etc. Of course, larvae were meant in place of "advanced eggs."
Swarthmore's System of Queen-Rearing, as given on another page, is well worth a trial. The part that costs, as he well says, is the part after the young queen emerges from her cell up to the time she commences laying. If Swarthmore's plan proves a practical success—and it certainly has a pronounced tendency in that direction—that to be force of bees than has heretofore been used during this expensive period, and it is the size of that force that has caused the expense. It is given now in good time for a thorough trial.

A "Large Force" of Bees—What Constitutes It?—Speaking of strong colonies, the editor of Gleanings in Bee-Culture said, "By a 'large force' I mean a colony the bees of which will weigh 8 or 9 pounds, or what would aggregate in numbers 49,000, or 50,000." Dr. Miller replied:

"Are you not a little modest, Mr. Editor, in demanding only 49,000 to 50,000 bees for a 'large force'? L. Stachelhausen says, "I have, in large hives, many times observed that the queen had laid, during the previous 21 days, 2400 eggs daily, on an average." Three weeks later about all the bees from that 21 days' laying ought to be on hand, making 71,400. If we count the life of a worker six weeks, then there ought also to be present bees, say one egg of the preceding week. Say the queen during that time laid 2400 eggs daily, and allow that half that number had been lost by fatalities, we should have 21,000 to add to the 71,400, making 92,400 in all. Perhaps that is not often reached, but I suspect it is nearer the right mark than 49,000.

That answer seems to be carefully built, and yet it is only reasoning that such a number of bees ought to be present, which is a different thing from citing a case in which such a number of bees has been present. Editor Root returns to the charge by citing actual cases. He says that when they bought swarms by weight the average weight was 5 or 6 pounds, and some tremendous swarms that had to be hived in a two-story chamber weighed from 8 to 8½ pounds. As 1½ pounds at 430 to the pound would make 385 bees, he thinks his estimate of 40,000 to 50,000 none too low. He thinks the Doctor wrong in assuming that all eggs laid by the queen are matured as bees, because bees certainly in some cases destroy eggs, and he says: "I think we would be safer in saying that, out of 20,000 to 30,000 eggs laid by a queen, we could not expect over 40,000 or 50,000 bees." The Doctor, in reply, questions whether eggs are destroyed by bees unless queenless, and the editor closes the controversy by challenging the production of a colony of bees that will weigh more than 9 pounds, equivalent to 10,500 bees.

There are two questions of fact in this controversy that it would be interesting to have settled. What is the largest force of bees that may be secured as the progeny of one queen? That ought not to be a very difficult thing to determine by actual weighing. Certainly it ought not to be difficult to determine whether 40,000 or 50,000 is nearer the right mark. The other question may not be so easily determined. Is it true that of all the eggs laid by the same queen, in the same hive, at the same time, in the same year, 80% are drones? If it is true, it would seem a very wasteful thing. But if a queen lays 3000 eggs daily for six weeks, and her colony weighs only 9 pounds, it is hard to get away from the conclusion that nearly half the eggs have been wasted.

Moving Bees Together for Winter.—In the Bee-Keeper's Review is given a picture of an apiary of E. B. Tyrell, the space between the hives in a row being just enough to allow another hive to be placed between, the object being to move the two rows together into one solid row for winter. Before packing the bees for winter the two rows are now moved together, a little at a time, one row being moved backward, the other forward. Of course, this takes only about half the labor, and very much less than half the packing material it would take if the two rows were allowed to go through winter as in summer.

Here is another way that gets them into still more compact form:

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Here are 36 hives in four rows, and, of course, the rows could be continued to any length. The first row of 10 hives and the second row of 8 hives both face the same way—toward the top of the page. The third row of 8 hives and the fourth row of 10 hives both face the bottom of the page. That makes the central two rows stand back to back. When winter approaches, the first row is gradually moved back until in a straight line with the second row, and the fourth row is moved back in line with the third row, the four rows now standing in two rows thus:

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Food of Queens, Drones, and Larvae.—Among American bee-keepers there is a feverish anxiety for immediate results, and they pride themselves on being intensely practical, but they would have better success in the long run if they would take the trouble to inform themselves upon some of the elementary matters that have been carefully worked out by scientific men, especially in Germany. In the Progressive Bee-Keeper, L. Stachelhausen gives a succinct manner some things about the prepared food which although by no means new, are probably new to the majority of bee-keepers. Asked whether at the time of contemplated swarming the workers withhold from the queen the egg-protein food, he leads us up to an affirmative answer by giving the following information:

The queens and drones never eat pollen, but are fed chyle by the workers, which is fully digested pollen, and is identical with the blood of the bees. They may also help themselves to honey, which is fully digested nectar. So the queen does no digesting, but is entirely dependent upon the workers. This freedom from the burden of digestion, and being fed so freely with food that is concentrated and nourishing, explains how it is that a queen, whose body without eggs weighs only 0.30 grains, can lay in 24 hours 3000 eggs weighing 0.01 grains, or three times the weight of her body.

"The larva receive quite the same food, that is, chyle regurgitated from the stomach of the worker-bee. Nevertheless, we find the necessary difference in nourishing of the different kinds of larvae. Queen-larve are supplied with pure chyle till the cell is capped in large quantities: we call this food "royal jelly." Worker and drone larvae receive the same chyle during the first three days only, afterwards the food is less digested by and by, and we call this food chyme. From the fifth day, till the cell is capped, honey and pollen is fed to worker as well as drone larvae."

Michigan Bee-Keepeers will serve their own interests if they will read the following, and follow the suggestion made:

To THE BEE-KEEPERS OF MICHIGAN:

I take this method of informing the beekeepers concerning a few points in regard to the Michigan fruit-brood law. A locality must be reported to the Dairy and Food Commissioner, Lansing, Mich., before it can be inspected, and as our funds are limited it would be a great saving if the beekeepers would work with the Inspector by reporting all localities where fruit-brood exists, or where it is thought to exist, as soon as possible. If this is done it will enable the inspector to plan a trip through the State and cover the whole territory to be inspected at a much smaller traveling expense. Localities first reported will receive first attention, and those who neglect to report their localities until late will in all probabilities be obliged to wait until next year for assistance.

John M. Rankin, Inspector.
Early or Late Requeen of Colonies.

By C. P. DADANT

Mr. C. P. DADANT: In the American Bee Journal of Feb. 11, I had an article, one paragraph of which related to the introduction of queens for early requeen. I said that by requeening one month earlier in the season, the queen-laying was cut nearly in half, and that the queens were ready for fertilization the drones must have been too scarce, although we had taken pains to keep all the bees in a feeding condition, for many of the young queens was fertilized, and the following spring we had ten drone-layers of the very best quality in ten of our very best colonies. And, by the way, let me here remark that the honey bees are a very good source for early requeening. We took advantage of this to rear early queens, and they were all purebred before the impure drones hatched in our neighborhood. The possibility of the queens falling to make such use of this, or any other argument against requeening an apiary late in the fall.

There is perhaps another objection arising from the difficulty of manipulating hive much in cool weather, and when robber-bees are as alert as they generally are at that season. But these objections fail to embarrass a practical apiarist. The only objection, if there is one, is the risk of losing colonies through precautions to avoid disturbances. In out-apiaries, however, where a man can give his personal supervision only at times, I should not like to do much of this handling after the honey crop has ended.

I would suggest that the most economical plan to requeen would be to rear queens more or less during the entire season, and requeen as we go. If, however, we change the bees we do, after a period, it would hardly do, for the brood was hatch, unless the season was particularly favorable, and we could make sure of securing a sufficient number of drones as late as desired. Since Mr. Bevis has succeeded, it shows that such thing can be done, and if the advantage of not disturbing bees is taken during the crop. If the queen is removed before the end of the harvest the brood that hatches out will give room for honey in the brood-chamber, and quite a portion of the crop may be taken out of the house, or the rear of the chamber, if he resorts to the extractor.

Hancock Co., Ill.

Scientific Names—Melillera Not Mellifica.

By Prof. A. J. Cook

We have all become used to the name, Apis mellifica, to designate the honey-bee. Some will wonder why we change to "Apis mellifica." The specific name in both cases comes from the root for honey, and either would seem appropriate. Why, then, give up a name which has been so long in use, for one no more apposite, and which is an entire stranger to us?

Our present method of naming animals and plants was originated by the great Swee, Linneus. It is called the binomial nomenclature. Every species has a name of two words. Some of the species names have been used in designating plant or animal. Thus we have the generic name and the specific name. In the honey-bee the generic name is Apis. This is broader in its significance than the specific name, and versata, the honey-bee of India, as well as the ordinary honey-bee, of which, as we well know, there are many races.

The specific name, on the other hand, refers to only one kind of bee. All the individuals of a species will be very nearly alike. Where any species is placed under varied conditions the individuals will tend to vary, and thus we have what are known as races. In our domestic animals, where man places them under such very different conditions, they will vary more than they would in nature, and so races are very common among our domesticated animals.

I think the races of our bees—Italians, German, or black, etc.—were generally formed by nature alone. The races we have will have habits and general peculiarities that are much more similar than will the different species. I think, too, they will be more apt to vary in their own characteristics. Our dogs and horses are good illustrations of the same kind. Our dog may not have the same breed as its own stock, but they are all dogs one species—Canis familiaris. Yet how different are the poodle and the Saint Bernard, and how numerous and how varied are all the intermediate breeds. Our horses, too, are so diverse, and it is hard to say how different the individuals of the horse species. The Shetland pony and the Normall wear illustrate a different environment with careful selection may do in modifying a species. The old idea that animals of the same kind may be treated as one species would be true were found to be untrue. The mule—a cross between the donkey and the horse—two obvious species—made it necessary to change their classification.
to modify the old notion. But as we all know, the nule is infertile. It was then stated that only animals that would interbreed and the offspring prove fertile belong to the same species. I think this is pretty generally true among the lower plants and animals. But I think there are numerous exceptions among the lower plants and animals. I think there are cases on record where different genera interbreed, and the offspring are fertile. Of course, such cases are very rare.

As we understand from the above, the nature of a genus and a species, which may be better understood by comparing them to our own names, the genus standing for our surname, and the species for the given name, we are unprepared to discuss the change of name in the honey-bee. This change of names, not only of insects but of all plants and animals, is very common. I know of some insects where the names have been changed two, three, and even four times during the last few years. It comes about in this way:

Two or more persons describe the same insect or other animal. Of course only one of these names can be selected. It has been decided that only the first name should be adopted. It is unfortunately true that sometimes the first name and description appeared in some obscure publication and were for a long time unknown. Therefore the second, third, or even fourth name was for a long time used in speaking of the insect. After a time, it may be for years, someone discovers the name and description, given third in order, we will say. Of course the old name gives place to this. Afterwards the second one may replace this, and finally the first and rightful name is unearthed and manifestly this takes precedence of all others. It is obvious that this frequent changing of names is a great hindrance to science, and a tremendous annoyance to the student; yet it is certainly the lesser of two evils.

It is now stoutly urged that every first description of an animal, where, of course, the name will be given, be published only in some standard scientific paper that every student of the science may have ready access to it, and may know of its existence. It is also equally important that every person in naming an insect and describing it take all possible diligence to make sure that the same species has not been previously described.

The father of this system of naming, who may almost be said to be the father of botany and zoology—Linnaeus—gave the first to describe our honey-bee, he described it as Apis mellifera, and so, of course, this name has priority and must be accepted.三年后 later, he described the same insect again under the name Apis mellifica, the name which has been used ever since. It is strange that the same person should describe the same insect twice under the same name, yet when we remember the amount of work Linnaeus did, and the astounding number of descriptions he made, it is not strange that he should have forgotten that he had previously described it. He should have named and described the same animal or insect a second time.

It is to be hoped that all our bee-papers as well as writers, will make a point of bringing this new name prominently forward, that very soon it may seem as right and natural as the old one. We are certainly fortunate in the name, which means honey-bearing. This name, then, will suit those nervous people who proclaim in the face of the truth that the bee simply gathers honey and does not produce it. Neither is the truth malign in this new name, for although honey is certainly a digested product, and so produced by the bee, we can still say that the honey is a honey-bearing.

So hereafter we will all unite in the name Apis mellifera for our pets of the hive.

Los Angeles Co., Calif.

The Swarthmore System of Queen-Rearing.

BY "SWARTHMORE."

A GREAT deal has been written, said, and done to simplify and cheapen methods for cell-getting, until now queen breeders have about all that can be desired in an almost perfect system of cell-work, from the egg to the mature queen, her care after hatching, and all that. But cell-getting is not the expensive part of queen-rearing; in fact, it does not represent an eighth part of the work connected with the securing of a laying queen, ready for posting to the customer far or near.

The great expense in queen-rearing is that necessary for the proper fertilization of the young queens after they are reared. The queen-breeder, heretofore, has been obliged to tear asunder large numbers of full colonies to form nuclei of a frame or two each to receive the young queens. Each in a separate colony for mating purposes only.

Now, all this is expensive—not alone in bees but in time, labor, care, and a hundred other ways. Full colonies are ruined, and all revenue from bees thus treated is entirely cut off until a laying queen is secured, sold, caged and mailed. All this woful waste has set me to thinking about a plan of operation to lessen the expense and labor in queen-rearing at the mating period.

Some years ago I succeeded in mating a number of queens from 4¼ x 5¼ section-boxes, each supplied with a teacupful of bees; but not until that past season have I been able to say that I have discovered a practical method of mating young queens by the section-box plan, although I have used them now for about 13 years.

The plan I have adopted is as follows: Hive a good-sized swarm (natural or forced) into a body containing ten all-wood or Simplicity frames, each frame filled with 4½ x 5½ x 1 inch one-piece plain sections, thus:

![Frame with Foundation]

Each section should be supplied with a starter of brood foundation, as shown, and the frames are set rather close together until fully drawn out by the bees. Unless honey is coming in rapidly the bees should be fed constantly during comb-construction, in the event of the swarm being a forced one.

In a few days a good, prolific queen will have filled the most of these little combs with eggs, and in due time it will be found that each little comb has its supply of brood, honey, and bee-bread—the exact condition necessary for the successful formation of nuclei for queen-fertilization. At this point take away all the section-holding frames, supplementing them with full sheets of capped brood, honey, etc., taken from other colonies; put on the surplus arrangement, and close the hive. This colony will yet show you honey before the end of the season; even though you have borrowed every particle of their work from the time of hiving. Let them work on; you will not need to molest them more.

Remove the section-holding frames now clear of bees, just as taken from the hive, to the honey-house, and adjust

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**FRAME WITH FOUNDATION.**

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**TOP OF FERTILIZER NUCLEUS-BOX.**

A, lid; B, section box frame; C C C, hive-staples, for guidance; D, perforated zinc; F, cork in flight-hole.
To each side of each little comb, containing brood, a cover made of the stuff, with 1½-inch strips nailed all around the edges; as shown at A, Fig. 1. Four small staples, C C C C, driven part way into each corner of the lid, so as to project or telescope into the section-box, will serve to hold the lids in place until they have become glazed a bit by the bees.

When the lids are all in place, each little comb will be in a compartment by itself, and each compartment may be entered by the bees through the perforated zinc that covers the two 1½-inch auger holes in the center of each lid, as shown in the drawing, E E, Fig. 4. The zincs are nailed fast to the inside of each lid. Pieces of section stuff do very well to close the zinc-covered holes when occasion demands (see dotted lines in Fig. 4). A 1½-inch flight-hole is cut just below the two large holes in one lid only. This is stopped with an ordinary druggist's cork, which is easily drawn when queens are to be introduced.

Now run a perfect-winged and sound-legged young virgin queen into each compartment; then recork the flight-holes and expose the zincs on all sides so that the bees can readily enter all the compartments from the sides, yet no queen can leave the compartment in which it is intended to restrict her. Then hang the frames in the hives of such bees as you may have just used in getting a batch of cells, or any queenless and broodless bees you may have at hand. Be careful, however, that there is no sort of queen with them, virgin or otherwise; and if they have been over three days queenless, a little tobacco smoke should be used.

A very simple way of supplying the compartments with young queens is to attach a ripe queen-cell to each comb before adjusting the lids; then hang the frames among queenless and broodless bees with flight holes corked, and zincs exposed. The bees will at once occupy the compartments, and in due time a young queen will hatch inside each compartment.

Any queenless bees will soon enter the compartments, and care for the brood and queens; and as soon as they become settled, feeding may begin. Feed a little sugar syrup (no honey) each day; and at the end of the fifth, if the weather is fine, remove the frames carefully, bees and all. Close all the entrances so none can escape from the compartments. If the weather is very warm, cover the holes on the flight side with wire net, as shown in the

![Fig. 4](image)

**Fig. 4.** Bottom of Fertilizer Nucleus-Box.

Fig. 4 is a view of the under side of H, showing holes uncovered; B, part of section-box; E E, holes covered inside with perforated zinc; F, all holes covered; dotted lines show position of thin board when excluder-holes are covered.

Fig. 5 shows the construction of a confinement-screen. A 3-foot piece of 1½-inch ply wood, 1 inch thick, is fastened to an 18-inch piece of 1 inch sheet zinc by six wire-nails. A 2-inch piece of 1 inch sheet zinc is nailed to each side. These sides are covered on top and bottom with a 1½ inch sheet zinc.

![Fig. 2](image)

**Fig. 2.** Top View of Cover.—G, food feeder.

![Fig. 3](image)

**Fig. 3.**

SWARTHMORE'S FERTILIZING-FRAMES, WITH NUCLEUS-BOXES IN PLACE.

Toward evening open the flight-hole to each compartment—three on one side and three on the other, as shown above by the letters F F F. If the next day or two be fine, each and every queen will leave its little chamber to mate, and just as large a percentage will return safely as by any method of nucleus management now in vogue. The life of these little colonies may be sustained several weeks by feeding lozenges of "Good" food every three to five days. Press the food into the holes at the back of each box. The blocks of Benton mailing-cages may be filled with "Good" food attached to the back of each compartment by two staples driven into the ends of same and hung on two cor-

![Fig. 5](image)

**Fig. 5.**

During the next few days, the bees may be supplied with water, both in the upper and lower sections, as necessary.

When the bees have been more than three days queenless, the combs may be filled with "Good" food as shown in the engraving, taking in as you do so, as many bees, that may be on the outside of the boxes, as possible.

Take these frames some distance from the old stand, and set them out separately on stakes driven into the ground, thus:

**Bees and Fertilization of Blossoms—Other Comments.**

BY ALLEN LATIHAM.

On page 262, is an important as well as interesting article on the subject of bees and the fertilization of fruit-blossoms, by Thaddens Smith. This article is bound to raise a controversy if not hot words. I hasten to put in my word in support of the writer in hopes to stem the wrath to come from the other side.

Provincetown, Mass., is the town at the extreme end of Cape Cod Peninsula. The land here is from one to two and one-half miles wide. It is swept by sea-breezes almost all the time. It is thus a poor place to keep bees. No bees at all are kept, as far as I can find. I have my summer cottage there, and in the two summers that I have spent there I
have not seen a single honey-bee. Right in front of my cottage is a fertile meadow in which the white clover stands nearly knee-high. Many bumble-bees may be seen on this, but not a honey-bee more.

This was the way that I had found out that I have to do with the matter which I began with. Just this—that region is extremely fruitful. Never have I seen small fruits in such abundance as there. Bushels of wild strawberries are gathered in June, July, August, and September, and they had been dragged on the bushes to the ground. There are blueberries, huckleberries, blackberries, raspberries, wild cherries, and last but not least, beach-plums. The shad-bush berries, or June-berry, have a musky smell which they have when ripe, as they are called in Provincetown, "juicy pears," are the most wonderful fruit (unless I except beach-plums) I have ever seen. I left the cottage one day to get some for pies. I was gone less than an hour. I rode on my bicycle, then walked the rest of a mile, then picked two five-pound honey-pails full, then walked and rode back. You can see from this how thick the berries are. I have seen the smaller bushes lying flat on the sand, drawn entirely out of the fruit. One could easily gather a bushel in an hour.

But, oh, the beach-plums! The sand-hills are covered with the scrappy plum-bushes; and the bushes are loaded with the succulent plums. I have often spent an evening gathering these plums by the bushel. The plums are about the size of cultivated cherries. I have seen a cluster of these plums that would yield a pint or more at two scoops of the fingers. One small bush the size of an ordinary currant bush will often yield four or five quarts.

Now how do these fruits form if there are no bees there? I shall not attempt to answer that question. I merely state the facts as they are, and ask how it is done.

**KEEPING QUEENS OVER THE WINTER.**

The question, "How can I winter my surplus queens?" is often asked. Though I can offer no easy way of wintering a large number, I can tell how one or two choice queens can be saved. It is not infrequently happens that a bee-keeper has an extra queen or two which he would like to winter. More than that, he can often profitably use such queens in the spring. Many a time have I had a fine, strong colony in spring queenless. Unless a queen can be given, that colony is not of much value. With a queen it will be ready for the June and July harvests.

Last fall I had two surplus queens of excellence. I could not think of killing them, but I had no colony without an equally good queen. I still had those queens in good health. I took from two strong colonies two frames each of brood with adhering bees. I placed these in a hive prepared as follows: A tight partition was put in the middle of the hive, and strips of newspapers were used as partition. In each side I placed a cushion of this thickness so as to allow two frames between it and the partition. The four frames spoken of above were disposed of in this way. Then I gave a queen from each colony back to the parent hives, only a pint or less remaining in each side.

The care of the hive was then the question. All through October and November (the nuclei were made in September) I either placed a heavy carpet over the hive on cold nights or carried it into the kitchen. The hive had been set close by the back door. On cold days the carpet was left on the hive. When settled cold weather came the hive was covered with a large blanket and placed near the hot water heater with the entrance away from the light. Here it had a temperature of about 50 degrees. When a warm spell came the hive was put out so that the bees could fly. Though they had been well treated they had not touched. The bees did not restless. They came through with small loss in numbers and are breeding up slowly. It so happens that none of my queens died last winter. I shall try to build the little colonies up. They were put out in March, before the snow bore on cold spells. The entrances are provided with screens.

You say, of course, that this is too much bother. There is work in it, but it is that pleasant putting work that I have. A bee-keeper of my acquaintance, who has the lives of valuable queens, which in turn may save the existence of valuable colonies.

**LONGEVITY IN BEES.**

I am glad to see a word from Mr. Doolittle in regard to long-lived bees. Prolificness at the expense of strength has been too long the vogue. We have all had a colony occasionally that had its frames packed with brood. We have fondly looked for great results. They did not come. The colony failed to gain in members though the frames were kept full of brood. All the honey gathered went into the brood. As a rule, they had been brought in by the bees on the other hand, we have seen a colony with only five or six frames of brood. We have turned from it in disgust. Behold that colony a month later. Still only five or six frames of brood. But where did all those bees come from? They crowd the hive and the queen stores two cases. These are long-lived and the right-kind of bees. Let us rear that kind. I do not mind if they have ten frames of brood, but let the bees be long-lived.

Yes, it is a favorable season for long-lived bees, but will offer a few more words. It is easy to see why these bees are of so much more value than short-lived bees. First of all they winter well, coming out strong in the spring, and do not seem so variable. A colony with this length of winter has been more than the kind. Why? In the working season let the short-lived bee live six weeks, the long-lived one nine. Each costs the same to rear. One works from two to three weeks, the other from five to six. The short-lived bees I estimate to be a worker for an average of one week, for the long-lived bee a worker for four weeks. Do we not find the secret of a honey crop right here?

I have a colony that has bees which winter and then give noble aid in filling the first sections. I honor those bees. They are my pets.


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**No. 6.—Practical Lessons for Beginners in Bee-Culture.**

BY J. D. GERING.

(Continued from page 343)

NOW, see here!" began Mr. Bond. "I am not the least bit sure that I can remember all the things you have been telling me to-day; but I am here to learn all I can. You shut me off twice when I asked questions or put me off, rather. I am going to ask some more questions, and I think you ought to answer them right on the spot.

"First, then, you've told me all about putting supers on this hive until you had five of them on, all in a pile. I'd like to know what you do that for. I can see no sort of sense in it. To me it seems like boy's-play to lift off and then lift back again a whole stack of supers weighing 25 pounds each. Now, tell me, if you please, what do you do such a cranky-looking thing for?"

"I am glad to have an opportunity to enlighten you on that subject, Mr. Bond," I replied. "But first I will inform you that the cranky-looking performance isn't boy's-play at all, in any sense of the phrase—surely not the lifting part of it; that you can readily see for yourself.

"You will not object to my using an illustration that must be familiar to you, in order to impress my answer to your question upon you. I will give you the scene that will stick. Well, you know that hens will always choose a nest to lay their eggs in which has at least one nest-egg in it—the more the merrier, in fact. They will generally avoid an empty, or an unused nest; and hence the fact has been generally accepted by poultry-men, and poultry-women, especially— that it pays to furnish the nests with natural or artificial nest-eggs. The women, at least, think that it encourages the hens to lay. I must confess, however, that I have never known a hen to lay more than one egg a day on that account. And I presume you can say the same, Mr. Bond."

"That I can," he replied. "But, for all that, I don't quite see the point where the illustration applies. Some illustrations don't illustrate, you know. I've heard lots of that kind preached. But, of course, bee-keepers aren't preachers."

"Well, perhaps there is no point for you to see, and my effort is lost," I replied. "I shall therefore give you my answer, sugar-slick."

"The fact is no invention or discovery of my own, that bees will work better and carry in honey faster when they have lots of it stored in the hive. Bearing this fact in mind, it has been the rule with the bee-keepers to 'tie-up' the supers on their hives as fast as the bees fill them, and to take none of them off before the honey-flow is played out."

Those who have been doing this, year after year, have become satisfied that it pays to do it; and that it pays not to do otherwise.

"Of course, I am aware that there are bee-men who stoutly maintain that there is no difference; that they have
always been in the habit of taking the honey off the hives as soon as the bees ripen the honey in the supers, and that the bees always begin to work on the supers. I put, on in place of the one that was removed. But, you see, such testimony doesn't weigh a feather, because it is time-stamped; for, if these bee-men have never thoroughly tried both ways, they have no right to say that there is no difference.

"Now, Mr. Bond, I am fond of testing things, for the mere sake of the thing, sometimes. Hence, when I read about the supers, and the supers, and the supers, and the supers, I never end the honey-rush because of several reasons given, I once tried it. But, in order to test the trial, I made a few experimental observations bearing on the questions. One of the cases was where a colony had gone on out on a strike, as it were. They, for reasons known to themselves, refused to work. All the other colonies in my apiary were rushing the honey into the supers at a furious rate, and had filled from one to three supers each, while this colony had not even drawn on the foundation in the sections of the super on their hive. I had tried everything I could think of to induce them to "get a move on" themselves, but without the result sought. It was a strange case, for the hive was full of bees—ever the super was full during the day-time—and the eight frames were solid with brood and sealed honey.

"Well, sir, I don't now remember how the idea came to me—whether it was dreamed, or heard it related at a bee-keepers' convention—but, at any rate, I did this:

I opened that hive one beautiful morning and took their supers from them. Then I took out two frames that had more brood than the rest in them, and put them to another colony, from which I took, instead, two frames nearly filled with honey, some of it unsealed, and put them into the hive of lazy bees. Next, I took out the frames that had the most honey in them, and with a honey-knife shaved off the capping, thus unsealing a large patch on each frame. This drastic proceeding set a lot of honey loose, of course; but it also broke up the strike. I watched them nearly the whole of that day, and will tell you, Mr. Bond, I had to laugh out loud myself for several times to see those bees hustle themselves to keep that loose honey from going to waste. Of course I was on the look-out all the while to prevent any of the honey from running out of the bee-entrance and tempting other bees to come and investigate matters.

"The next morning those bees went to work in the super, which I had replaced the evening before; and they didn't let up until the end of the honey-fall, when they had filled two supers, and a third partly.

"Another experiment I made—no, I beg your pardon, it wasn't an experiment, but an experience—and it happened thus:

"Before I adopted the tiering-up system I always put on only one super at a time, and then looked through the glass in the side to see when the bees were sealing the outside frame. I saw them do what I took that super off and gave them an empty one. Well, I had observed this before, when I had performed this operation, that there was a very marked slackening-up of work in those hives from what they had taken full supers; but I did not stop to study about the cause. It was not until that same season when I learned how to break up a strike in a colony that I took particular notice of this streak of loafing, or sulking—I am not sure which it was. As I was always working off full supers one morning I found that one of the colonies had put in spare time in building brace-combs between some of the frames, and had extended that kind of work to the top of the frames, for it is the hard filler of the space between the brood-frames and the bottom of the supers that is most important in honey. Well, in taking the super off, this extra arrangement was of course broken up, and on a lot of honey let loose.

"There were several important things about bee-keeping which I hadn't then learned yet, hence I was not aware of the fact that those bees did that extra job because they were short of honey-storing room for several days before I thought it was going to come. Furthermore, I am sure that the extra comb had to be removed before a fresh super was placed on top the frames, I took the honey-knife and bee-smoker and went at it. It was a sweet job of work, now I tell you! But I got through with it without getting more than a dozen stings on my hands; and then put on the super, and cheerfully closed the hive.

While doing that little job of work, Mr. Bond, I learned something that was new to me. When I first began slashing into the comb with my honey-knife I got quite a number of hot stings on my naked hands. As I proceeded, my hands became daubed with honey, and I noticed that the bees did not attempt to sting where there was honey. Taking the hint, I daubed honey all over my hands, with the result that I got no more stings doing that job.

"This recipe I throw in extra, without cost. You can tell by trying it—should occasion call for self-defense some time when you find it necessary to do such work—whether it was my fore- or my back comb. There are occasional on occasions, you know, when a bee-keeper can't keep his hands in his pockets and yet do the work that calls for their use."

(To be continued.)

Questions and Answers

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Millen direct, when they will be answered by the Doctor to send answers by mail.—Editor.]

Building Up Colonies.

My bees wintered well—47 colonies out of 49. A few of them are very strong. What is the best way to build them up? Give them a frame of brood from a strong colony, or exchange hives in the middle of the day when the bees are flying the strongest?

ONTARIO.

ANSWER.—Take from a colony that has five brood or more, leaving it only four frames of brood. Do not give these frames of brood to the weakest colonies at first, but give a frame to each colony that has only three frames, until these are all supplied, then give to the weaker ones. Take the adhering bees with the frame of brood, but be sure you don't take the queen. If you give a frame to any colony, let them be from different hives, for if you should give two frames with adhering bees from the same hive it would endanger the queen.

Filling Combs With Syrup for Feeding—Fastening Queen-Cups.

1. I am the newest and "greenest" of bee-keepers. On page 310, Allen Latham writes of filling brood-combs with sugar syrup from a coffee-pot at the beginning of the apple-bloom. How does he hold the comb during the operation? Height, as it is in the hive, or does he turn it from side to side?

ONTARIO.

ANSWER.—Take from a colony that has five brood or more, leaving it only four frames of brood. Do not give these frames of brood to the weakest colonies at first, but give a frame to each colony that has only three frames, until these are all supplied, then give to the weaker ones. Take the adhering bees with the frame of brood, but be sure you don't take the queen. If you give a frame to any colony, let them be from different hives, for if you should give two frames with adhering bees from the same hive it would endanger the queen.

2. In making queen-cups a la Doollittle, I suppose the bottom, i.e., the thickest part of the cup, is fastened to the stick, is it not?

ONTARIO.

ANSWER.—1. You are no greener than the rest of us have been, but are perhaps a little smarter in finding out sooner your greenness. You may ask questions that may betray your ignorance. When you do not find instruction in your textbook upon any given point, you may gain that instruction through experience, but sometimes that is expensive, and by asking questions you not only gain the desired information for yourself, but help others as well.

Mr. Latham gives no particulars, but you may be sure he does not have the comb hanging, as in the hive, when he makes the comb. Lay it on its side, or turn it up from a height of three or four feet, and the fall from such a height will make the syrup force its way into the cells. It will work better if the syrup is hot, but you must look out not to melt the comb. When one side is filled, turn the comb and fill the other side. Then when the comb in a hive-body that stands over something to catch the drip.

Years ago I fed many gallons of syrup in combs, and to make the work easier I had hung three or four feet above the tub a large baking-powder can, or something of the kind, the bottom of the can being punched full of nail-holes, the holes being punched through from the inside.
With a pitcher in one hand I poured the hot syrup into the can, while the other hand kept the can moving about over all parts of the comb. Having the can thus suspended by strings made it much easier.

2. Yes, my dear, we will do so.

3. Generally there is no trouble in getting bees to take syrup whenever they can reach it. Perhaps it was too cold weather for them to leave the cluster. Sometimes they will take hot syrup when they will not take the cold, the nearer the cluster the sooner they will be to take it. If you put them in combs they will be sure to take it. For fear of starting robbing, don’t give the combs till nearly dark.

**Material for Cell-Cups—What to Feed to Work Them Up.**

1. In making cell-cups for queen-rearing, what is the wax mixed with?
   - In the dry season when the bees will not work up the cups, what is best to feed them so as to induce them to work them up?

**Dividing for Increase.**

1. I don’t care to let my bees swarm. Would it be safe to take one, two, or even three frames of brood from each hive, and when I get 10 frames put them in a hive, making sure that I have not taken a queen from any of the hives? Does it make any difference if there are any bees on the brood-frames? Do you think the bees would fight with each other, because there will be bees from different hives, such as Italians, blacks, and Hybrids, or would you brush the bees off when you take out the brood-frames?
2. What would I do for queens for each new colony thus made?

**Convention Proceedings.**

(Continued from page 357.)


BY DR. L. D. LEONARD.

SECOND DAY—FORENOON SESSION.

The first thing on the program was Pres, West’s address, read by Mrs. Aeklin, as follows:

**President’s Annual Address.**

The Minnesota Bee-Keepers’ Association was organized at Minneapolis about eight years ago by a few determined and loyal bee-keepers, under the laws of Minnesota. Wm. Urie, Wm. Danforth, and B. Taylor, successful bee-keepers who have since passed to their eternal homes, were present at that meeting. There had been previous attempts, made without success, and meetings had been held; the Association got into debt, and was in bad repute. Under the present management the debts have been paid, and there is a surplus in the treasury.

Company with a strong and vigorous society having increased its membership which includes some of the most noted apiarists in the West. When thoroughly organized the society at once took steps to put the honey department at the State Fair—which had become a disgrace to the bee-keepers of the State, under the supervision of honest bee-keepers. From that time until the present that department has gradually grown in size, quality and importance, in fact, no department of the State Fair has shown such marked improvement with the same amount of money expended.

Through the influence of this society a grand exhibit of the products of the little “busy bee” was made at Omaha, which demonstrated that the finest honey—as well as butter—comes from the grand, young State of Minnesota. The exhibit was a grand surprise to every one, and won great honors for Minnesota. Exhibits were made by some of our bee-keepers which won 100 points.

Through the influence of this society a law was passed by the State legislature, making it a crime to sell or offer for sale adulterated honey, unless the package containing the same be so labeled, and it is provided that any person violating this law may be prosecuted and punished. This law was passed by the State Board of Agriculture, and is a very good provision.

The rapid strides made in the art of apiculture during the past 50 years is in keeping with the rapid strides made in all other departments of life where genius and invention have been developed, due to the energy, enterprise, and self-sacrificing labors of such men as Father Langstroth, Moses Quinby, Adamum, John H. Adams, A. E. Mainum, Prof. A. J. Cook, Dr. A. J. Boardman, Dr. A. B. Mason, Chas. D. D. Anderson, Bar., D. A. Jones, W. Z. Hutchinson, Dr. C. C. Miller, A. J. Root, E. K. Root, and a host of others, whose bright and inventive minds and consistent lives have made, or are making, the bee-papers of to-day superior to the papers printed in the interest of any other line of business. What other branch of learning or occupation has had such honest, heroic, self-sacrificing, devoted and eminent workers? Their influence and superior qualities of heart and mind have blessed all other departments of life in...
which they move. And what a pleasure it is on such an occasion as this to speak kindly of them, and to accord them a high place in our history.

Instead of the old straw hive and the log gum the inventions of the early American apiculturists have given us the frame so admirably adapted for the home of the worker bees. And every kind of manipulation and theory are developed, and from which all other hives in a measure have been evolved. The large, unwieldy and unmarketable honey-boxes have given way to the frame of one-piece construction—a convenience and blessing to the apiculturist, and which in its simplicity and cheapness is within the reach of all. From the swinging of the dinner-pail in which there was a piece of comb honey, around and over his head, the young, sick, and uneasy boy—which operation his father noticed threw the honey outward of the comb—came the honey-extractor now so generally used, a great help to every well-cared for apary, and even the present day honey knife and comb knife, for which there is no universal appreciation by the successful apiculturist.

Then comes the little queen-cage with candy, a great improvement and source of profit—a means by which the queen—indeed and in truth the most wonderful and interesting of all insects known—is transported from all parts of the globe, and we have thus been able to improve our race of bees, to be used in our hives, the Dowlittle method of rearing queens; the honey-board, the wax-extractor, the queen controller, wired frames, the foundation-faster machine, bee-feeders, bee button, separators, and the improved method of procuring comb honey; and very many other improvements and devices help to make the labor easy, successful and more profitable, and are valuable for the interest of the therapeutic apiculturists in some department of their art.

The tendency of our occupation, then, like all other things, is toward greater efficiency. This is a race of intense activity and progress—the tide is fast bearing us onward and upward. Some are wishing for the good old days gone long ago, but these are the best days since the stars first sang together; when the Messiah was found in the manger, and 1, for one, am glad I am living now. Bee-keeping is wonderfully interesting and fascinating to the successful apiculturist. It brings us in contact with one of the most wonderful little creatures in God's glorious universe. The man who has bee-keeping, has a world of mental and physical enjoyment around him: the seasons, the fields, the hills and valleys, and all the creatures on the earth are clothed in glory; but nowhere, nor in any other creature, is the wonderful and admirable adaptation of the queen, to the worker, in the "one-bee." The manner and thoroughly practical governmental in the home, the power and adaptability of the queen with her bodyguard, in that home for its good and success: the tiny eggs which she never tires of depositing by the thousands until old age shall claim her; the care and attention of these eggs by the nurses of the family; the food and growth of the young bee from the time it begins to show life until its birth into that home; its care after birth; the different kinds of deposits, and food which produces from the same mother the workers (either male or female), the drones (the male bees), and the queen, which produces respectively the worker in 21 days, the drone in 24 days, and the queen, much larger than the worker, in 16 days; the wonderful means the worker has of constriction of the cell for strength and economy; the ability of the workers to gather nectar from the blossoms and flowers of the fields and trees, which, when stored in the home becomes one of the best foods and medicines, for food and health.

Honey has great healing and soothing properties, and is an excellent medicine for sore throats, lungs, cuts or sores of any kind. Dr. McDonald, of this State, informed me several years ago that he used the poison successfully for rheumatism and dropsy. Honey as food is very strengthening and healing to the system. It is said that during the Russian and Turkish war, in crossing the mountains the soldiers were weak and cold from lack of food. The Russian general ordered that the soldiers be fed with honey every day—a ration which at once revived their spirits, and strengthened and warmed their bodies. In ancient times it was regarded as almost sacred, being the best food, medicine and drink, when prepared, to be found upon the earth. In Abyssinia, Russia, India, Palestine and other countries, refreshing drinks are made from it. In ancient Egypt it was valued as an embalming material, and in Rome for the preservation of fruits and the making of cakes. In India a mixture of honey and milk is a respectful offering to a guest, or to a bridegroom upon his arrival at the door of the home of his bride's father. To the ancient Eumenides, a mixture of honey and milk was also an offering to the gods. Wherever kept, as their value in fertilizing blossoms of fruit and clover can not be estimated. Our occupation brings us in contact with one of God's best gifts to man, and opens up a field for labor, as flattering as any other where the results of the capital is invested. Yes, more than this, it offers a source of making a living, and support to the sick, that no other occupation does. The labor and work is of such a fascinating kind that it can be continued as a toy, year after year, for weak and sick, and many have found health and success in following it when everything else had failed. As a combination with fruit-growing it can not be excelled. In fact, every one who lives in a locality where there is plenty of bee-pasture should keep bees if the locality is not already overstocked. There is nothing that will pay better, and bring such rich returns to the health of the family.

My friends, it has been nine years since I was first elected president of this body, during which time but one union of great boasting us in a few months ago that we leave you as such, and another must take my place. Whoever it may be it should be one who has plenty of time to devote to the interests of the society, and who is able to spend a little money in the interest of the society. The work of the apiarist is like that of the front rank men or work is a labor of love in its behalf. This and kindred societies can only be kept in the advance guard by the personal devotion of those whose hearts love the society and the calling it represents. The meetings which we have held during all these years have been pleasant and profitable to me. I have regarded you all as my friends; I have tried to do my duty, and have found you all ready to assist me; and I shall be pleased at all times in the future to hear of you brave and industrious men. In whatever capacity I can be of any service to any of you in any capacity it will make me happy to serve you, and I shall also be happy to hear from each one of you personally at all times. If there is any wish that success and happiness may follow each one of you always.

J. P. WEST.

The address was well received, sympathy expressed for the president in his illness, and regret that he was unable to attend the meeting. The secretary was instructed to express the warm sentiment of the Association toward him. The proposition to join the National Bee-Keepers' Association in body was carried, and certain changes which would have to be made in the constitution if this were done, was decided to postpone action until the next meeting.

Mr. Long fellow, a Minneapolis commission man, next gave a talk on shipping and selling honey. He said he best packages to use in this market for extracted honey are the 10-pound and the 60-pound tin cans; and for comb honey, 12 and 16 section cases.
HOLDING QUEENS AND CELLS BETWEEN THE LIPS.

Doubtless perfectly dry lips will do no harm either to a queen or to a drone; but, on the other hand, however, the human saliva is a poisonous fluid (greatly variable in the degree of its poison) and we don’t want our queens soaked in poisonous fluid, as bunglers would do it, should you tell them to hold queens that way. Even for delicate plants and seeds the saliva is not desirable. Try it on nails, which can give and take in the matter of dirtiness and poison. If a high and refined degree of dirtiness is desired, with a spice of danger thrown in, try nickels and pennies. Page 256.

AN APARIAH ROBINSON CRUSOE.

Mr. H. T. Hanna, we shall have to compliment you as an aparian Robinson Crusoe, if you have a good location and no other apiary for eight miles. Page 285.

THE BEE-KEEPERS’ CLUB FOR QUEEN-BEARING.

To have 100 bee-keepers club together and employ an expert queen-bearer at fair wages to rear 50 for each, is a decidedly new departure. Certainly there are some very manly and intelligent bee-keepers out there, but, at least a place of a giint for queens. Reasonable in the place of unreasonable dates. Fair and turn and “divy” in the place of clamor—or would the order of precedence be a specially hard thing to adjudge with unifc Fathers? There are also some weak points. I think I would rather collect my wages from one man than from a hundred. And, while the enlisting of half a dozen in the new scheme might be very easy, the five thousand might be pretty well worn out before man No. 100 “swore in.” Page 291.

FIRE AT LONG-TONGUED QUEENS.

I’m right glad Mr. Doolittle fired himself off as he did on page 293. Little guns are excellent for many uses; but when an enemy develops that needs (badly needs) to be intimidated somewhat, then the heaviest gun in the service is just the piece to turn loose. Exactly how much good will come of the cultivating of long tongues by beekeepers we don’t know just yet. Quite a bit I hope (notwithstanding the “bang”), but it’s plain to be seen that inaccuracy, and pretense, and conjectures that hardly amount to more than pretense, were getting the thing as the smoke of the pit. Long-tongued bees were given to the best of my knowledge as much as “pure white,” “pure black-powder,” or “pure gum drops,” where many officers look after frauds. Attention, ye buyers! When you get your long-tongued queens, get them with the same carefulness as if you had won the first, with a great house. Testing the actual reach of bees at work is not so hard as to be beyond the reach of the ordinary apiarist; and ‘speaks it will have to come to that. Mr. D. pushes things too far in claiming that long tongues are of no profit except in red clover regions. Many long-tubed flowers have something to do with furnishing the total of nectar supply.

The Home Circle.

Conducted by Prof. A. J. Good, Claremont, Calif.

THE TOBACCO HABIT.

Over 100 of our college folks—almost half of us—went to Los Angeles last Saturday to attend the Intercollegiate Oratorical Contest, and the second contest of three arranged with one of the colleges to decide who were champions in baseball. I was proud, as our fellows won the trophies in the exhibition game, as well as they had in the first, with a great score of 15 to 2. I was still more proud as we achieved victory in the oratorical contest. But I was most proud of the gentlemanly character of our students. One way this was shown, was in the entire absence of smoking among our fellows. The others smoked. We did not. I rejoice that we have no smoking at our college. I wish tobacco was enforced in all our colleges. "Our Homes," has done splendid service in urging against this habit. I wish I could be like happy in these "Home Circle" columns. To the hundreds of students that I have taught physiology, I have always spoken, as best I might, against all use of tobacco.

The money spent for tobacco—though to my mind the least weighty argument against its use—should be thought of. The sun is enormous. If saved, how quickly it would pay off. How often would clothe our people. How generously it would "bread and butter" us all. I would might say the blessed word that would stay this frightful expenditure.

The worst count that perhaps can be brought against this arch enemy of the well-being of our people, and especially of our youth, is the tendency of the habit to make its patrons thoughtless—regardless of the comfort of others, and thus to destroy the gentlemanly bearing. How often in public places our ladies must endure the poisonous fumes from cigar or pipe. Only a few days ago I was presiding at a large picnic gathering, where speaking was going on, when some ladies appealed to me to relieve them from such an annoyance. I have had to do this unpleasant duty over and over again. Can people acquire the tobacco habit, and preserve their gentlemanly instinct, all unimpaired?

There is a very serious side to this question—that of heredity. If, as many of our best scientists insist, the taste, inclination, and diseased tissues consequent upon the use of "the weed," are all likely to be transmitted to the dear children, then how can any of us acquire—how can any of us persevere, in this, oh, so common habit? If, as seems proved, wives and children are seriously poisoned by simply breathing the emanations from fetid breath and befouled clothing; then, indeed, we have most eloquent appeal to the moral strength that can to stay this evil. And sell our girls as well as boys. God be praised that our girls are saved from this danger.

But the girls have a proud privilege. They can influence against the "weed" in a manner desired, by protecting their happiness and well-being. God help all our girls to say boldly, "Yes, the cigar is offensive to me." For surely it must be offensive, morally at least, to every right-minded girl.

THE BOYS.

I read a pathetic account yesterday of a boy, just at that awkward age of 13, who was the victim of neglect and ridicule of his sisters. Home, that should attract, almost drove him away. One of the sisters heard a lecture on the perils of smoking, and he became hardly quick. She went home, surprised her brother by the request to tie his necktie, and soon more by a present of a beautiful one. Within a day or two the big, awkward boy forgot room neatness, five other dainty attractions, which only the deft hand of girls can fashion. Wasn’t the sister paid when the great boy threw his arms about her, and blubbered out, "Oh, but it’s good to have a sister care for me." We would all like to practice one kind of theft. We would all like to rob the slums, the saloons, the street corners, and all other questionable resorts, where the dear boys are led to the bad. Loving attention at home, the words of kindly sympathy, the neatly fixed place in any plan that is dear to the boy, will almost always result in this blessed robbery. The sister almost more than mother can be the proud agent in this worthy work. From 12 to 15 is the rapidly growing, forward, blundering, bashful age with the boy. This is the time of sunshine. Let all in the home circle unite in the effort to make the boy, that it may be a good crop.
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Improved Golden and Leather-colored Italian bees, with assurance.

We have one of Root's best long-tongued Med- con Breeder for Queen, a Golden Bred from a Doolittle, via a Golden Bred from the U. S. over $8 each, this is worth that sum. The above breeders have been added to our already improved strain of Queens, and the colony owners, J. L. Gundy, of Humboldt, Nebr., wrote us on Aug. 5th, 1910, as follows: "Of the four bee hives that we had one of our queens had already stored over 400 pounds of honey (mostly comb); he states that he has observed that his bees work on Red Clover, as they were the only kind in his locality and adopted them.

A. Root's folks say that our queens are extra costly breed and selected. The American Bee Journal tells us that he has good reports from our queens from time to time. We have been upon the same terms from the beginning.

After considering the above evidence, need you wonder why our orders have increased each year? Give us a trial order and be pleased. We have years of experience in raising and rearing queens. Safe delivery will be guaranteed, and instructions for introducing sent with each lot of queens.

QUEENS NOW READY TO MAIL.

Prices before July 1st:

- 3-lb. Tested $1.75
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H. A. LADD, PUBLISHER
RICHLAND CENTER, WIS.

Title text: "Bee-Keepers' Guide."

Those Long-Tongue Adels

BEAVER, PA., April 4, 1910.
From one 3-frame nucleus you sent me I look 25,000 swarms this year, 30,000 Queen, W. S. BARCLAY.

Each Queen, $1.00, Essay, "How Not to Rear Queens," sent free.

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3-frame Nucel For Sale

Can supply 100 or 150 at $1.00 each, with one empty extra comb; 3-frame Nucel, $1.50, All Lk. R.

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Please mention the Bee Journal.

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CHOOSE STRAWBERRY.

Prices for May and June:

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Having been 28 years rearing bees and queens for the trade on the best known plans, I will continue to rear the best.

PRICES:
One Untested Queen $1.00
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BelgianHares
Choice, pedigreed and common stock, youngsters, $3.00 per pair. Write for description and prices.
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BEES, HIVES, SECTIONS AND ALL BEEPERS’ SUPPLIES.

QUEENS
Now ready to supply by returned mail, STOCK which can not be XCELLED to.
Bred under the SUPERSEEDING CONDITION of the colony.
GOLDEN ITALIANS, THE GREAT HONEY-GATHERERS. They have no SUPERIOR and few equal. 36 sacks $5 for $1.00.
RED CLOVER QUEENS, THE LONG-TONGUED ITALIANS, which beat all RECORDS behind in GATHERING HONEY; $1 each; 6 FREE SAFE ABRIVAL GUARANTEED.
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June 13, 1901.

AMERICAN BEE JOURNAL.
Basswood and Alfalfa Honey

in 60-pound tin cans, f.o.b. Chicago—two cans in a box—at these prices: 9 cents a pound for one box of two cans; two boxes (4 cans) or more at one time, 8½ cents a pound.

We have only a limited quantity of the Basswood honey. Sample of either kind, postpaid, 10 cents. Address,

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

20 cents Cash paid for Beeswax. * * This is a good time to send in your Beeswax. We are paying 20 cents a pound—CASH—for best yellow, upon receipt, or all 28 cents in trade. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

Marshfield Manufacturing Company.

Our Specialty is making SECTIONS, and they are the best in the market. Wisconsin BASSWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free illustrated catalog and price-list.

Marshfield Manufacturing Co., Marshfield, Wis.

Red Clover Queens

Long-Tongued Bees are Demanded Now.

One Untested Italian Queen FREE as a Premium for sending us TWO new subscribers to the American Bee Journal for one year (with $0.50 or, one Tested Queen FREE as a premium for sending us FOUR new subscribers with $4.00).

We have arranged with one of the oldest and best queen-breeders (having many years' experience) to rear queens for us this season. His bees average quite a good deal the longest tongues of any yet measured. The Breeder he will use is direct from Italy. He imported her himself. Her worker-bees are large, somewhat leather-colored, very gentle, and scarcely requiring veil or smoke. They stored red clover honey last season.

All queens guaranteed to arrive in good condition, and all will be clipped, unless otherwise ordered.

Cash Prices of these fine queens will be as follows: Untested, $1.00 each; Tested, $2.00 each. Send all orders to

GEORGE W. YORK & CO., 144 & 146 Erie St., CHICAGO, ILL.

up all their stores, and I have lost 15 colonies through spring dwindling, and expect to lose more. I have been feeding, but the bees are not ready to build up.

I think there is no better country in the United States for all purposes than the Cherokee Nation country.

—R. F. CAMPION.

Cherokee Nation, Ind. Ter., May 10.

The Weather Hard on Bees.

My bees were in splendid condition in March, breeding up strongly, and they worked three days on maple blossoms, the trees having the finest amount of bloom on them than I ever remember seeing, the blossoms being as large as peach-blossoms. But suddenly the weather turned cold, and thousands of the poor little bees were caught napping, they could not get to the flowers, and perished. The frost killed all of the bloom that was far enough advanced to be affected, and all through the greater part of April we had cold rains and frosty weather, then there was a great profusion of fruit-bloom: but the bees did not seem to be strong enough to take advantage of it, and in the midst of it came a heavy, cold rain and hail-storm which destroyed the bloom.

The bees have had a hard time of it, though most of them are in good condition now. Some are weak, but most of them are clustered at the entrances waiting for white clover, which is looking first-rate, and there are a few blossoms here and there.

We have had no swarms so far this year.

—D. C. McLEOD.

Christian Co., Ill., May 27.

Bees Starved in Iowa.

A good many of the bees in this part of the country starved last winter. I have 30 colonies in very good condition, and increasing fast.

I clip all queens, cut out queen-cells, give plenty of room—two or three supers at once—and have very little swarming. I sell all my honey in the home market, and stamp every section.

—GEORGE C. DUGG.


Bees and Olives.

These are suggested by W. A. H. Gillasp in the Bee-Keepers' Review, as a desirable combination.

He says:

The bulk of the work with olives is done between Oct. 1 and March 1; and for the first two months the work is moderate with both bees and olives. Some time in June or July the honey harvest commences and lasts until Oct. 1, when the fruit is ripe. By that time one man can put in his time the year through at one place, having no idle spell. Perhaps that is why the results are better in Greece, where they use the method in some cases, while in other surroundings, with other men, it would not.

Smothering a Colony of Bees.

This is a much easier thing than the novice would suppose. Nearly every one must suffer a personal loss in order to learn the lesson. Possibly some may be induced to be careful without any personal experience by reading the following case reported by Dr. C. S. Phillips, in the Southland Queen:

I want to tell you how we lost a large, fine swarm. There was a warm front that came out and my wife hired them, and they came out and went back. They did this two or three times, and the last time was on Saturday, and when I came home from the office she told me of it. I said, “All right; I'll fix 'em. Sunday they will not come out.”

So Sunday morning I got some wire-cloth and fitted it over the entrance to keep them.
After 28 Years.—We are not much in sympathy with the extravagant claims as being "biggest," the "best on earth," "none so good," etc. When, however, these or similar claims are based on the actual facts we believe that the advertiser has not only a perfect right, but that he should make the facts public. This is brought to mind by the advertisement of the Elkhart Carriage and Harness Manufacturing Company, of Elkhart, Ind., which regularly use this paper in season. These people for several years have been laying claim to being "the largest manufacturers of rhe classic style and the best in the market" by writing to the consumer exclusively. To one who will take the pains to investigate, or who is better informed, it is possible, go back and look over this institution and examine their methods of doing business, this statement will appear as modest and entirely within the bounds of truth and fair dealing. There is no secret about this statement; in fact, it has taken more than 28 years of hard and persistent effort to bring this institution up to its present high plane. Having de-

Honey and Beeswax

Market Quotations.

Chicago, June 7.—No new honey comb has been quoted in the market. Producers' promises are being made for some before the month closes. A little good white comb still on sale at 50 cents per pound, but very hard to find, and other kind there. Extracted very dull, practically no sales made. Suger content 80-90%.

R. A. Burnett & Co.

Detroit, May 21.—Fancy white comb 14½ pounds, No. 1, 130 cents; dark and amber, 160 cents, Extracted white, 160 cents, Beeswax, 27½ cents.

We have little desirable honey in sight. The new crop will find the market well cleaned up. The demand is always light at this season of the year.

Cincinnati, May 17.—No demand for comb honey, also stock of it well exhausted. Extracted very dull, sales are more or less forced; lower prices from 3½ to 1 cent per pound.

G. H. W. Wheler

Boston, May 21.—Our market continues dull on honey with very light stocks on hand. Our normal prices are as follows: Fancy I-pound cases, per case, $3.40; No. 1, 3.85; am-

New York, June 1.—Extracted honey is ex-

Batterson & Co.

killed by dust and very little moving. We quote for the present: White, 65c; light amber, 75c; medium, 85c; dark amber, 95c; brown honey at unchanged prices. New crop is now coming to hand, however, and from the same district as from 12½c, according to quality and style. Beeswax, 27½ cents; Hildreth & Segerin.

Albany, N. Y., June 1.—Honey market quiet.

No stock, no stock orders, and no demand now. It is between seasons. We look for good prices through the coming month. Our comb honey has very little brood has nearly exterminated the keepers.

Buffalo, May 21.—Very light trade in all grades of honey. Strictly fancy sells fairly, at 7½ cents; dull at very low rates; 3½ cents, all the range. Beeswax, fancy, 27½ cents; dark, 20 25c.

W. R. Cronkwell Produce Co.,

Successors to C. C. Clemons & Co.

San Francisco, June 1.—Honey market rather firm. 12½ cents; amber, 18½ cents; dark, 68½ cents. Ex-

market. Beeswax, fancy, 27½ cents; dark, 20 25c.

KANSAS CITY, May 4.—Practically no ship-

ments arriving, and very little selling. We are getting $3.50 to $4 per case of 24 boxes. No. 1, $4.50; No. 2, $3.50. Sugar content 85%.

W. R. CRONKCLL PRODUCE CO.,

Successors to C. C. CLEMONS & CO.

Bee-Keepers' Supplies!

We can furnish you with the A. J. Root Co. goods at wholesale or retail at prices. We can furnish you with the best and latest such goods at prices paid for beeswax. Send for our latest catalog.


POULTRY BOOK FREE. 64 pages, illustrated with a map, trial subscription to our paper, THE INLAND POULTRY JOURNAL, Indianapolis, Ind.

Improved Swarthmore Queen—Nurseries in all parts of the United States. The Swarthmore Apiaries.

For Sale

Good Bee-Ranch and General Farm
IN SOUTHERN CALIFORNIA.

241 Address, G. B. O'EAR, San Diego, Cal.

Please mention Bee Journal when writing.

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ROOT'S GOODS

AT ROOT'S PRICES.

Everything used by beekeepers.

POUNDER'S HONEY-JARS. Prompt service, Low Freight Rates.

WALTER S. POUDER,

S. 232 OPEN DRIVING WAGON.

These are built for driving, and are suitable for mowing and other farm work. They are of wood and iron, and are made in three sizes: 200 CRATES OF 2 HONEYSAND 200 CRATES OF BEE-KEEPS' SUPPLIES.

FRED W. MUTH & CO.

SAN FRANCISCO.

For Sale

200 CRATES OF 2 HONEYSAND 200 CRATES OF BEE-KEEPS' SUPPLIES.

For Sale

Market presents a weak tone, with dealers, large and small, having no interest in, and little, if any, in speculation of liberal offers from producing sections at an early day. There is not much new honey now here, either & or extracted. For some very choice white comb 1½ cents is asked. New amber extract has been placed at 4 cents, which is the utmost fig-

For Sale

California! If you care to know of its

O. 242. Please mention the Bee Journal.

FRED W. MUTH & CO.

1400 Front & Walnut Sts., Cincinnati, O.

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We have a Large Stock on hand and can ship promptly.

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Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of THE AMERICAN BEE-KEEPER free. Address,

THE W. T. FALGONER MFG. CO.,
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ITALIAN QUEENS — Warranted.
Tested ...................................... $1.00
Untested ................................... 75c
RIVER FOREST APARIES
214h RIVER FOREST, Cook Co., ILL.

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ILLOIS DAY
at the Pan American Exposition.

Tuesday, June 25, 1901, has been selected by the Governor of Illinois, as "Illinois Day," at the Pan-American Exposition at Buffalo. In order to make that occasion a greater success, the Nickel Plate Road will lend its assistance by making the following rates:

$13.00 for tickets good 10 days.
$16.00 for tickets good 15 days.
$21.00 for tickets good 30 days.

Tickets at above special rates will be available on any of our three through daily express trains from Chicago at 10:35 a.m., 2:30 p.m., and 10:30 p.m., which carry through vestibuled Pullman sleeping-cars and afford excellent dining-car service, on the individual club meal plan, ranging in price from 35 cents to $1.00.

For further information and illustrated descriptive folder of the Pan-American Exposition grounds, write John Y. Calahan, General Agent, 111 Adams St., Chicago.

I ARISE
To say to the readers of the Bee Journal that
DOOLITTLE...
has concluded to sell QUEENS in their season during 1901, at the following prices:
1 Tested Queen ........... $1.00
2 Tested Queens ....... 2.25
1 Tested Queen ......... 1.25
3 Tested Queens ......... 3.00
1 select Tested Queen 1.50
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Select Tested Queen, last year's rearing 2.50
Extra selected breeding, the very best ... 5.00

Circular free, giving particulars regarding each class of Queens, conditions, etc. Address,
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24th Year Dadant's Foundation. 24th Year

We guarantee satisfaction. **
What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.

PATENT WEED-PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.25, by mail.

Beeswax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

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Pan-American Exposition
... AT BUFFALO ...

THE A. I. ROOT CO.
will have an Exhibit showing a

COMPLETE LINE OF BEE-KEEPERS' SUPPLIES,

Also some NEW GOODS that have not yet been advertised. The exhibit will be conspicuously placed in the Gallery of the Agricultural Building.

If you have never seen a

Ball-Bearing Cowan Honey-Extractor,
Here is your chance.

We expect that HUBER ROOT, the youngest member of the Root Co., will be the man in charge of the exhibit. He will be pleased to meet all our old friends, and make new ones wherever possible.

Gleanings in Bee-Culture
Will contain a very interesting series of articles on Queen-Rearing, giving New Methods and Short Cuts. There will also be a series on

BEES IN LAW.

E. R. Root will tell of his trip through Texas, Colorado, Oregon, and California. Better subscribe now.

Six months' trial subscription for only 25 cents.

THE A. I. ROOT CO., Medina, Ohio.

GEORGE W. YORK & CO., 144 A 116 Erie Street, CHICAGO ILL.
are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO.
Send to them for their free Catalog.
MR. J. M. RANKIN,
Inspector of Apiaries for the State of Michigan.
The Bee-Keeper’s Guide;  
Or, Manual of the Apiary,  
BY  
PROF. A. J. COOK.  
460 Pages—16th (1899) Edition—18th Thousand—$1.25 postpaid.  
A description of the book here is quite unnecessary—it is simply the most scientific and practical bee-book published to date. Fully illustrated, and all written in the most fascinating style. The author is also the best known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without The Bee-KeePER’S Guide.  
This 16th and latest edition of Prof. Cook’s magnificent book of 460 pages, is neat and substantial, cloth binding, we propose to give away to our present subscribers. The work of getting new subscribers for the American Bee Journal.

Given for TWO New Subscribers.

The following offer is made to present subscribers only, and no premium is given to the two New subscribers—simply the Bee Journal for one year.

Send us two new subscribers to the Bee Journal within the next four weeks. Mail us a copy of Prof. Cook’s book FREE, or club it with the Bee Journal for a year—both for only $1.75. But surely anybody can get only TWO new subscribers for a year, and thus get the book as a premium. Let every body try for it. Will YOU have one?

GEORGE W. YORK & CO.,  
144 & 146 Erie Street, CHICAGO, ILL.  

The Bee-Keepers’ Association:  
OBJECTS:  
To promote and protect the interests of its members.  
To prevent the adulteration of honey.  
To prosecute dishonest honey-dealers.  

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MEMBERSHIP DUES: $1.00 a year.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one on his coat-lapel, as it will cause people to ask questions about the busy bee, and many a convert is made of the same. I see it wind up with the sale of more or less honey; at any rate it would give several a superior opportunity to enlighten many a person in regard to honey and bees."

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it.

Price, by mail, 6 cents; two for 10 cents; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

Weekly Budget.

Mr. F. Greener, of Ontario, Co., N. Y., writing us June 9, had this to say:

"The season so far has been exceptionally unfavorable. Hence we have not seen steadily, as we look for a yield only from buckwheat later."

Dr. Jas. McLean, whose interesting article on "Medical and Nourishing Properties of Honey" appeared on page 384, writes us that a slight error occurred therein, referring to the indulgence formula regarding the quantity of honey, which should be one teaspoonful instead of one tablespoonful. He thinks it might be well to rearrage the whole sentence as follows:

"One teaspoonful of pure honey dissolved in a glass of cold or tepid water, into which mix one teaspoonful of thinness of myrrh, to drink shortly after eating."

Mr. Thaddeus Smith, whose picture is shown on page 389 this week, is a retired bee-keeper, though he has from 10 to a dozen colonies. He begins, in this week's number, a series of reminiscent articles which we have no doubt will be read with much interest by all. He is between 70 and 80 years old, though no one would believe it if compelled to judge from the picture alone. It must be that the Polhe Island climate, in connection with a luscious fruit diet, contributes to longevity; and very likely honey also plays an important part in helping to keep him so young in appearance.

Mr. J. M. Rankin, as previously announced, is the recently appointed inspector of apiaries for the State of Michigan. We are pleased to present so good a likeness of him as on our first page this week. He is 36 years of age. He began his career as a bee-keeper at the age of 12, with two colonies, one in a Simplicity hive and one in a box-hive. During his first experience he made the acquaintance of a German bee-keeper by the name of Andrew Hunt, to whom he is indebted for careful and interesting teaching, and for a great deal of his early training in bee-culture. When 18 years of age Mr. Rankin met foul brood for the first time, and it resulted in the loss of half of his 40 colonies, but the disease was finally stamped out.

He took charge of the experimental station apiary at the Agricultural College of Michigan in April, 1894, and during the past four years has been a student there. He has done some good work with foul brood, and has gone several times to different parts of the State to assist bee-keepers in treating their apiaries to rid them of foul brood, so the work is not entirely new to him.

We had the pleasure of meeting Mr. Rankin at the Chicago convention of the National Bee-Keepers’ Association last August. We feel that Michigan has made no mistake in appointing him to so important a position in the interest of bee-keeping. He will not disappoint those who looked hard to secure the foul brood law, and who also recommended his appointment. On account of his investigating turn of mind, and decided interest in the subject, we bespeak for Mr. Rankin an honorable career in the bee-keeping line.

The Bee Journal is sold for 25 cents a year, and subscriptions sent postpaid. Address, GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.
Editorial.

The Season seems to be unusually unfavorable. Cold and dry weather has prevailed over a large area, while some portions complain that it has been too wet. There is some complaint that white clover is plentiful, but that the bees get little or nothing from it. Unless very close watch is kept, there is danger that some colonies will be starving in June.

Starting Bees in Sections.—Mrs. Barber and others are warm in praise of the plan of giving bees an extracting-super to start them to work, and a day or two later replacing the extracting-super with a super of sections. Referring to this, M. A. Gill says in Gleanings in Bee-Culture:

In advising the use of an extracting-super to start to work in sections, are you not aware that thousands of us bee-keepers do not have an extracting-super on the place? I would advise any bee-keeper working for comb honey to exchange supers with colonizers that are tardy about working in sections with one that has made a good start, and be sure to carry along some of the comb-builders (young bees) which are the last to leave the super. The colony, given the super with full sheets of foundation will at once resume work, from the force of the same habit you say they have acquired by the use of your extracting-super.

A Satisfactory Hive-Cover—at least one that is satisfactory in all climates—is hardly yet on the market. Editor Root says that the perfect hive-cover is yet to be made for Colorado, Cuba, and other countries that are different from the northern part of the United States. He hardly need to have made any distinction, for objections against a cover in Colorado would still lie against it in New York, only in less degree. Possibly one trouble in the case has been that there has been too strong a feeling that the expense of a cover may not much exceed the cost of a plain board. Something must not be expected for nothing, and a good cover being so essential a part of a hive, the wise bee-keeper will hardly object to some extra expense. Perhaps it would be a good idea to have a pretty thorough discussion as to the points of a good hive-cover. Some of them may be as follows:

Lightness: a cover must be lifted a good many times, and it makes a big difference whether it weighs five pounds or twenty-five.

A freedom from warping and twisting: a plain board cover may be firmly nailed at the ends that it cannot possibly warp, but the cleats can not in the slightest degree prevent it from twisting so it will not lie flat on the hive.

A dead-air space: this will make it cooler for summer and warmer for winter. To be sure, a shade-board can be put over in summer, and something of the same kind may be effective for winter, but it is more convenient and satisfactory if cover and shade-board can be all in one.

A hive-cover with these requisites would make a perfectly close fit, and, if made properly, give pretty good satisfaction. In spite of the expense, some have covers coated with tin, so as to make a sure thing against leakage. Lately Neponset roofing-paper is mentioned as a close competitor of tin. Gleanings in Bee-Culture reports it is still doing good service after 12 years' use. Of course, it must be painted; but so much tin.

Improvement of Stock is in the air nowadays. Unfortunately it is "in the air" in too literal a sense. There is a general reaching out after it, and a feeling that somewhere in the air about us there is something like improvement if we only knew enough to get hold of it. We are just now getting along so far in the matter as to begin to realize that we know nothing about it. The editor of the Rocky Mountain Bee Journal says:

"Who among us will deny that darkness, black as Egyptian night, envelops the whole bee-keeping world on this subject? This includes queen-breeders, bee-journal editors, and all others."

Well, it is a hopeful sign when one begins to feel his ignorance, and the reaching out after light gives promise of good things to come. If control of mating becomes an established fact, why should there not be just as intelligent work done in breeding bees as in breeding any other class of stock? Even without control of mating, if enough interest can be aroused to get all the bee-keepers to breed only from the best, there will be a great gain.

Sections Filled with Foundation have an argument in their favor sometimes not thought of. If you are wise, you will probably have in the brood-chamber much less drone-comb than the bees desire. It is the natural thing for them to fill out largely with drone-comb for storing, and the two kinds of comb do not look so well in a section. You probably have thought of that, but that is not all. The bees desire drone-comb, and if you keep careful watch you will find that sometimes as much as half or quarter of the section has not a drop of honey in it when sealing is well along in the super, because the bees are holding these cells open for the queen to lay in. If the section is filled with worker foundation, then there is no chance for drone-comb there. Those who use full sheets of foundation in sections do not find it necessary to use excluders to keep the queen down.

Size of Entrance.—Editor Doolittle says in the Progressive Bee-keeper that he regulates the entrance to suit the size of the colony. After the season upon which she obtained her allows to the strongest colonies an entrance of 2½ inches, and from there down to 1½ inches for the weakest, leaving them thus during early spring. When the bees begin to work on early pasturage, the entrances are enlarged as needed to allow free passage.

Box-Hives and Skeps in other countries seem to be more common than in this. A writer in the British Bee Journal says: "I can get as many driven bees as I like for the trouble of "driving."" The writer says he makes his hives out of used boxes, and he has taken the first prize for the best hive made by an amateur. Most bee-keepers on this side would hardly feel they could afford to make their own hives from common boxes.

Yellow Sweet Clover.—Successive crops of this clover from one sowing are reported in Gleanings in Bee-Culture by M. M. Baldridge. December 2, 1887, seeds were put in a shallow trench and covered with one or two inches of soil. From this sowing came three distinct crops, the last in 1899, which must have come from the same sowing. He says it sometimes winter-kills, and, like the white variety, it is a biennial.

Getting Light Extracted Honey.—Mrs. Harrison tells in Gleanings in Bee-Culture about some extracted that she put on exhibition in competition with a number of other samples, the best among which she obtained a premium. Hers was distinctly whiter than the others, which did not at all differ from each other. Her competitors thought there must have been some trick about it, and she told them the trick. She extracted from none but pure-white combs. Holding the comb up to the light, if she saw a few cells of dark honey, those few cells were not unpicked. All utensils were clean and free from other honey. That was her "trick" for getting the whitest honey. This trick is a familiar one across the water, but bee-keepers on this side are hardly equal to their foreign cousins in getting up extracted honey for exhibition.
Convention Proceedings.

(Continued from page 376.)


BY DR. L. D. LEONARD.

SECOND DAY—Afternoon Session.

Mr. Corbett, of the Dairy and Food Commission, talked of the work done by that Commission in the State. Of 150 samples of honey examined in two years, 25 percent has been found to be adulterated. Four dealers have been prosecuted for selling adulterated honey, and fined to the amount of $55. The following letter in regard to the matter, was read:

Hon. J. P. West—

My Dear Sir:—Pursuant to your request to Major Bowler, I send you the following names of those who have been convicted and fined for selling adulterated honey this year:

Sahmaus & Zeigler, Duluth, Feb. 23, 1900—$15
Ol A. Berz, March 12—$15
Mallouh & Son, March 15—$15

The second named was fined for selling imitation honey.

Yours very truly,

A. Grindall.

Miss Moeran then gave a talk on cooking and canning with honey.

The advisability of having a Minnesota honey exhibit at the Pan-American Exposition, at Buffalo, was next discussed, and Dr. E. E. Jaques was appointed to take charge of the matter for the Association.

The following paper by G. H. Pond, was then read:

DISPOSING OF THE HONEY CROP TO THE BEST ADVANTAGE.

In considering this subject we must first decide whether we want to get the most for our honey regardless of the time required; or, is our time worth so much that it is best to sell our honey the easiest and quickest way? If we come to the latter decision the bee-keepers of Minnesota have an excellent outlet for their honey through the commission merchants of Minneapolis and St. Paul; and I think we can obtain better prices for our honey through them, than do those who ship to the large Eastern cities.

But perhaps most of us will decide that our time is not worth so much that we feel warranted in following this plan, and if by spending more time in disposing of our crop we can get a better price, we would better do so. Now I do not propose to advance a theory, but to give a few facts from experience, and as I have had no experience in producing or selling comb honey, I shall dwell only on disposing of extracted honey.

Honey is an article that people in general do not buy unless it is brought to their notice, so, in order to sell it, is necessary for us to put it up in a very attractive way, and then bring it to the notice of the people as much as possible. In peddling honey among farmers I have found that the fether I go, the more I can sell; and this rule holds good wherever I have sold honey. "Keep going" is a good motto for any one who would sell bee-honey, for customers nearly always tells a friend or two, and shows them the honey, and in this way the business is extended, so that the more one sells the more he can sell.

I have learned by experience not to try to induce people to buy more honey than they wish at one time, because sometimes when they buy too much honey, or gets in an untidy condition otherwise, and thus they get set against it. It is strange how many people there are (who ought to know better), who think that when honey candies is spoiled. For example, I have sold to many people boxes of honey for two or three years and they take over 100 pounds at a time, getting it three or four times a year, and I supposed how to care for canned honey. But this fail their kitchen-man, and he thought he could get much money from it, and on examining it I found that all that added it was that honey was stored. A new kitchen-man was employed and he did not understand it.

In selling honey put up in glass packages to retail grocers, I find that if the honey candies on their hands their sales of it about come to a standstill, and although I tell them that heating will restore it to a liquid form, and they say that they will try it, I do not remember that a single one of them ever did. I have found that the best way is for me to exchange it for honey freshly put up, and take the candied home and relish it myself.

To sum up, then, the most important points in disposing of your honey crop are:

1st. Produce a first-class quality of honey.
2d. Put it up in as attractive form as possible.
3d. Bring it to the notice of customers constantly.
4th. Keep your customers satisfied.

C. H. Pond.

Next, a paper was read by Dr. Mary McCoy.

BEE-KEEPING NEAR DULUTH.

Years ago I became interested in the bloom in and about Duluth, as a possible profitable field for the support of the honey-bee. The spring season of Duluth is always short; three weeks later than that of the southern part of the State, our earliest bloom being the dandelion, which is an abundant producer of pollen and some very bitter honey that is claimed to be very stimulative. We have some fruit-bloom—apples, cherries and plums—but there are not enough trees, all told, to make a fair-sized orchard. I do not think that basswood is indigenous to the country about Duluth, and there are but very few trees planted in and about the city. Until this year, summer butternuts have made very few flowers, and I have always ushered in the white clover which formerly literally carpeted the whole surrounding country, as well as the vacant lots, squares and parks of this city. Wherever a fire has burned it has been replaced by deadened foliage and blackened foliage with a profusion of the fragrant white clover bloom, and as Duluth has only recently been reclaimed from a wilderness, and fire has been one of the reclaming agents, it has had plenty of barren spaces, neat and beautiful. There are a few other flowers, such as the wild strawberry, the wild cherry, and the wild rose, which all help very materially, and I could not help noticing how heavily the wild cherry-tree bore which grew near where the bees were placed.

In the early fall the fireweed puts in an appearance and the honey stored from it is as fine as that from the white clover.

The weather is cool enough here so that the bees do not care to hang outside of the hive, and the first summer we kept them they did not lose more than one out of every six days.

The past summer was a little warmer, and they loosed a little in the middle of the day, but their loss is not to be compared with what I have seen of it in the Michigan apiaries.

We have had no experience with any bee-diseases in Duluth and have seldom had any where we have lived; but I think the bee-moth inhabits Duluth, or, if it does, perhaps the bees (like the people of our city) are too wise to make it a foothold.

Suffice it to say that since the first summer that we have not caught the disease, we have never lost more than two or three colonies.

We know nothing about foul brood; it is a disease that has not yet gotten into our part of the State. I don't think there ever has been any in this section, and I hope there never will be.

There are about 10 people in and about Duluth that keep bees. One family has kept them over 20 years. I asked the head of this family—she is a widow—if it paid, and she replied, "Well, I've paid off the mortgage on the farm, sent the children through high school, and one through business college, and built a kitchen on the house, and all I've had to do it with has been my 69 colonies of bees." So she has found it profitable.

We have been keeping bees for about four years, starting with two colonies. White clover began to blossom about May 15, the spring being unusually warm and early, and as we had plenty of rain throughout the summer, and the frost was late in appearing, our honey season lasted till September. That is, until we sold out, for we sold out our 175 pounds of beautiful white clover comb honey, which was selling in Duluth at that time at 15 cents per pound.

The next summer the yield was fair, but as the bees were five miles from our home they were hungry and I supposed they should have had, although we increased to 12 colonies, and secured about 300 pounds of honey. We had scarcely any snow last winter [1899-1900], and the white clover was badly winter-killed, so we did not have the honey; although we sold none at all; but if clover was scarce, the price of honey was high, so we did not do so badly, after all. We sold one colony to a friend, and with the honey we sold and ate, we figured that our debt and credit sides have come out about even. We discouraged swarming all we could the past sum-
American bee journal

June 20, 1901.

Contributed Articles.

No. 1. Some Reminiscences of an Old Bee-Keeper.

By Thaddeus Smith.

I propose to give some recollections of the time, incidents, and persons, connected with bee-keeping over a quarter of a century ago, and some incidents of my own personal experience of 30 and 40 years ago, with notices of prominent contemporary bee-keepers and the great changes and improvements made in the science of bee-keeping within the last 25 years. The introduction of the movable-comb hive, and the Italian bee. This first article will be given to the writer's early experience and the condition of bee-keeping at that time, but in future numbers he will give the more up-to-date accounts.

I was brought up on a farm in Woodford Co., Kentucky, ten miles from the city of Lexington, and as far back as my earliest recollection I have been at the hives of small and queenless colonies that were destroyed by the moth. Such is undoubtedly a fact where movable-comb hives are used, and some assistance can be given the bees in getting rid of the moth, but it did seem, in those days, that some of the colonies would succumb to their attack.

It has been said that wherever there is a demand there will be a supply. So we soon had offered us patent mothtraps, and patent moth-proof and moth-catching bee-hives. Agents with models, beautifully made of mahogany or rosewood, perambulated the country. The worms, perhaps, were not so long lived as these things "worms"—I may learn after a while, but excuse me for the present), when matured or dislodged by the bees, would fall to the bottom-board and take refuge under the bottom edge of the hive, and under the combs that came near the bottom, and I had to go early every morning and tilt the hive back and kill the worms. This was a pretty good non-patented mothtrap, but required close attention and work, accompanied sometimes with burning.

My father set about to devise a better plan to get rid of these worms that fell to the bottom-board, and to break up their hiding-place and prevent them getting up into the combs again. He had the hives all raised from the bottom-board by driving a big nail in each of the four corners, leaving them to project three-quarters of an inch, forming an entrance that high all around the hive. These he set apriaries looked as if they would be destroyed by them. We did not know then, as we know now, that it is only the weak and queenless colonies that are destroyed by the moth. So there could not have been much trouble in wintering.

But there came a time, for a number of years, when the moth worm or miller became very bad indeed. Whole...
upon smooth flat stones, that were easily procurable, from one to two inches thick, and laid flat on the ground, distributed all about over a large yard. Now when the worms fell to the bottom they had no place to hide, could not get back on the combs, so had to go to the ground, and many of them were eaten by the other insects. Brown and white house-wrens were often seen busy around the hives gathering these worms for their brood.

My father tried other projects—had hives placed in a house, and had the entrance to them through long flat tubes extending a foot or so outside the walls of the house, so the moth-fly could not find her way into the hive, I suppose. He had a theory that it was necessary for the worms to have access to wood for material to form their cocoons with, as we often see them scrape and cut into the wood of the hive to enclose themselves; and he got the idea of having hives made like common crockery or stoneware, but not being near to any crockery manufactory he failed to try the experiment. The hives placed upon the stone with an open entrance all around that was never closed or contracted, winter or summer, seems to have given the best satisfaction, for they were used in that way until I adopted the Langstroth movable comb hive in 1863.

I remember some curious devices of my neighbors' One had a hive suspended by chains in a tree some 20 or 25 feet from the ground—to imitate the natural abode of bees in hollow trees, I suppose. Another had a bee-house with arrangements for getting surplus honey from below the hive instead of the usual way from the top. A trough-like box 12 by 14 inches square extended around the inside of the house, and bees were placed in and over it, and upon this box the hives were set, the bees having to pass through the box to get out. When they had filled the hives, they would fill the box below, and a trap door was arranged on the box so the honey could be cut out. He claimed that it worked well.

There was another curious bee-house in his front yard. It was a section of a very large hollow sycamore tree, probably four feet in diameter and six feet high. It was placed upon a post a foot above the ground with a floor in it, and a neat, conical roof of shingles, with a staff in the top, and was quite ornamental. A door was sawed out and was so placed that one could go into it; and in it an ordinary box-hive of brood was placed. When the place was filled the box they would build comb all over and around the outside of it. The door to the big "gum" was opened, and the honey outside of the hive cut off whenever needed, or as cool weather came on. I don't know whether this colony ever swarmed or not. Ontario, Canada.

To be continued.)

Bee Keepers' Exchanges—Organization and Co-operation.

Written for the Wisconsin State Bee-Keepers' Convention held at Madison,

By C. A. Hatch.

We have so often heard it said, "In union there is strength," that it has lost its power to affect our understanding. A single straw would not be much to match against a man's strength, and yet if that single straw be increased by numbers enough it can defy the strength of the strongest man.

An army would not accomplish much if each soldier were allowed to go and do as he pleased regardless of every other soldier. But if all act uniformly, and become a unit of the whole, that it becomes an army and ceases to be a mob, that effective work can be done, and it becomes a power.

ORGANIZATION.

Concentration and organization are the effective means of progress in the beginning of the new century. Unorganized labor is being pushed to the wall by organized. The strength of a man is not in his confidence, trust, or some thing of the kind, has a hard row to hoe. He may make just as good an article, and may be able to sell it for the same price as the trust article, but then comes in the item of freight-rates which is sure to down him if nothing else will. The large concerns have larger quantities to move, and therefore can ship by car or even train load, thereby getting lower rates, to say nothing of treaties with rail-roads whereby special rates may be obtained.

WHOM IT HELPS.

The small bee-keeper with only a small output is the one that an exchange can help most. He is one of the small straws that are to be bound together to make the strong rope. Ten men having one-tenth of a car-load each, by organizing, can have almost the advantages of him who has a car-load and himself. The large producer gains by having small lots where they can be controlled, and not put on the market at ruinous prices, to demoralize all prices.

Bee-keepers are of necessity more or less isolated, and hence can not avail themselves of the help of organization as readily as some other callings. But even these difficulties can be overcome.

ADVANTAGES.

The advantage of lower freight, both on goods shipped by members and goods shipped to members, is one of the advantages of bee-keepers' exchanges. Also the difference between buying at retail and in car-lots or large quantities is another advantage. This will apply to all supplies used by the members, as, for example, hives, sections, foundation, cans, and barrels.

Another of the advantages of a well-managed exchange is in the uniform grading of the bee-keepers' products. Few men are capable of grading their own honey in a proper manner, for they are either too partial to come to a fair judgment of their own products or too deficient of their own success and modestly put it too low, and yet others are downright dishonest and think anything they can work off is all right; whereas, an honest, capable grader has none of these influences to draw him one side and his judgment and care can give a fair and honest grade. One of the trials of a dealer is in not getting a uniform quality from different producers, owing to their different ideas as to grading, and if an exchange could do nothing else this one thing would pay for all the trouble.

Not every bee-keeper, however good he may be at producing good crops of honey, is a good salesman, many a bee-keeper losing heavily in mismanagement in selling what he can, and him self.

In an exchange one can have the advantage of the concentrated wisdom of all the membership in selling, by selecting one of the best business men for business manager.

Uniformity of packages for both comb and extracted honey is another of the benefits of an exchange; being all bought at the same time and place, of course all would be alike, and, therefore, many of the trials over tare on packages would be overcome, dealers would become familiar with the packages used and would know exactly how it would come to them in. In fact, uniformity is the word that expresses most of the benefits. Uniformity of products as to grading, uniformity as to packages, and, last but not least, uniformity of prices.

One kind and grade of honey would always bring the same price, no matter from what part of the State it came, and not as it now is—one producer competing against another producer, or even against his own products, as would be the case where shipped to two dealers in the same city.

COST OF CO-OPERATION.

Everything in this life costs time, labor, or money, and a honey exchange is no exception. It will cost both money and self-denial to accomplish anything worthy of the name. Postage, mailing, prints, general correspondence, must be paid for; a room large enough to store a car-load of honey in, at some central point in the State, would have to be secured, and also the services of a salesman. But in my experience with honey exchanges, which has been quite extensive, I found all these obligations of the members are more easily met than the self-denial required to say our honey is not a little nicer than neighbor B's, our opinion is of a little more value than any one else's.

If an exchange is to succeed, there must be a full and complete surrender of individual opinion to the rule of the majority. We must think our honey just what the grader makes it, and no more. Be honest yourself, and give others the credit of being the same, and half the troubles of organization will vanish.

There are other advantages in an exchange not mentioned in this paper, and on account of its length the plan of organization has not been mentioned, although much is
Can a Queen-Bee Be Worth $50, $100, or $1,000?

BY G. M. DOOLITTLE.

Of late years there seems to have sprung, from the minds of some, the idea that if they would let the world know about a certain queen-bee which they have, the only way in which this can be done is to give the estimate they place on her in dollars and cents, that, apparently, being the only expression of value. And from this it comes about, that we frequently see in print that some have queens which they value at $25, $50, $100, and some even as high as $200; and so the question has arisen in the minds of some, if there is such a thing possible as that any queen-bee can be worth these figures; and whether such expression should be an inducement to buyers.

Commenting on this matter, the editor of the American Bee-keeper wrote as follows:

"When a queen-breeders offers as his greatest inducement to buyers to send out queens from a mother valued at 50, 100, 200, 500 or 1000 dollars, he should be regarded with suspicion. If he is not a faker pure and simple, he is not what he appears to be in the eyes of the honest business world."

And what is a faker? The Students' Standard dictionary says a faker is "a street vendor." But coupled with this is the idea, in the minds of most people, that this street vendor elligently to the utmost of his ability, to "hawk them up," rather than on the real value or merit there is in his goods, in proportion to the price asked for them. And this is the light in which the editor of the American Bee-keeper looked at the matter of selling queens from a mother having only a dollar-and-cent value attached to her, according to my opinion, in reading that editorial.

There is no abuse in calling his goods in such a way, or in any way, which will enable him to dispose of them at a large margin of profit, relying on his ability to "hawk them up," rather than on the real value or merit there is in his goods, in proportion to the price asked for them. And this is the light in which the editor of the American Bee-keeper looked at the matter of selling queens from a mother having only a dollar-and-cent value attached to her, according to my opinion, in reading that editorial.

If we take that comment alone, it is just such an argument as any faker would use, and it was just the point Editor Hill was striking at, in reading his editorial argument. And such an argument does not rise much above the definition of what a "faker" is, as given in that same editorial in Gleanings.

Unfortunately, Mr. Root comes to the rescue near the close of his comments where he says:

"The laurels of our [b800] breeder do not rest solely on the long tongues of her bees. But long tongues or no long tongues, she [her bees] rolled in the honey last year, and is doing the same thing this spring. That her bee's work is worth the yard.

In this we have something of value expressed, while the simple saying that this queen "is worth $200," without any qualification, (save that, because she has been "hawked" up as worth $200, "I can sell $1,000 worth of queens from her queen"), expresses no value, save that which comes from the wear and tear of the lungs doing the hawking.

But let us take this value part and look at it a little, and see if it is possible for a fine breeding queen to produce valuable honey (that may be exchanged for other values which can be represented in terms as high as $50, $100, $500 or $1,000.

Take a queen in any of our apiaries which gives bees the class of Mr. Hight. But if they sold 10 pounds more honey to go other colonies having common queens, that extra 10 pounds of honey, according to present prices, would represent $1.25 as food, or exchange for value some one in another city may have produced, which we desire. Then, if that queen lives three years, her bees do equally as well year, then she has a value, speaking in common terms, of $3.75, or above the average queen in the apiary, if the average queen is worth $1.00 at producing values, then this queen is worth $4.75 for the real value of her bees, just for honey-gathering. So, then, we have it possible that a queen may approach nearly to a quarter of a hundred points of value from the honey-gatherer alone.

Now let us suppose that we use this queen for the purpose of rearing other queens, that we may increase on the value there is in her bees over and above others for honey-gathering purposes. The queen may be fairly well, (according to the way I find it in my apiary), only one queen in four will prove as good as her mother. If we rear 40 queens from this one, and 10 of them prove of equal superiority over the average queen in our apiary, as did their mother, we have the value of that mother-queen estimated in dollars and cents as $37.50. Now suppose we have 4,000 colonies we wish to rear, and we go out into the world to bless it with that number and one out of every four proves as good as the mother, then we have $3,750 as the worth of that queen, from the extra value in honey the bees from her daughters bring in for the mouths of those famishing with "honey-hunger" in the world.

But can 4,000 queens be reared from a single mother? Oh yes. With our methods of rearing, it would be easy for some of our largest breeders to rear 10,000 or even 20,000 queens from a single mother. Then it is possible, by keeping this mother-queen in a nucleus of bees the rest of the time, to prolong her life to five, and even six, years, as some of our breeders can testify. And thus it will be seen that the value there is in a really good queen—one that is head and shoulders above the average of those in the country—may go even much above $1,000, as we commonly express ourselves.

But not to appear as a fakir, we should know that the queen has real value in the work accomplished by her bees and those from her queen daughters, putting that work out to the world as her real worth, rather than saying that "we value her at so many dollars."
Questions and Answers.

Conducted by Dr. C. C. Miller, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—Editor.)

Management for Increase and Honey.

I have an apiary of 70 colonies, and would like to increase them to 140 this season. I would also like to get much honey as possible at the same time (mostly extracted). I have enough brood-comb on hand to give each one almost a comb. I have had an abundance of ex-tracting-combs, and a good many sections for bee, white comb. The surplus obtained in this locality is from white clover, linden and goldenrod. The prospects for a good flow from linden are excellent. Supposing this to be your case, how would you proceed to obtain the best results?

MINNESOTA.

Answer.—I don't know what will be the best way for you. What is best for one person may not be best for another. What may be best for you in one place may not be best in another. On the whole, probably the very best way would be for you to study carefully all you can and in text-books and bee-papers so as to be familiar with the whole subject, and then block out your own plans. It may be that your best plan will be to allow each colony to send out one natural swarm. The prevention of swarming may be given so many times in this department, which may again be given here for the sake of the newcomers who will need it about this time of the year:

"Hive an old colony in the morning, and then set the hive on the old stand, setting the old hive close beside it. A week later move the hive to a new stand. That will strengthen the swarm, and it will so weaken the old colony that it will give up all further thought of swarming. Of course, the swarm is what will give the crop of honey and prevent it from being so often put between hive and super the super should be put on as soon as the swarm is hived. If no excluder is used, then the super should not be put on for a day or two for the queen may get lost.

It is possible you may prefer to make matters into your own hands, for left to themselves you are not sure that every colony will decide to swarm. This plan may suit you: Take from No. 1 all its brood-frames but one, brush- ing all, or nearly all, the bees back into No. 1. Fill up No. 1 with empty brood-frames or frames of foundation. Put the frames of brood in a hive we will call No. 3, and set No.

3 in place of No. 2, removing No. 2 to a new stand. Do this in the forenoon, unless you do it in the afternoon at a time when large numbers of the bees are out for a play-spell. For a day or two all the field-bees that go out from No. 2 to form new colonies will be so occupied that they will not leave No. 1. This frame of brood, the bees may be discouraged and the hive is likely to be filled, and if you leave it for a day or two they may swarm."

Preventing Increase—Other Questions.

1. How would it do, to prevent increase, when the bees swarm get the queen and kill her, or take her away from the swarm, and return the bees to the original colony?

2. When the bees are smoked they fill themselves. What do they do with that honey? Do they retain or re-deposit it where it came from?

3. Does it matter whether the bee-space is regular between the lower frames and the sections above?

4. Will the bees work above when the spaces between the frames and the sections are irregular, or partly closed by misfit of the sections?
may cut out all queen-cells but one, a week after the first swarm. You may listen for the piping of the young queen in the evening of the seventh day after the swarm issued, and if you do not hear her then, listen every evening till you do, or till the sixteenth evening: when you hear piping cut out all queen-cells next morning. You may hive the swarm when it issues with the young queen, and put it in the cellar till the evening of the next day, and then return it to the old hive, by that time the bees will have dispensed of all the queen-cells.

2. It is probably redeposited, in most cases.

3. It matters much. If the space is less than about ¼ inch, the top-bars will be cemented to the parts over them with propolis or honey more than about ¼ inch, burr-combs will be built and filled with honey.

4. The bees will work in the super no matter how irregular, even if half the spaces are so close together that they can not get up through them.

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Dealing with swarms.

If you have empty combs that the bees had died on last winter, would you put in as many such frames as the hive would hold to hive new swarms on, or would you put in some frames with only starters or foundation in them? I would use combs, Wisconsin.

**ANSWER.**—I would fill up with combs as long as they last. There is no better place for combs to be protected than in the care of the bees, and the sooner the bees get the combs the better.

### Bees Deserting the Hive

I had a swarm of bees leave a hive June 1. In the spring I transferred the bees from an old box into a new hive; for a while they seemed to be doing well, building up their broken combs, and were gathering honey. About noon June 1 they left the hive, taking the queen, young and old bees with them, and leaving unsealed fresh honey, young bees just gnawing out, and bees in the larval state. There were no mice or ants to bother them. The hive was clean, and they had plenty of honey, and when I looked in the hive there were only five or six bee robbers, I suppose.

**COLORADO.**

**ANSWER.**—I don’t know what the trouble was. It likely was a case of what is called spring dwindling. I have had colonies desert their hives just as yours did, leaving honey and brood in all stages, with no apparent excuse that I could find. If the colony is weak, and the only thing that I could guess in the case was that the old bees had died off, and there was more brood present than the young bees could take care of. You may have trouble of the same kind again, and you may not have another case in years.

### Too Rapid Increase—City Bee-Keeping

I started the season with four colonies, which, up to date, has increased to ten, and one ready to swarm. I have one colony that is working in the supers. We have plenty of white clover, and I think will get some honey soon. But we are a good quality of Italians—the best in this section. I live in the city, and don’t branch out very strong. Now, what would you advise me to do? I am a dry goods clerk, and have not much time. I can sell a few colonies now. Would it be a good idea to rent pasture close to town, and try to take care of the over-supply, or not?

**ILLINOIS.**

**ANSWER.**—It may do no great harm before answering your questions to make the gratuitous suggestion that you may make the mistake that many a beginner makes, and increase too rapidly. When you increase from four to ten or more, your colonies will not be as sure to live through the winter as if you were satisfied with a more moderate increase. Neither will you get as much honey. Of course, if you are anxious for increase, and will give them the proper care, feeding all that is necessary, you may pull through all right.

1. If the drones are so plentiful immediately after cast- ing the swarms, the trouble probably is that there is a great deal too much drone-comb in the hive. If the drones appeared in plenty not until two months or so after the last swarm issued, then the trouble may be that you have a drone-laying queen, or laying-workers. If on would is from too much drone-comb, then your bees will gather less honey than they otherwise would, and much of it will be wasted in rearing and feeding those useless consumers. If laying-workers are present, or a drone-laying queen, it means the destruction of the colony.

2. What do you want to rent a pasture for? If you mean for the bees to feed upon, they will not thank you to rent it, but will find it if it is within two miles of your home. You can keep in a city yard as many bees as can find pasture within reach.

**Bees Not Working.**

Bees are building up fast. I have a colony that has a queen, but the bees work hardly at all, scarcely any of them coming out. What is the matter? They have some honey. I will Italianize about the middle of this month. I lost heavily the last winter, because of short stores last fall.

**OKLAHOMA.**

**ANSWER.**—There may be nothing the matter except that the colony is very weak. The presence of a queen can not of course warrant a goodly number of bees flying unless there are plenty of bees present. Look and see whether the queen is a drone-layer. If not, you will probably see bees fly as well as soon as the colony is a little stronger. You should turn out that there are plenty of worker-bees in the hive, and very few of them flying while other colonies are busy, then it may be well to change the queen and give them one or more industrious stock.

**Perhaps Pickled Brood.**

I bought five colonies of bees this spring in movable-frame hives. Three of them, I looked into, and found dead bees, which looks watery, and lies on one side. There is no smell about it. It doesn’t seem rubbery, or anything like that, and will not draw out with a toothpick. Will the swarms have the same disease? What will become of soul-necrotic or pickled brood if not attended to? What can be done for them?

**NEW YORK.**

**ANSWER.**—When anything so serious as pickled brood is suspected, it is too serious a matter to be treated by a few words in this department, especially as it would take up too much room. Study up the subject fully in back numbers, and get the leaflet on pickled brood, if you do not have it already. Very likely, the sections on which you will find the disagreeable symptoms largely to disappear, but none the less you should inform yourself so as to battle it, for it will be a safe thing to count on its reappearance in the future.

**Thinks Late Thin Honey Injures the Bees.**

There is a plant here that has yielded honey in October for the last two years. The bees have filled the brood-chamber full of this thin honey, and when they had the first flight in the spring they opened the hive badly, both inside and outside around the entrance. I lost half of my bees, and the other half are weak. It seemed to affect the queens. I would like to know how to keep this thin stuff out of the brood-chamber. I lay the sections on which they had room. How would it do to run it through the extractor without uncapping it? If there would be any brood in the hive at the time would it not kill it? I believe the honey is from the sters.

**OHIO.**

**ANSWER.**—I am afraid I don’t know enough to help you out. There is a possibility that you may be mistaken about the honey from that late plant being the cause of the mortality among your bees. But if you are satisfied that extracting without uncapping would help matters, you can do so without hurting the brood. So long as you do not turn the extractor fast enough to throw out the brood you are all right.

**The Premiums offered this week are well worth working for. Look at them.**
The Treasures of Nature.

From the drift of a star to the drift of a soul,
The world is all miracle under control;
That the breath of love and man's realized awe,
Alone wear the chain of inscrutable law.
A law that attains us, but ever eludes,
That baffles our groping, but never deludes:
We never can hold it; it holds us secure;
And the wisest in reading shall longest endure;
A Faith-bow of promise, a promise replete—
As sweet as the honey-bee and as fulfilling; but never complete;
We chase where it beckons, and gather the gold,
And lo, on before us, new treasures unfold!**

THE STUDY OF NATURE.

In my teaching in college, I find in some of the students an almost insurmountable disinclination of handling insects, because they come with no alacrity to the work of dissecting. Others, no whit less refined and sensitive, in a general way, show no such squeamishness. We dissect cats at first, and then other and smaller animals. The practical zoologist and the protected, not from books but from handling the real things, as of great value. The same is true in regard to the study of caterpillars, beetles, and bugs. The distaste is often erratic in the extreme. Thus nearly every girl will take interest in, and even at first, the beautiful, little lady-bird beetles, while the same girl will shrink away appalled at a ground-beetle or caterpillar—will shudder if a myriapod is handed to her, and actually turn pale at the very thought of touching a spider. I think that all this unreasoning, and in fact, unreasonable, is a vice. It is, perhaps, no more, unless cured of it—and it is a malady difficult of cure—will lose much of the beauty that she would otherwise get. Every girl may be required, as a duty, to dress a chicken or a rabbit; to dissect carefully a cat will teach her to do the other more intelligently, and will give her an insight into her own structure and physiology that will be of great value, and which can be gotten in no other way.

The insect world touches us in many ways. They annoy us and our domestic animals; they prey upon our crops to the annual tune of millions of dollars. The best success in life demands that every home circle shall know—and so study—these myriads of friends and foes—for all are not enemies—that they may prepare to wage battle in case the intruder comes with intent to injure. Insects are ubiquitous—that is, everywhere. We run against them at every turn. Not to know them is surely most unwise. In fact, that man is best equipped who knows most about the things that he runs against in all his daily walk. The little malarial animal is very small, but it can destroy the red blood corpuscle. To know of it and its work enriches the world. To know that a mosquito inoculates us with this often fatal poison, by its bite, is even more valuable, for it shows us how we may fence off disease and even death.

Thus this knowledge of these hosts that everywhere encompass us about is vastly practical, and stupid indeed is he or she who does not grasp every opportunity to gain such knowledge.

Again, no study does more to quicken and develop observation than this. The person who sees everything, and sees it well, is mightily strengthened for life's big fight. As students work in geometry, they often say that they can almost feel their brains grow. So students of entomology often remark, on their increased facility to find insects, and to find and see correctly minute and obscure parts, as the study goes on.

Just here is suggested a duty for every home circle. I have shown before the value of the walk in the woods, the Sunday stroll with the children by wayside and meadow. These are very golden days to foster this love of nature. They are often times when it is hopelessly crushed. The mother, mayhaps, is taking her first walk with the little boy or girl. They come upon a lovely caterpillar or beautiful beetle. The mother shrugs and jumps back. The little one has a lesson and an impression that it will take long schooling to correct. It has then and there gained an abhorrence that will rob it of great pleasure, and will very likely be a handicap in life's work. I have always rejoiced that my mother was not appalled at the sight of grub or spider, and that she early taught me to see the beauty in both. I shall never involve the.planck child in this unfortunate. I hold my own little ones to admire and love these gems, sown so thickly about us by God's own loving hands. I rejoice the more as I know that my dear ones are much better equipped on this journey, and are much better prepared to get more of pleasure and profit from it.

I urge all in our home circles to be interested in everything about them, to study and observe, and I am free to say that nothing offers so rare an opportunity as these myriads of wonderful insect forms and insects. The honey-bee and myriapod, their head high, walks more erect, feels more self-respecting, is more a man. While thrill may not be, is not, the best gift to covet, it is a worthy one. So of our nation. She for many a year is vain. She shall not have all she desires, and what is, her income is far in excess of her outlay. In other words, her exports of bread-stuffs, manufactured articles, and raw materials, are far in excess of her imports—of tea, coffee, sugar, and such other articles as she needs. We are thrifty. We are industrious. We Doolittle and I are both rejoiced. We are happier than though she were buying more of value than she were selling.

I believe Mr. Doolittle is exporting in excess of his imports. That is, his home-sales, etc., are greater in amount than his purchases of clothing, supplies, etc. Thus he, like our goodly country, is thrifty. I rejoice that it is so.

I hope this explains my logic. I regret that I did not make my meaning plain to all before. I thought as I commenced reading Mr. Doolittle's criticism that he was going to say: Why rejoice, for our thrift means unthrift for our neighbors across the water? I do regret that. The entire world looks jealously at our commercial progress. They are alarmed at our late increased thrift. They watch us with increasing anxiety and rapidly increasing prosperity with almost consternation. That should make us no less energetic, or frugal. It should make them hasten to study our methods, and to adopt our practice.

QUESTIONS AND SUGGESTIONS.

Mr. Doolittle's kindly paragraph causes me to urge others to ask questions and make suggestions as to these "Home Circle" papers. I wish to make them helpful to all the readers of the "Old Reliable." One reader kindly urged me to read Henry George's "Progress and Poverty." This friend actually sent me the book. I am studying it carefully, and when it is digested I shall bring it into "The Home Circle." It has valuable suggestions.

Another asks: How shall we contribute? Send me valuable recipes, hints as to living and economies, gems cut from newspapers, any and every thing that will help to make our homes more bright and happy. Send to me thus: A. J. Cook, Claremont, Los Angeles Co., California.

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee-Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.
$15,000 in Cash to be Given Away

The Press Publishing Association will give $15,000 in 1,000 Cash Prizes to those making the nearest estimates on the combined Official Vote of Ohio, Massachusetts and Iowa, cast for Governor on the 5th day of November, 1901.

Estimate the total vote in these three States combined for Governor and send your estimate and subscription to the American Bee Journal, and you will receive a certificate, which will entitle you to participate in the distribution of the $15,000 to be awarded by the Press Publishing Association, of Detroit, Mich., to those making the nearest estimates of the Official Vote for Governor in the States of Ohio, Massachusetts and Iowa, to be determined by the Election held on the 5th day of November, 1901.

We have made arrangements with the Press Publishing Association, of Detroit, Mich., to enable our subscribers to participate in the distribution of these magnificent prizes, amounting to $15,000.

Our Offer: Until further notice, everyone who sends us a sufficient amount to pay his or her subscription to the American Bee Journal to the end of this year (1901) will receive the subscription is in arrears at least since Jan. 1, 1901; or to any one sending us $1 for a year in advance of next Jan. 1, 1902, will receive a certificate which will entitle him or her to participate in the distribution of the Prizes. No advance is made in the price of our paper; you get the certificate absolutely free.

YOUR ESTIMATE.—When you send in your subscription you also send your estimate. Be careful to write your name, address and estimate as plainly as possible. As soon as we receive your subscription we will send you a certificate of the Press Publishing Association, of Detroit, Mich., containing your estimate, which will entitle you any prize you estimate may entitle you to claim. We will file a duplicate certificate with the Press Publishing Association. Every subscriber may make many estimates, and will receive as many certificates, as he sends dollars on subscription to the American Bee Journal.

Valuable Information. To aid subscribers in forming their estimate, we furnish the following data:

<table>
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<th>PRIZES to be Awarded as Follows:</th>
<th>$5,000</th>
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<td>To the nearest correct estimate</td>
<td>6,250</td>
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<td>To the 2d</td>
<td>5,000</td>
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<td>To the 3d</td>
<td>2,750</td>
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<td>To the next 10 nearest</td>
<td>250</td>
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<td>To the next 15 nearest</td>
<td>150</td>
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<td>To the next 20 nearest</td>
<td>100</td>
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<td>To the next 50 nearest</td>
<td>75</td>
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<td>To the next 100 nearest</td>
<td>50</td>
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<td>Total, 997 prizes, amounting to</td>
<td>$12,500</td>
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In addition to the above Prizes, the following Special Prizes will be paid:

<table>
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<tr>
<th>Special Prizes to be Paid:</th>
<th>$500</th>
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<tr>
<td>To the person making the nearest correct estimate before July 10</td>
<td>500</td>
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<tr>
<td>To the person making the nearest correct estimate between July 10 and Aug. 10</td>
<td>700</td>
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<tr>
<td>To the person making the nearest correct estimate between Aug. 10 and Sept. 10</td>
<td>900</td>
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<tr>
<td>Total, 3,000 prizes, amounting to</td>
<td>$15,000</td>
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In case of a tie, or that two or more estimators are equally correct, prizes will be divided equally between them.

SUBSCRIPTION BLANK.

Name: ____________________________

Town: ____________________________

State: ____________________________

My Estimate: ______________________

The cash must accompany your order. The American Bee Journal costs you only $1.00 a year. You get the Certificate absolutely free. Address your orders to

GEORGE W. YORK & CO., 144 & 146 Erie Street, Chicago, III.
GOOD HONEY-FLUCTUATED.
We have just had a couple of good rains, and it looks as if we would have a good, old-fashioned flow of white clover honey. We had a spell of wet weather anything for nearly two months, and I had about given up hopes of a clover crop. A. N. Draper.
Madison Co., Ill., June 7.

DROUTH WILL CUT THE CROP.
Our bees have been storing honey nicely for about two weeks, but the protracted drought will cut our honey crop short, as the white and black clovers are dry ing up or dying, and there is but little sweet clover growing near.
DAVID SHARP.

BEES DID NOT WEAR WELL.
The bees came through the winter very weak indeed, but have built up much better than I expected, so I can hope to get something, at least.
MATTHEW CUMBER.
Grant Co., Wis., June 6.

KEEPING DOWN INCREASE.
I see a good chance for Dr. C. C. Miller to get into a dispute in regard to an answer to a question on page 5 of the American Bee Journal, which reads: "If your object is to keep down increase, perhaps this plan might suit you better. WHEN THE peeps are a little older, kill the old queen and return the swarm. A week later cut out all the queen-cells but one, and the work is done. There will be no more swarming for that colony until another year." That may be so in some locations, but it will not work everywhere. I have had swarms many times after having hived first swarms by themselves and cutting out every queen-cell but one 7 days after the swarm issue. And I have then had swarms from the same colony again in from 6 to 8 weeks. I also have virgin swarms from almost every prime swarm.
C. H. HARLAN.
Kanahêe Co., Minn., May 27.

GOOD Outlook FOR A Honey-CROP.
My winter and spring losses have been very heavy and it has been cold with much cloudy, rainy weather (it is raining today), and the wind seems to have blown from the northeast. But the honey outlook is fine: clover is very plentiful as none of it was winter-killed, and burdock seems to be setting full. The biggest drawback with me is the bees, but they seem to be building up fast now, and may be in good condition for the coming season. I visited R. L. Taylor's apiary, May 24, and his 200 colonies are in excellent condition, most of them ready for the supers, with the clover flow two weeks ahead. Hewintered his bees in the cellar, and I wintered mine outdoors.
E. B. TYRRELL.

LONG-TONGUED BEES.
From a southern standpoint I read with some satisfaction G. M. Doolittle's article on page 296, and Dr. Williger's reply on page 298. I feel quite sure that Mr. Doolittle is very willing that the people of the red-clover belt get good red-clover honey, and also sure that he meant to cast no reflections on the honesty of the people at Medina. I suppose the opinion that these articles will do good. While no sensible man will doubt the advisability of having long-tongued queens in the phone boxes and other places where no benefit whatever would be derived from them. In my own locality (southern Georgia) bees with a 25-300 reach would store
no more honey than our shorter-tongued bees, or their pollenizations, of course, are the same. Although Root closes his advertisement with an "X. B.," saying that the rank and file of beginners have no use for such queens, still they will buy them, and it was this class of bee-keepers that Mr. Doolittle was directing his appeal to.

If some enterprising queen-breeders will get up a non-swarming strain, a greater benefit will be conferred upon the bee-keeping fraternity than tongue-race. By this improvement all of us, from the red clover feeder to the honey-bucket man, and from buckwheat to sage of the West, will jump for joy.

Harrah for long-tongued queens, for Dr. Miller's claim as far as bees go and for bees that don't swarm, for "we ain't!"

Dodge Co. Ga.
F. M. Creighton.

Best Honey-Flow in Years.

Bees are blooming white on clover, and the honey-flow is the best we have had in years. White clover is literally taking the country, for which I am sorry (1).

We are in sad need of foul-brood legislation in this part of the State.

W. T. Stephenson.

At Work on Raspberry and Clovers.

Bees are working very busily on raspberry, white clover and red clover, both clovers being in bloom now. The prospect for basswoods is not as good as in former years, but the calves are coming up nicely. L. G. Blake.

Grant Co., Wis., June 3.

Bee-Keepers' Supplies.

Just received a consignment of the finest up-to-date HIVES and SECTIONS we’ve had. They are M. to none. Order from Beekeepers’ Supplies on hand. Bees and Queens. Catalog free.

The A. I. Root Co.,
H. G. Acklin, Manager,
1024 Miss. Street, St. Paul, Minn.
14A1
Please mention the Bee Journal.

3-frame Nucel for Sale

Can supply 100 or 150 at $1 each, with one empty extra comb; frames nucleus, $2.25. All loc. R.R.
W. T. Lewis, Lewisburg, Miss.
Miss. State Order Office—Olive Branch, Miss.
24A2
Please mention the Bee Journal.

$13.00 to Buffalo and Return, $7.00
via Nickel Plate Road from Chicago, for the Pan-American Exposition. Tickets on sale daily, good leaving Buffalo up to midnight of tenth day from and including date of sale. Also tickets on sale daily Chicago to Buffalo and return at $16.00 for the round trip, with 15-day limit, including date of sale, $21.00 Chicago to Buffalo and return good for 15 days.

On all through tickets to points east of Buffalo, privilege of stop-over at Buffalo for 10 days may be granted by the joint Agent and payment of fee of $1.00.

Write John Y. Calahan, General Agent, 11 Adams St., Chicago, for full particulars and folders showing time of trains, etc.

also on inbreeding; for even now some queen-breeders have largely omitted the drones, and where could, and perhaps do, practice selective inbreeding; and in the near future it is probable many other beekeepers will be tempted, whereby the drones will be absolutely controlled.

The experience of the best authorities is that inbreeding is not, in itself, of any detriment whatever. The instances of vigorous animals which have been inbred for many generations are too numerous for the popular idea to be altogether true, for this reason: If the same parents are used, the offspring will have those tendencies doubled. Of course, this is more liable to happen with related or outlying colonies than with those not related. Hence, if any of those common tendencies are bad, they will be approxi-mately twice as bad when the parents are selected by inbreeding. It should be remembered, also, that there are various degrees of inbreeding. To make perfect inbreeding is profitless as it has only half the effect, for good or evil, of mating mother and sister. At present, on the whole, it may be better to avoid stock in bees likely to be inbred, but as soon as queens will be mated in confinement, the case will be altered.

Best Averages from New Colonies.

A Stray Straw in Gleanings in Bee-Culture.

Sometimes it is said that a beginner gets a year's experience and that is all because his first enthusiasm is gone. I believe that's a libel on many of the veterans. A bee-keeper may ride his hobby so hard as to kill it, but they don't all do it. Just 40 years ago I took the bee-fever, and the temperature is just as lively now as it was then. What forward to some things I want to do with bees next summer with just as keen a relish as I had 40 years ago. The extra results secured by a beginner are largely to be credited to the fact that he has a small number of colonies, and so the bees have a better chance. The last sentence explains it in the "A B C" book. The statement is made to the effect that the average yield per colony will be much larger in a small apiary, remote from any other yard of bees, than in larger apiaries—Editor.

Wax-Worms in Pure Wax.

It has generally been considered that pure wax, as in foundation, is in no danger of being troubled by the wax-moth, at least some pollen being necessary to support the larva. J. L. Doolittle reports in the Progressive Bee-Keeper that he found the wax-worms in foundation that had been kept a warm place near the roof.

Sweet Clover Not a Weed.

The following question and answer appeared in the Wisconsin Farmer:

Mr. Editor:—Will you please tell me all you know about the aptness of clover to be grown, whether it is good as a fertilizer or pasture, or whether it is good for nothing. Some tell me it is good as a weed, but a weed is always a weed, and a weed is always as red as clover.

A few clover (Melilotus alba) is a legume, as are other clovers, and because of this fact exerts a similar effect in the renovation activities of the North, generally it is regarded as a weed. Some States have reduced its growth against certain crops. The clover should be destroyed, along with the Canada and Russian thistles. A number of one or two experiment stations have commented on it, as a forage-plant and as a source of frit, it very early becomes woody, and loses whatever value it has as a forage-plant. It has a peculiar taste of its own to which cattle have become
Basswood and Alfalfa Honey

in 60-pound tin cans, f.o.b. Chicago—two cans in a box—at these prices: 9 cents a pound for one box of two cans; two boxes (4 cans) or more at one time, 8½ cents a pound.

We have only a limited quantity of the Basswood honey. Sample of either kind, postpaid, 10 cents. Address, GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

26 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying 26 cents a pound—Cash—for best yellow Basswood Beeswax. Low, upon its receipt, or 28 cents in trade. Impure wax not taken at any price. Address as follows, very plainly, GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

Marshfield Manufacturing Company.

Our Specialty is making Sections, and they are the best in the market. Wisconsin BASSWOOD is the right kind for them. We have a full line of Bee-Supplies. Write for free illustrated catalog and price-list.

Red Clover Queens

One Untested Italian Queen FREE as a Premium for sending us TWO new subscribers to the American Bee Journal for one year (with $2; or, one Tested Queen free as a premium for sending us FOUR new subscribers with $4.00).

We have arranged with one of the oldest and best queen-breeders (having many years' experience) to rear queens for us the coming season. His bees average quite a good deal the longest tongues of any yet measured. The Breeder he will use is direct from Italy, having imported her himself. Her worker-bees are large, somewhat leather-colored, very gentle, and scarcely requiring veil or smoke. They stored red clover honey last season.

All queens guaranteed to arrive in good condition, and all will be clipped, unless otherwise ordered.

Cash Prices of these five queens will be as follows: Untested, $1.00 each; Tested, $2.00 each. Send all orders to GEORGE W. YORK & CO., 144 & 146 Erie St., CHICAGO, ILL.

Feeding in the Open Air.

This is objected to because colonies that need least get most, and because neighbors' bees can not be excluded. It has the advantage that it seems a little more like a natural, harvest than feeding in the hive. M. A. Gill says in the Rocky Mountain Bee Journal:

I hardly dare advise beginners to feed in the open air, but practice that plan myself, I feed in troughs filled with alfalfa stems. From one-half to a pound of honey or syrup made as thin as raw nectar. After feeding in the open air then put them in the hive for a couple of days. If I have any broods filled with honey, I uncap them and hang not more than three in an empty hive, equally spaced apart, and let the bees have it. If properly done, there will be no trouble from robbing. I had as soon feed 100 colonies in the open air as 100 pigs, provided my neighbors do not have too many bees.

The Lowest Temperature for Comb-Building.

S. E. Miller reports in the Progressive Bee-Keeper that he had comb built in March when the outside temperature varied from 18 to 72 degrees, the average being about 45 degrees. He asks what is the lowest temperature at which comb-building can be carried on, and answers from three different experimenters.

J. W. Rous frankly says he does not know, but thinks it can hardly be below 30 degrees. G. M. Doolittle says that bees can build comb in zero weather. Dr. Miller goes still lower, and practically says that no colony of bees has ever lived through a temperature so low that it would not admit of comb-building. Mr. Doolittle says the heat inside the cluster necessary for comb-building and brood-rearing is from 90 to 98 degrees, and Dr. Miller explains how it is that the colder the weather the warmer it is in the center of the cluster. His answer is as follows:

If you mean at what temperature of the brood-nest bees can build comb, it may be replied that it is somewhere in the nineties, probably. From your accompanying remarks, however, it seems that you mean the temperature of the atmosphere surrounding the hive. That's another thing, and the temperature doesn't depend so much upon the strength of the colony.

If a single bee is exposed to a freezing temperature, it will be a dead bee in a short time. If it would not be able to call a dead bee, for it can be revived if brought into a warm place if it has not been frozen too long. If there be a cluster of bees, the bee in the center of the cluster will not succumb to the cold as soon as a single bee, but it will succumb. If there be 50,000 bees in the cluster, with plenty of stores within easy reach, a freezing temperature will not affect them unfavorably at all. And a much smaller cluster
A Home in Colorado FOR SALE

I have a fine Fruit-Ranch of 14 acres here at Fruitia, all set to fine fruit, principally winter apples, with plenty of small fruits, peaches, pears, plums, cherries, apricots, prunes, and about 700 grapes; 100 colonies of bees, most Italian, and about 100 fine Belgian hares that I will sell with the place. The orchard is in fine bearing, being about 10 years old, and is clean and free from weeds. The house is a good 2-room one, nearly new, with bath and water; a good new barn for two horses and two cows; good brick hen-house and two good cellars, good loan and shade. I have a paid-in water right, and a well, and a good abundant supply of water at all times for irrigation. I am desirous of making a change in my occupation, and would sell the place for a bargain. With the proper party the yield from the place this year will be about $2,000. It joins up within 20 rods on the south side of Fruitia, where one has all of the best high schools in the State, employing 7 teachers. It is only 3/4 of a mile to the depot, churches, school and post-office, and has telephonic connections with all parts of the State. This is a good, healthy climate, and good property.

Address for terms and further particulars, W. C. CARNAHAN.
Box 64, Fruita, COLO.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, June 7.—Not any new comb honey has come to this market up to date hereof, but there are as long as many as we can get a month or more in. A little good white comb still on sale, which easily brings $1.40 per cwt. or more, against other kinds. Extracted very dull, practically no sales made. Beeswax in fair demand at 210c. per lb.

R. A. BURNETT & Co.

DETROIT, June 8.—Strawberries are taking the attention, and very few sales of honey are made, but prices seem quite reasonable and good lots. Beeswax in fair demand at 210c. per lb. M. H. HUNT & Son.

CINCINNATI, May 17.—No comb honey, also stock of it well exhausted. Extracted very dull; sales are more or less forced; lower prices from 19c. to 1 cent per lb. C. W. WEBB.

BOSTON, May 21.—Our market continues dull on honey with very light stocks on hand. Normal prices are as follows: Fanny 1-pound cartons, 1st, 14c.; 2nd, 13c.; No. 2, 12c. Extracted from 6c. to 10c.

BLAIR, SCOTT & LEE.

OWAM, May 1.—Comb honey, extra white, 24c.; cases, per case, $6.75. J. C. P. ABOTT.

LEARN TO SING AT HOME by my thorough method. Teaching plans, complete course I guarantee to train and enable you to sing well and easily, without expense. The best musical knowledge possible. Most desirable for girls, for young women. Highest Endorsements. Beneficial for voice and health. Write for free illustrated book.

Prof. O. M. Whaley, Kalamaazoo, Mich.

A Home in Colorado FOR SALE

Send for circulars regarding the oldest and most improved and original Bingham Bee-Smith. For 21 Years the Best on Earth.

J. C. CARNAHAN, Farwell, Mich.

Please mention Bee Journal when writing.

THE WHEEL OF TIME

for all times is the Metal Wheel.

We make them in all sizes and weights.

To order any size, state the size, your name, and address. We advise as to the best size for the actual work it is intended for.

The best made and most easily operated in the world.

Send for descriptive catalogue for directions.

The Wheel Company

Electric Wheel Co.
Box 16
Quincy, III.

FREED W. MUTH & CO.,
S. W. Co., Front & Walnut Sts., CINCINNATI, O.

Please mention the Bee Journal when writing.

HONEY AND BEESWAX

200 CRATES OF 2
lion-pound cases each

BEE-SUPPLIES!
ROOTS’ GOODS!
AT ROOTS PRICES

Every useul thing by bee-keepers.
POURER’S HONEY-JARS. Prompt shipment.
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IARISE

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1 Untested Queen . $1.00
2 Untested Queens. 2.25
3 Tested Queen .... 1.25
5 Tested Queens .... 3.00
10 Select tested queen. 1.50
3 " " Queens 4.00
Select Tested Queen last year's rearing 2.50
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The classic in Bee-Culture—Price, $1.25, by mail.

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Ball-Bearing Cowan Honey-Extractor,

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We expect that HUBER ROOT, the youngest member of the Root Co., will be the man in charge of the exhibit. He will be pleased to meet all our old friends, and make new ones wherever possible.

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Will contain a very interesting series of articles on Queen-Rearing, giving New Methods and Short Cuts. There will also be a series on

BEES IN LAW.

E. R. Root will tell of his trip through Texas, Colorado, Oregon, and California. Better subscribe now.

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THE A. I. ROOT CO., Medina, Ohio.

( U.S. A.)

George W. York & Co. 144 & 146 Erie Street, Chicago, Ill., are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO. Send to them for their free catalog.
AND so to-day I'm seven times ten,
And hence 'tis said I live on "borrowed time."

Well, what do I have that was not lent
By Him who made me what I am!

My life, and all that goes to make it up—
From deepest joy to sorrow's cup—
These all are borrowed from His gracious store.
But some day He will give me better things—
Yes, the best He has, and they shall all be mine
Throughout unending ages.
You say I'm on the "shady" side of life.
Not so, my friends; the shadows are behind,
Along with all earth's troubles.
I see ahead the Sun of Righteousness,
Whose beams already light my path.
And render it more pleasant to my tread
Than aught that this world has to give.
But even if the shadows do at times
Fall o'er my pathway, dark and deep,
I'll pause a moment, wipe my brow,
And then press on, not to the light,
But in it and toward it.
The best of life is still ahead.
And, I am sure, it always will be so:
For morrow's sun has something for the child of God
Far better than the things to-day has brought;
So don't console with me on ripening age.
For that is but another name for labor done,
And an advance toward that gladsome day
When we shall gather up our jewels.

Dr. C. C. Miller

June 10, 1831.

June 10, 1901.

W. P. Root.
Dr. C. C. Miller, of course, is different from some ladies in the usual number of particulars, and also has another distinguishing dissimilarity. He still has birthdays. He had one the 6th of this month. He is now 20 years old—or, we should say, 70 years young, for he’s on the sunny side of 70 now. At least he would tell you that if you were to ask him on which side he is.

Dr. W. P. Root, known as “Stenog’Mn” in Gleanings in Bee-Culture, has sent us the poetic statement on the first page of this number. He has expressed for Dr. Miller quite clearly just what the Doctor could say, though perhaps in a different manner.

Dr. Miller is the most prolific writer on the subject of bee-keeping to-day. He has been in the bee-business over 40 years. and he doesn’t claim to know it all yet. To many a question relating to bees and bee-keeping he is compelled to offer the laconic reply, “I don’t know.” And yet his fund of actual information, gained from his years of practical experience in the apiary, is something remarkable.

Further, we were going to say that Dr. Miller is the best loved bee-keeper in America, but we won’t say it, for the Doctor wouldn’t thank us for it. He is the quintessence of modesty, and so we won’t say too much at this time. And yet to say the good and well-deserved thing now is much better than to wait and place them in bouquets upon the casket that some day will contain all that is mortal of him.

We can truly speak not only from our own heart, but for many others, who appreciate Dr. Miller, his life and work, and pray that he may be spared to us all yet many years ere he is called “up higher.”

Mr. R. Wilkin, one of the oldest and most prominent bee-keepers of California, died at Newhall, Calif., May 30, 1901. He was father-in-law of J. F. McIntyre, another leading bee-keeper of the same State. We hope soon to be able to present a more extended sketch of Mr. Wilkin in these columns.

Mr. John W. Backman’s East Side apiary is shown on page 40 this week. It is located in Fairfax Co., Va., and all but two of the hives are double-walled. The地点的前缀 faces east, and is beautifully situated. The little girl at the hive is his youngest daughter, and the lady to the left is Miss Castell, his helper in the apiary. Mr. Backman says she can find a queen as quickly as the most experienced apiarist, and is a good bee-keeper, besides being a fine scenerist. The two bees in the background, carrying the colony of bees, are his two sons who are running the farm. The lady to the right is another daughter, and the man with the smoker is Mr. R. himself.

He thinks his hives are the finest in the United States, as they are a perfect piece of cabinet workmanship, being thoroughly made, then painted with white lead, the masts being all sunk, then putted, then sand-papered, and then painted with the white lead. They are on stands 11 inches from the ground, nor would he have them on tight stands, but wants them so that the cats and chickens can get under them, and so that there will be free circulation underneath. In this way the bees keep dry, the bees are healthy, and there are no ants or mice to bother.

The day that the picture was taken there was a fierce fire raging just at the left of his place, and his wife and youngest son were badly frightened, and were watching the fire, so that is the reason they do not appear in the picture. Two of his houses were within 50 feet of the fire, but no damage was done to his property.

Mr. J. H. Hodgkins, of Winnebago Co., Ill., writes us that he thinks he is about the oldest subscriber to the American Bee Journal, as he has taken it continuously ever since its first editor, Samuel Wagner, began to publish it in 1881. He has never missed receiving one number in all those years, and he has preserved nearly every copy.

We suppose there are not very many of our subscribers who have such a record as Mr. Hodgkins can show.

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BY RETURN MAIL.

For sending us One New Subscriber for one year, to the American Bee Journal, with $1.00, we will send, by return mail, a fine Untested Italian Queen free as a premium. This offer is made only to our present regular subscribers.

We will mail one of the above queens alone for 75 cents; or 3 for $2.10.

Please do not conflict the above offer with the one on another page which refers to Red Clover Queens. For sending us two new subscribers, and $2.00, we will mail free as a premium an Untested Red Clover Italian Queen.

**GEORGE W. YORK & CO.**

144 & 146 Erie St., CHICAGO, ILL.
Questions for Discussion at the Buffalo convention may be sent in at any time from now till Sept. 10, to Secretary A. B. Mason, Station B, Toledo, Ohio. For more than one reason it will be better to mail your questions in advance than to wait until you are present in person at the great meeting of the National Bee-Keepers' Association. You may forget a question if you wait, and if several offer the same question the duplicates will be thrown out in advance. This feature of the convention is a very commendable one. The live discussions in a convention are what give it its greatest value.

Repression of Drones.—Perhaps no one has kept hammering away on this subject more than G. M. Doolittle, and no one has gotten it down to more practical shape. He discusses the matter in the American Bee-Keeper, and although there may be little he has not already said, and therefore is in this journal, it is worth repeating for the sake of some of the beginners, and more especially for some who are not beginners, but have not given the matter sufficient heed. He says:

"I have yet to see the hive containing a populous colony, one strong enough to send out a prime swarm during June and July, that had not a few cells of drone-comb in it; and I do not believe that these few cells can be kept out, for worker-comb will be cut down and drone comb made. If, however, these cells can not be gotten otherwise. From my experience in the past, I would say that it is not practicable to keep drone-comb out of any hive, but rather have just one frame in each and every hive, having from 10 to 30 square feet of drone-comb, as I am sure that it is desired that no drones shall fly, and decapitate them, thus making a sure thing of the matter, and fully satisfying the bees. In this way you will not have a few drone-cells scattered all through the hive, nor will you have to use a drone-comb at the entrance of such hives to catch undesirable drones, the same making quite a cost and much work for the bee-keeper in putting them on and emptying the same; besides a general bother and disgust to the bees when first put on, and at times of the flight of drones and young bees.

If this comb with drone-cells is placed near the outside of the hive and the drone-comb is near the top-bar of the frame, you will not have to decapitate the drones more than two or three times during the season, for the queen will be slow in depositing eggs in it; and when honey comes in so the bees begin to prepare for winter, they will fill it with honey, thus keeping the queen from depositing any more eggs in it that season.

If, in addition to the above, the top-bar to the drone-comb is covered with a piece of drone comb, is painted white or red, you will know just where this comb is without taxing your memory; this will fill it with honey, thus keeping the queen from depositing any more eggs in it that season.

Is It Profitable to Use Foundation?—S. E. Miller discusses the question in the Progressive Bee-keeper, and while not questioning its use in sections, he does question the profit of using it in the work of drone-hive filling. He argues that yes, an S-frame hive filled with medium-brood foundation, freight and all, will cost 55 cents or more, and thinks, in many cases the 55 cents is never gotten back. In reply to the claim for straight combs with no drone-cells, he says:

"I have in my apiary as nice all-worker combs built on starters as any one can show built on full sheets. I have others that contain partly drone-comb, and some nearly all drone, but these are by no means useless as I use them in the upper story for extracting from, or, if I wish to, I can cut out the drone-comb, if it works well, as Mr. Doolittle does, but I must confess that I have never done this as thoroughly as I should have done.

Mr. Miller argues that he can ent the drone-comb and replace it, and then with charming frankness confesses he has not thorougly done this. Ah, there's the rub! Bee-keepers can cut it out, but do they? Those who have had much practice in the job know that it is some time and trouble, and it is easier and safer to prevent than to cure. The probability is that if Mr. Miller would count what he has done, he would admit that his 55 cents came back with interest.

Suppose, however, that we take the ease of a man who promptly cuts out all drone-comb, or removes it to the extracting-chamber. Before that drone-comb is cut out it must be built, and that building costs wax and labor for the bees, to say nothing about the time of the bee-keeper in repairing. But the waste of the drone-comb is not all. As fast as it is built it will be more or less filled with drone-egg—generally more—and that brood is a waste. Unless the man is very careful and prompt, a good deal of the brood will arrive at the sealing stage before it is cut out, and that will be much the same as throwing away a comb of honey of the same size.

The argument that drone-comb can be put in the extracting-chamber may have some weight where there is an extracting-chamber in the case, but cannot in comb-honey production.

After all this is said in favor of foundation in the brood-nest, it should be added that there are good authorities who think it economical to use a swarm nothing but starters for the first half of the frames. If hived on these there will be little, possibly no drones built, the building of drone-comb commencing after the first half of the hive is filled. To prevent the building of drone-comb in this second half, full sheets of foundation are given after the first half are filled.
Another feature of the Fair, and one not to be overlooked, is the premium list. I find by referring to the premium list for 1900 that the sum of $280 was divided into 79 premiums, comprises the list which is composed of 235 lots, beginning with the "most attractive and finest display of comb honey," and ending with the "grand sweepstakes," which requires the most attractive exhibition in this department, all things considered.

In order to understand this matter properly it is necessary to compare the Minnesota list with one or two others, whose shows, by the way, do not come up to that of Minnesota by any means, for instance:

<table>
<thead>
<tr>
<th>Minnesota</th>
<th>Illinois</th>
<th>Wisconsin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finest display of Comb Honey $125 5-3-2-1-</td>
<td>820 15-3-5-</td>
<td>48 8-4-12</td>
</tr>
<tr>
<td>Beeswax 100 3-2-1-</td>
<td>90 15-10-15</td>
<td>40 2-1-3</td>
</tr>
<tr>
<td>Granulated Honey 5-3-1-9</td>
<td>70 15-10-15</td>
<td>40 2-1-3</td>
</tr>
<tr>
<td>Honey-Vinegar 6-2-1-</td>
<td>40 8-4-12</td>
<td></td>
</tr>
<tr>
<td>Extracting-Frames 5-3-1-9</td>
<td>50 2-1-3</td>
<td></td>
</tr>
<tr>
<td>Nucleus of Yellow Bees 3-2-1-6</td>
<td>40 3-2-9</td>
<td></td>
</tr>
<tr>
<td>Carniolan Bees ...</td>
<td>3-2-9 8-4-12</td>
<td></td>
</tr>
<tr>
<td>Total for bees ...</td>
<td>40 3-2-9 8-4-12</td>
<td></td>
</tr>
</tbody>
</table>

It will be seen from the foregoing that in some particulars our premiums are considerably behind those of Illinois, while in some cases they far exceed Illinois' offers. For instance, Minnesota pays a total of $121, divided into six premiums, for bees, while Illinois pays a total of $27, and Wisconsin a total of $24, divided into four premiums. It is to this part of the premium list that I would like to call special attention. It has been my opinion, and I think I can always get just about what he is willing to pay for, and this holds as good in exhibiting bees as in other walks of life. I will venture the assertion that there is not a bee-keeper present that would care to take a choice queen with a modest number of her bees, and shut them up in an observatory hive for a week in an overheated room like that at the State Fair, for a premium averaging from $5 to nothing. It simply will not do, even in this day of the so-called "grand sweepstakes," of the Fair of 1900, and I consider the remark of the judges that it was the poorest lot of bees they had ever seen, most perfectly justifiable. Were the same policy pursued with other kinds of stock the result would undoubtedly be the same in a very short time.

I hope that anything said in this paper will not be regarded as a complaint against the premium list or any one connected with the management of the Fair, for it is not so intended. In the main, the premiums are liberal, that is, while only a few bee-keepers make exhibits, but suppose 50 should decide to make exhibits, then there would not be enough to pay the expenses of half of them. Should we ever be blessed again with a good honey-crop and a pushing assistant superintendent, it would probably be sate, and every one might be secured. While our present assistant superintendent holds office I can assure you that there will be but very few bee-keepers in the State that will not have an invitation to attend the State Fair.

The State Fair has been quite a success, its finances are steadily increasing, and it seems to me that the time has come for this Association to take some steps to secure more money for the premium list. It is not my intention to say just what should or should not be done in that line. My main object in writing this paper is to outline a few of the more important features of the premium list where they might be amended, in order to start discussion: for I consider that unless the reading of a paper does that it fails entirely in its purpose, for "in a multitude of counselors there is safety."

WM. RUSSELL

Following this paper was one by Dr. E. K. Jaques on "Bee-Keeping for Pleasure."

The election of officers for the ensuing year resulted as follows:

President, WM. Russell; first vice-president, G. A. Forrgeron; second vice-president, G. H. Pond; third vice-president, Dr. Mary McCoy; secretary, Dr. L. D. Leonard, Syndicate Block, Minneapolis; and treasurer, L. E. Day. Executive committee, H. G. Acklin, WM. van der Molen, W. Acklin, L. D. Leonard, Sec.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.
Contributed Articles.

Thick vs. Thin Brood-Frame Top-Bars.

By S. T. Pettit.

I WOULD like to reply to Dr. Miller and Editor Root, who seem to be not a little excited over my article on top-bars in Gleanings for March 19, and want to say that I endorse all in regard to wide and thin top-bars; but I believe combs-are more plentiful with the use of top-bars 3/4-inch thick than with 3/8-inch thick. Can it be that the length of the Langstroth top-bar does not have any effect on this thickness? With due respect to the editor, I firmly believe he is mistaken in that. My experience with 3/4-inch top-bars covers a period of 15 or 16 years, and it is altogether different from his. I have made many tests with the different kinds, so it is not theory but long experience from which I speak.

On page 380, Dr. Miller says, "His strong point is that, by having 3/4-inch more depth, the space of 1600 to 2000 cells is lost." Yes, that is my strong point, which I will take farther notice of later.

I did not make the mistake of reckoning that the same number of bees were occupied brooding those sticks as would be occupied in brooding 3/8-inch thick comb. I neither thought it, nor said it, but this is what I did say, "The thick top-bar is a mistake. Our best consideration." I think most bee-keepers will agree that 1600 to 2000 cells in a hive are of more value than useless lumber, adding weight and unnecessary expense. I hope after due consideration the Doctor will agree with this also.

Then the Doctor proceeds to use about half a column, and proves nothing, except that he "don't know" what he is talking about—it's all wasted energy. Farther on he says, "So if the prevention of burr-combs by detector-combs does not, in fact, save a cell, then the combs are all a delusion (which I do not believe)!"—well, I suppose I can show the reason why he does not believe it. He did not make personal, practical experiments for himself and for the benefit of the public for whom he writes; but well, perhaps I can do no better than to give the article of Editor Root, as follows:

"Dr. Miller was greatly struck with the idea, and after some extended correspondence with the Doctor we decided that we would launch forth, for the ensuing year, the new top-bar.

Then later he said that he and Dr. Miller had evolved the new top-bar, by revolving around each other by the coat-tail—a clear case of conviction and prejudice not founded upon personal, practical experience, hence the Doctor's complainant "which I do not believe."

I quote from a letter sent me from the U. S. A., dated April 4, 1901: "I have read with much interest your article in Gleanings for March 15, and want to say that I endorse all in regard to wide and thin top-bars; but I believe combs-are 3/4-inch wide. For a number of years I have been using a top-bar 3/4-inch thick, and 1 1/2-inch wide, and not a burr-comb on a single frame in 8 years' use." I may add that a few days ago Mr. Cruikshank, who takes Gleanings, and lives near me, came to see me and in alluding to this discussion said: "I use 3/8-inch thick top-bars, and have no bother with burr or brace combs."

But Doctor Miller says, "I still want the 3/8 top-bars for the sake of having the sections so far from the brood-combs that the bees will not find it convenient to carry up a lot of black wax to spoil the snow-white sections." This statement reveals the fact that the Doctor has not yet learned all the valuable uses to which the queen-bar, or perforated metal queen-excluder may be put. My practice is to get the sections just as close to the brood as I can, preserving all the necessary bee-spaces. To this end I want thin top-bars. Then, to prevent the bees from moving up dark wax, and to bar the drones with their filthy habits, and the queen from the sections, and to restrain pollen, I use a queen-bar, or, if you please, an all-metal perforated-metal queen-excluder. When the drone has a burr, it has a cross-pieces. This arrangement gives the same distance between the top-bars and sections as he wants, with all the advantages enumerated. But I would bring the sections closer down if I could and not dispense with that editor.

Cross Bees at Swarmingle-Time, Etc.

By W. M. Whitney.

SOME one asks why bees are sometimes cross when swarming. Tell him to examine the hive they came from, and if he finds little or no honey, the question is easily answered. Who wouldn't be cross, crowded out of home with the whole family in a starving condition? Or, possibly the swarm has been clustered a long time. Pull one of the crossest ones in two, and see how little honey it has in the honey-comb. If they have plenty of honey, they are gentle as kittens—wouldn't sting if they could, and couldn't if they would.

Introducing Queens.

The communication on page 311, entitled, "Introducing a Queen-Bee," etc., is really amusing. The gist of the whole article seems to be a priori attempt to show that the honey-bee is actuated by pure, unadulterated motives. Now, it occurs to me, that taking the effects indicated in the communication as causes, and reasoning a priori, it would not be a difficult matter to show that the honey-bee is prompted by the highest type of love and patriotism. A community of individuals, in which individual rights and privileges must be held secondary and subject to the well-being of the body collectively. But enlightened and Christian people, places of comfort are provided for the unfortunate and infirm; but, the time was when such persons—whether their condition was the result of heredity, accident, or age—were disposed of in the most convenient manner possible, as the occasion for the good we do. The people occasionally hear the thought expressed that such might still be a good practice.

The community of bees, either in instinct—or if any one can show what this implies—it is by some other power, seem to know when any member among them has ceased to be of use to the body as a whole, and take the only possible means to perpetuate the existence of the colony. Why, how long do you suppose a colony of drones, caged, etc., to provide an all-metal—when the hive, nurses to care for the drones and queen, the dear old mother-queens, and the ever faithful, but weak and worn-out workers? Does not the existence of an existence—How persistently the little heroines defend their heart-stone against all intruders, even to the sacrifice of life itself. How carefully they
Circulation and Respiration in Insects.

By PROF. A. J. COOK.

ESPIRATION and circulation, or the securing of oxygen and elimination of waste, and the conveying of elements from one part of the body to another, are exceedingly important functions of highest importance in the higher animals —so important that we denominate the cessation of these functions as death. A chicken in Michigan lived for weeks with its head cut off. That part of the brain—the medulla oblongata—which is the centre of breathing, remained intact, and so the chicken continued to breathe, and the heart ceased not to beat, and so the chicken lived. Of course, it could do no thinking, nor could it walk; but so long as breathing and the circulation of the blood continued, we said the chicken lived.

In insects, and in so many bees, respiration looses none of its importance; but because of its peculiar character, the circulation of the blood becomes much less complicated. Insects may say that the respiratory system is inversely proportional in its complication, to the circulatory apparatus.

In us, as with nearly all vertebrate animals, breathing is specialized, and restricted to narrow limits. The lungs are the principal organs in breathing. They are their seat of action. These limitations make a very complete circulatory apparatus very necessary, and so we have the great force-pump—the heart—the conductors leading from it, the arteries, which convey the life-giving fluid to the tissues; and the veins, the great conduits, that return the blood again to the heart. The oxygen, which is really the most important of all substances, is only received in any considerable quantities by the lungs, and skin respires in a small way, and so we get a modicum of oxygen through skin respiration the blood then must have two circuits—the one to the lungs to get this vitalizing oxy-

igen, the other to the body to give this same oxygen to the tissues. Equally important is circulation, in bearing the waste from the tissues, and equally important are the processes in separating this waste—the ashes of work, if we may so speak—from the blood. All the blood which comes into the lungs is a single tube—trachea—and enters this either from mouth or nose through a single aperture—the glottis.

When we come to insects, we find a very different arrangement. The bee and all insects must have the oxygen, and if very active, as are bees and all other insects of their order, they must have a large amount of this vitalizing element, the most important food-product. The insect’s breathing-organ is very different from ours. It is also by means of the spiracles which are breathing-tubes. The breathing-tubes, or tracheae, are in the thorax, and the branches of them are the tubes we find them. Thus the life-giving oxygen goes everywhere in the body, and there is no need of a complex system to circulate it.

These tracheae are curious in their make-up. They are made of spiral threads, lined with an epithelial or cellular membrane, as are our own bronchial-tubes. Thus the ultimate structure of the insect lungs is not essentially different from that in higher animals. In both cases we have an intricate and extensive ramification of tubes, lined with a central spiral thread. In the insect respiratory system, the tubes in the insect respiratory system, is in appearance and construction, as if we should wind a fine wire closely about a lead-pencil, and then remove the pencil without disturbing the wire. From this it follows then, that the insect’s requirements are met in that air, or rather oxygen, is carried everywhere to the tissues.

The circulatory apparatus, then, need not be very complex or energetic. It has not to carry the all-important oxygen. Thus we may call the blood of a bee, red. Blood is red because of a coloring element called hematoglobin. This is large in amount, which shows its importance. It is emphasized as we know its function, and it is to carry oxygen. In insects there is no need to carry oxygen, as the air goes everywhere.

We understand, then, why insects have no red blood. Were it there, it would be like Othello in the play—its occupation would be gone. The only organ of circulation in insects is in the heart. This is dorsal, and lies close along the middle line of the body. The blood in this vein passes back to the head. This heart action is to keep the blood stirring, so that as active tissues take out the nourishment, no portion may be depleted of nutritive elements. All is constantly being mixed. And so all the blood is kept as rich as any of it. Thus we see how an intricate or elaborate air-system makes unnecessary a complex circulatory apparatus. The machinery in all organic nature is always simple, unless there is call for something intricate.

Scientific Breeding as Applied to Bees.

By ARTHUR C. MILLER.

I N an editorial on page 355, reference was made to an article of mine entitled "Scientific Breeding," and justly so, and the writer, having a task upon hand, was in-breeding with in-and-in-breeding. When writing that article I had in mind in-and-in-breeding as that term is commonly understood, and I sought so to have expressed it. It is commonly understood to mean the promiscuous breeding together of animals closely related, and as the result of this in ignorant or careless hands is generally disastrous, it is supposed to prove that the breeding together of such relations is disastrous per se. On the contrary, it is the chief reliance of the skilled breeder for intensifying desirable tendencies.

The article was not intended to be an essay on thorough breeding, but was intended to do exactly what it has done,
i.e., call attention to the then present status of the subject, a concise interest, comment and study. The breeding of stock in such a way as to develop and establish desirable traits, or, in a word, thorough breeding, is a subject on which many volumes have been written, and to endeavor to give any satisfactory exposition of it in the space available for an article in our bee-papers is impossible. The best we can do is to call attention to the subject, refer those interested to the standard works on it, later discuss salient points, and study it as applied to bees. We shall certainly only ever reach the ideas and laws applied to higher animals, for with bees the drone does not represent two lines of blood, as does the queen, and other factors are also different and will require much study and research.

I believe the breeding of queens is passing into the hands of the amateur bee-keeper. A few years ago the art was restricted and skilled in the art. It is for the best good of all concerned, and Mr. Martin's plan is in this direction. For a time it may cause some personal dis-trust and necessity for readjustment by those who have to drop the business, but bee-keeping will be benefitted thereby. It is only the working out of the natural laws of specialization and the survival of the fittest. Those who kick against it will only show their ignorance of great fundamental truths.

The exact details under which the system will be conducted are properly a subject for debate, and the more full the discussion the more readily will the change be made. The average honey-producer is certainly not in a position to study into the traits of individual colonies, nor when he observes desirable characteristics has he the time or skill to develop them. But if he can turn that queen over to the queen-rearer with a statement of all the observed traits and of the pedigree so far as known, then is she placed where the man with the time and training can observe, and act on his observations. Suppose each of twenty skilled queen-rearers were given a look at the queen-specialist's best queen, would he not then be in a position to, even if not able to control the drones, he could produce queens far beyond anything we now have? The skilled queen-breeder of to-day need not fear this plan, for if he has the power to survive he will introduce his drones as queen-specialist. Rambler's plan is entitled to our serious consideration.

Providence Co., R. I.

No. 7.—Practical Lessons for Beginners in Bee-Culture.

By J. D. Gehring.

(Continued from page 270.)

Now, Mr. Bond, I continued, "if you will please come a little closer I will show you how I take a super off the brood-chamber.

Mr. Bond took two or three rather timid steps away from the apple-tree, against which he was leaning with a worried expression of things, and then halted when he saw me using my old chisel at one end of the super to loosen it from the frames.

"O, come along!" I called, when a side glance showed me his action. These bees are as tame as kittens now. They'll make no sign of a fight while they are full of honey, you know. Don't forget that, Mr. Bond. And, let me remind you, also, don't forget that you are wearing the best kind of a bee-veil, and are at liberty to keep your hands near your head. You can pull the bees by the head, as you wish to do so.

"As I was saying this I had reached the last frame in my prying operation, and, as that frame stuck to the super worse than any of the others, it came loose with a snap and a bang, the usual result—with which all practical bee-men are familiar. In an instant, I heard that special buzz for my smoker, standing near by. A few puffs of smoke, only, were required to drive the out-rushing bees back. My quick movement in reaching for the smoker must have looked to Mr. Bond as the effect of sudden fright, for he uttered a fairly hearty guffaw, and I think he kept the smile from his face when I suggested, "Say, Mr. Gehring, how long will bees stay tame after you've made them gorge themselves on honey? Those in that hive act as if they hadn't had a lick of honey to eat today. Do you know that it is now 4 o'clock, and that it was 2 o'clock when you left them to 'tend to that swarm?"

Mr. Bond was right. But I wasn't quite willing to acknowledge that I had made a mistake by forgetting the polity. I, therefore, attempted no direct reply to his bantering questions, but said:

"I'll show you in a few minutes, Mr. Bond, that these bees will behave all right. I have never had any experience that no harm is being done to them. If you'll come here and take this smoker while I take the super off, it will be a good lesson for you for future use.

Having thus persuaded Mr. Bond, and I continued: "Now, when I lift the super the bees may make another rush. If they do, just blow a few gentle puffs of smoke over the top of the frames—that will send them back. But if they make no rush, nor act 'lightish,' don't use the smoker on them.'"

"Do you mean fear, or emotion I raised the super a short way above the frames, and carefully inspected it. There was a very small swarm, of course took wing, but made no vicious demonstration. Mr. Bond, however, did not know how to interpret the actions of bees, hence he did not waste the opportunity. On the contrary, he just wanted me to do what I thought best, and I would do. Before I had time to turn, after setting the super down, he was pumping the smoker with frantic energy, and sending dense volumes of smoke down between the frames of the open hive.

"Quit that, Mr. Bond!" I cried—not taking time to be polite. "Stop that smoke! Don't you see the bees are not doing any harm? Never use the smoker unless it is absolutely necessary! Remember that, now and always, Mr. Bond. You can't make bees take the effect of the smoker harder to handle, because smoke-treatment like that frightens and irritates them. You can see that for yourself," I concluded, pointing, as I approached the hive, to the bartender, who, though they were pouring forth, in a frantic rush to escape the smoke.

"I beg pardon if I didn't do the right thing at the right time," meekly replied Mr. Bond, as he handed the instrument of possible torture to me. "But, you see, these practical lessons you're giving me are hard on the nerves—my nerves, I mean."

"That surprises me, Mr. Bond," I replied. "I always had a sort of an idea that 'fair-fat-and-fourty' people, like ourself, needn't be bothered with the little things. That was the indirect effect. The indirect effect of it was, or is, that your lesson will have to be postponed for to-day. It is now too late in the day to keep the hive open longer for the purpose of giving a lesson on the subject. Besides, it would not be wise, or even merciful toward the bees, to trouble them further while they are unduly excited. You needn't keep your veil on any longer now, Mr. Bond. There is no danger at all after I get this super back on the hive," I said, as I was replacing the super, and then closed the hive.

"That means, then, that school's out and I'm dismissed. Is that it?"

"Not exactly dismissed, Mr. Bond," I replied; "for I want you to come again as soon as you can, on a bright, warm day. Remember to come as early as seven in the morning, when you do come.

"In the way, Mr. Bond, I lest I forget to ask you: Do you take the American Bee Journal? I name that, in particular, because I read it in preference to any of the other bee-papers, and because I think it's the best in most respects; though others, as far as I am concerned, are good, too.

"We were walking toward the honey-house as I talked. On the way Mr. Bond removed the bee-veil and carried it in his hand until we had reached my work-room, of which he asked to take a seat, but before doing so he handed me the veil, and then said:

"If you had asked me that question about the Bee Journal the first thing this morning, I would have seen no reason for hesitating to tell the truth about it. But after
the experience I have had to-day, and the lesson I've had in practical bee-keeping, I'm ashamed to confess that I have never taken the American Bee Journal as a regular subscriber. The fact is—and perhaps I ought to be ashamed of that, too—I've never before felt, as I now do, that I needed a bee-paper of any kind. My good old father never took any, and he got along very well with his bees—that is, I always thought he did before to-day.

"You have done no worse in that," I replied, "than hundreds of others are doing all the time, without ever feeling a pang of guilt, or showing the least sign of repentance. And most of all, when you've got good and sensible men and women, too, Mr. Bond. The Missouri gentleman who wrote you about was one of that class of bee-keepers. He sneered at the very idea, when I asked him that same question I've just put to you. But you know what he lost by being wise in his own conceit. If you haven't forgotten what I told you about his bee-business transactions with me. Why, Mr. Bond, that man actually laughed at me when I tried to convince him, one day, that bees have eyes and could see as well as men!"

"No, Mr. Bond," I concluded, "it never pays to try to get along successfully in the bee-business, on a large or on a very small scale, without a bee-book to begin with, and a bee-paper to continue on.

(To be continued.)

Questions and Answers.

Conducted by

Dr. C. C. Miller, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—Editor.]

Exchanging Old Colonies With Nuclei.

I had a mind to form nuclei from a colony that swarmed a week ago. Rather than to destroy queen-cells I thought to form nuclei with them. Then to remove other hives and place these nuclei in their places, but a friend told me if I did, the returning bees would be likely to kill the bees and destroy the queen-cells. Would that likely be the result? On going through it to-day I found one queen, but three or four cells, and they all empty, so I could not have carried out my project had I wished. It appears I got that idea from Gleanings in Bee-Culture, but haven’t it to refer to now.

Iowa.

Answer.—Put a nucleus with a young queen in place of a strong colony, and there is danger that the queen may be killed. And you may actually that a queen-cell would be disturbed by the returning bees.

Effect of Too Many Stings—May Have to Abandon Bee-Keeping.

I have been keeping bees three seasons, and had many stings. The spring of 1900 I was troubled with burning and itching, and it lasted about two months. I thought I told you about it, but last March I received quite a lot of stings on the head and face, and now I am troubled terribly with itching, burning, and breaking out over the body as well. The doctors were of the opinion that I was suffering from some kind of poison. I am 65 years old. What is my trouble?

I visited relatives in east Virginia three years ago, who have many bees. I had rhumatism badly, and they assured me if I would get bees, and work with them, and receive stings freely, the formic acid would certainly cure me; and to my hope I do not have any rheumatism now. I have frequently thought if Dr. Miller would caution beginners against too much bee-poise, it would have been for the best.

Let me add that I at first rather encouraged stings. Now I am seeking a remedy to eradicate the poison. I am reasonably sure that my blood is heavily charged with bee-sting acid. I think Prof. Cook doesn’t claim it to be formic acid.

Kentucky.

Answer.—Your case is a very exceptional one, and it is among the possibilities that you may never be able to work with bees without suffering too much inconvenience. No remedy, however, will be needed for the stings received in the spring. It is not supposed that the poison remains in the system, and all you need to do is to avoid stings in the future. It is also possible that in time you may become habituated to the stings so as to be able to continue working with bees. It will certainly be well for the present to take some care not to have too many stings, at least until you find that no serious effects result. If you find no abatement with time, but every sting bringing just as much suffering as ever, then your only course is to give up bee-keeping entirely.

Management for Increase.

As I am trying the Newman plan of increase it hardly suits me, as he says to put the queen-cells on a new stand. I wonder if that is possible with the queen on the print? He says remove the frame on which you find the queen and three other frames of brood, and put into a new hive on the old stand, removing the old hive to a new stand, then put in a queen-cell 24 hours later. Do you think that would depopulate the old colony so there would be danger of the cell getting chilled?

Wisconsin.

Answer.—There might be some danger in the direction you indicate. Do this: Put the queen with half the contents of the hive on a new stand, and a day or two later let the other hives swap places giving each a new stand. In that case, as you put the queen on the new stand, enough bees for safety will remain with her, and by the time you make the exchange some of the bees will have marked the new location so as to return from the field to it, and your part without the queen will have learned their queenlessness by the time the exchange is made, so that there will be no danger of their deserting the brood.

Feed for Weak Colonies—Foul Brood Question.

1. Is there a good substitute for honey with which to feed weak colonies? If so, what?

2. In what way does foul brood manifest itself? There are young bees lying on the outside of some of my hives. They are still white, and do not have their wings formed yet.

Pennsylvania.

Answers.—1. Granulated sugar with water, or a syrup therefrom, is probably the best. In the spring, after bees are flying daily, almost any sweet that bees will take can be used.

2. It is hardly the place to give here all about foul brood. Consult your text-book on bees. But you need not fear foul brood because young bees still white are lying outside the hive. If there are only a few, it may be the work of wax-worms. More likely, especially if there are many of them, the trouble is starvation. In that case, you will find some of the skins carried out with the insides sucked out.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper’s song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at $1.00.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once. If you want a copy of this song.
The Afterthought.

The "Old Reliable" seen through New and Unreliable Gla ses.

BY E. H. HASTY, Sta. B Rural, Toledo, O.

EARLY QUEEN-BEARING IN THE NORTH.

Swarthmore, you're a "clever chic," but all the same, queens in the North are not going to be reared for sale six or eight weeks after the general season. The weather, we have all found this a phenomenally backward spring) is a fearful antagonist to buck against. Why, this spring seeds planted in pots in the window, inside the house, refused to come up. I sowed a lot of winter and spring in a place, when the record is no longer needed, is simple and effective. I use for this purpose the broad side of a section—carry one or several in my pocket—and renew the surface on occasion by shaving it with my pocket-knife. In other words, it is an excellent way of getting things which are eventually to be put down in a book. Quite inconvenient to be running to a book to write as often as a poor money demands. Say, dear reader, don't you need a wooden-pocket-book? There's lots of "money in it." Page 309.

APPLE-BLOSSOM HONEY.

Allen Latham's way (page 310) is all right to get choice bits for home table. Hardly to attempt to modify it as to boom the main harvest. I maintain one-third from apple-nectar and one-third sugar-honey would be still more exquisite than apple-honey pure and simple. Apple-honey inclines to have a little too much flavor. He's right that it is delicious the day it is brought in; but I would hardly agree that it is the only nectar good at once. He must have forgotten the basswood. Probably no nectar whatever is fit to keep if extracted when only one day old.

FEEDING BEES IN A TOPLESS WIRE ENCLOSURE.

If it is really true that all that is needed to feed any colony in the open air is a wire fence around it six feet high (top open to the sky), we certainly ought to know it. Very unique and remarkable for our arsenal. But let's not tell our brothers that it never kicks till we have fire it off several times with our own shoulders against it. You see, Mr. Latham, you said the home bees quickly learned the way out in and in it and in it and I strained my believing "machinery" to believe that ever I have turned the sand. But the more I think of it the more I relent; and the bent machinery revolves a little slowly in a jingle-joggle sort of way. If it does work as stated, at all times, and in other people's hands, the more credit to you. Page 311.

MIDDLE.

A living machine without a heart.
With no tender throb in any part.
Of iron rules a slave, I ween.
It bows at the throne of King Routine;
It's born of the crowd, and dies alone.
And spares no life, not even its own.

I think it probable that W. W. McNeal is right in claiming that the bee is entirely destitute of love for any other living thing. It has a lot of country to take on for its lack of personal affection. But when he comes to speak of the bee's reasons for action he gets woefully beyond his depth, it seems to me—as most of us do. In consciousness and mode of mind action, living creatures differ much one from the other; and all differ, almost immeasurably, from the human creature's way of thinking and feeling and intuition. A squirrel is conscious that a surplus of food can be turned to future good account. Many other animals will wantonly destroy their own food (all but a few mouthfuls immediately in front of their eyes) even with starvation as the result. This sort of thing is consistent with the personal rules required to keep it so. A cow equally likes a clean bed, yet with disgusting unconsciousness defiles it and everything else in the vicinity. A man sees a fellow man with a guilty-looking face, and is off with his pain—so such an extent often as to be obliged to turn away his eyes. A bee sees a fellow bee half crushed, and in all probability has not the slightest idea that there is any pain Involved at all. If I were a man, I'd be more in favor of the bee's way of doing things, when the weather (see above) has allowed us to see this fecundity of insect life. I can safely say that they are more prolific than the breasts of the queen-breeder in most cases. The queen-breeder is more often enticed into nurturing in the strong season. His eggs hatch in the crowded drones, and rear many drones in March. I can readily believe that drones would mostly get through the mails all right—except when subjected to freezing. If I remember aright, those who have tried to destroy drones-eggs and drone-brood, without destroying the combs also, have found it a very difficult thing to do. But we'll give you a good, long credit-mark for your experiences and success. A queen-breeder might think it worth while to gain a much more moderate time six weeks. And the actual breeding season might wish drone-eggs from afar to cross stock on hand. Page 307.

THIN BOARDS AND SECTIONS FOR KEEPING HIVE-RECORD.

Mr. Davenport's thin boards, 4x4's, make excellent records, no doubt; and spouting Detroit, can as we fathers occupy our own sections. The mode of keeping a hive-record seems to be. But we'll give you a good, long credit-mark for your experiences and success. A queen-breeder might think it worth while to gain a much more moderate time six weeks. And the actual breeding season might wish drone-eggs from afar to cross stock on hand. Page 307.

CLAREMONT A MODEL CITY.

We have a very exceptional society here in Claremont. The metropolis of California, "Our Tribute to Christian Civilization." The unwritten law of the college is, "No Tobacco; no lewdness." I rejoice to say that out of eighty graduates which will be our number now in a few days—our first class graduated since I came here in 1894—all but five have been Christians. Two of those five were members of churches, and one of these is now preaching the gospel; two others, though not professing Christianity, were very intimate with me. They possessed the Christ spirit in a marked degree; we of our 200 students, one-half the residents in voluntary Bible-study classes. We see, then, that our unwritten laws are, and will be, more potent and influenceful than written laws usually are. Thus it will be easily understood why Claremont streets are so free of tobacco. Barely is the smoker seen, and almost never is a young man, and never a boy, seen with the insignia of slavery and short life—the cigarette—reaching from his lips.

I need not say that Claremont is a good, clean place in which to keep a boy. We have never had a case of any kind, being reared in Claremont. Every head of every home circle wishes his boys—how good that I do not need to say girls; (God bless the girls, and help them)—that they stop not with avoidance of the dirty habit, but work with all their greater power to keep the boys from its filthy clutches—to let tobacco entirely alone. Even the man enslaved to the habit hopes his boy may be kept from it. I never heard but one smoker say that he wished his boys to follow in his steps. I am glad indeed that he was so exceptional. But there are few Claremonts. And the great question is: How can we keep the young from this befouling habit, that strikes even at the very health and life of our splendid American boys? And how from the other dangers that lurk to entrap and tarnish our dear ones?

THE BOY AND THE GARDEN.

It has been true—it is true to-day—that Satan is on the eager watch-foot for illers. He knows that they are easily caught. To get the boy or girl thoroughly interested in some good work will more surely rob Satan of his power than aught else. The home circle can undertake no more hopeful or important study than that which will employ all the hands and moments of the boys and girls. Even the city will furnish gardens. We all remember how the governor of Michigan helped the poor by stimulating the growing of potatoes on the vacant lots of the city. Can we not employ the hands to secure the garden, helping at first to cultivate, to plant, and to clean? Let us insist, however, that it all belongs to the children. Let us raise the neat cultivation, the straight rows, the beautiful, thrifty plants; let us so advise and direct that there may be no, or few oth-
ers. Let the children seek the market, prepare the vegetables, etc., in neatest fashion, do their own selling, and, most important of all, let them have every cent of the proceeds, to spend as their very own. If rightly guided—and the thoughtful home circle will always keep guidance in mind—the money will not go for tobacco, nor nonsense. Very likely it will go for books or papers that will guide to better profits. How rich is the culture that comes from such a scheme, well and successfully carried out! It will surely be the best school the child will ever attend.

I believe in education. I am sure no class can have too much. Were all our people thoroughly and wisely educated, most of the evils of our present society would disappear. I believe the educated farmer may exert a power for good that any man might justly envy. I talked this to my boy long before he entered college. I believe that the teaching that follows boyhood is the teaching that tells.

My boy, before he hardly reached his teens, had such a garden as suggested above. He also had a valuable partner—his younger sister. He also had two very interested spectators to advise, direct and encourage. They were the "other" part of the home circle. That boy not only secured spending money—but of all, he acquired such a love of the work, that he looked towards agriculture during all his college course, and to-day is an enthusiastic tiller of the soil. He has no use for tobacco, and if he ever uses profane or unclean language, a knowledge of the fact has never reached his father's ear. That little garden was a garden indeed. In it grew richer and better plants than celery or asparagus.

There are gardens and gardens. Setting the table may be the garden for the girl, or she may have a veritable flower-garden that perchance may take her into the sunshine and pathway to robust health. We must secure employment for our dear children. Their good and the safety of our country demand it. He or she that lets the club, business, society, or even church duties, rob the children of the care and thought that will secure to them habits of thrift, industry, and patient continuance in well-doing, is making a perilous mistake. He or she who keeps the little hands wisely employed, and the little mind interested in all that the hands find to do, is the good angel of the child. May we not hope that there will be just such good angels in all our home circles? May these good angels be so wise and happy that the work of the child may be at the same time its best play.

MIMICRY.

I don't mean making faces. Bees and wasps are usually beautifully yellow and often brilliantly striped. They love sweets, and so gather thickly about the nec- tar-bearing flowers. Two-winged flies hover, and for like purpose, about the same flowers. These flies are also yellow and beautifully striped. Often they are so like the bees that only sharpest eyes can tell which is fly and which is bee or wasp. Why this resemblance in color and markings? For the bee and wasp have a sting. The bird picks up the handsome wasp only to feel the cruel smart, and spit it out, with a lesson that will save all other wasps from attack by that bird.

The fly has no sting. It could not hurt the bird, and doubtless would be a delicate titbit for bird or youngling. Yet the fly has the wasp color, and the bird is fooled by this, passes the fly, loses the tender steak, and so the fly owes its life to its color-markings.

It is good to get our children interested in just such interesting things that are thick all about us. The cabbage butterfly in its black-dotted robes of white drops its green eggs on the green cabbage-leaves. Their green hides them from bird and insect; and so they are saved to life by mimicry.

The weasel is white in winter and brown in summer, and so profits by its color. Polar animals are white. Who of the children can tell why this white helps the weasel and the polar bear?

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Estimate the total vote in these three States combined for Governor and send your estimate and subscription to the American Bee Journal, and you will receive a certificate, which will entitle you to participate in the distribution of the $15,000 to be awarded by the Press Publishing Association, of Detroit, Mich., to those making the nearest estimates of the Official Vote for Governor in the States of Ohio, Massachusetts and Iowa, to be determined by the Election held on the 5th day of November, 1901.

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YOUR ESTIMATE: When you send in your subscription you also send your estimate. Be careful to write your name, address and estimate as plainly as possible. As soon as we receive your subscription we will send you a certificate of the Press Publishing Association of Detroit, Mich., containing your estimate, which will insure you any prize your estimate may entitle you to claim. We will file a duplicate certificate with the Press Publishing Association. Every subscriber may send in as many estimates, and will receive as many certificates, as he sends dollars on subscription to the American Bee Journal.

Valuable Information. To aid subscribers in forming their estimate, we furnish the following data:

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The certificates of the Secretaries of the States named showing the Combined Official Vote will determine who are entitled to the Prizes, and the awards will be made within 60 days after the Official Vote is known. The American Bee Journal will publish the names of the successful estimators.

Statement of Mr. W. A. Punges,
President of the Central Savings Bank, Detroit, Mich.: I HEREBY CERTIFY, that the Press Publishing Association has deposited $15,000 in the Central Savings Bank, Detroit, Mich., for the express purpose of paying the Prizes in their contest on the Combined Official Vote of the States of Ohio, Massachusetts and Iowa, and that this fund can be used for no other purpose.

J. A. Punges
President Central Savings Bank, Detroit, Mich.

The cash must accompany your order. The American Bee Journal costs you only $1.00 a year. You get the Certificate absolutely free. Address your orders to GEORGE W. YORK & CO., 144 & 146 Erie Street, Chicago, Ill.
S-frames Nuclei FoR Sale

Can supply 100 or 150 at $2.00 each, with one empty extra comb; 2-frame Nuclei, $1.50. All L.o.H. and B.Q.S. extra. Write.

TENNESSEE QUEENS!

Fine lot of Choice Tested Queens reared last season, descendents of select imported and select golden queens, reared 3% miles apart, and mated to select drones. $1.50 each; un-tested waitressed Queens, from same breeders, either strain, 75c each. No bees over 360 miles from my locality, 50c each. None impure within 1 mile. My bees are reared from selected stock. All colonies received must be free from any outside influence, for they are to be used in establishing new colonies.

Bee-keepers' Supplies.

Just received a consignment of the finest up-to-date stream-lined Hives and Equipments that we have. They are 2 to 3 none. Complete line of Bee-keepers' Supplies on hand. Bees and queens. Catalog free.

THE A. L. REDFORD CO.,

H. O. KALLMAN, Manager,

1024 Miss. Street, St. Paul, Minn.

Have on order over $10,000 worth of Bee-keeping Equipments. A. L. Redfords have the largest assortment of Bee-keeping Equipments on hand. All orders filled promptly and satisfactorily.

PROSPECTS POOR—QUEENLESS COLONY.

There is no prospect of a honey crop here, as it rains nearly every day, and all bees that have been successful in the woods. We had an open winter, and bees wintered without loss. Four of my colonies lost their queens, and have been robbed out. I think it better if robbers get started on a queenless colony in the spring, to let them go, as they are too young to save. The bees are all old, and it spoils a good colony to open the hive before fruit-blossom.


G. ASCHA.

FREE FOR A MONTH....

If you are interested in Sheep in any way you cannot afford to miss the best Sheep Paper published in the United States.

Wool Markets and Sheep

has a hobby which is the sheep-bred and his industry, first-foremost and all the time. Are you interested? Write today.

Wool Markets and Sheep, CHICAGO, ILL.

BEE-KEEPING GUIDE, R. W. WEBER.

This book of 175 pages presents a clear and concise treatment of the Belgian Hare industry, its growth, origin and kind, the raising and feeding of the stock, care of the young, feeding, diseases and their care, marketing, shipping, etc. First edition of 50,000 copies was sold in advance of publication.

Price, in handsome paper cover, 25 cents, post-paid; or with the American Bee Journal one year, at $1.50 a copy.

GEORGE W. YORK & Co.,

144 & 146 Erie St., CHICAGO, ILL.

GOLDEN ITALIANS, the GREAT HONEY-GATHERERS. They have no S.P.E.N.D. and few equal. 75c each; 6 for $4. Recut Lower Queens, the LARGEST TONGUED ITALIANS, which left all RECORDS behind in GATHERING HONEY, 5 each; 6 for $3. SAFE ARRIVAL GUARANTEED.

C. H. W. WEBER, Successor to CHAS. F. MUTH, 264 & 266 Central Ave., CINCINNATI, OHIO.

HEADQUARTERS FOR Root's Goods

Bees-Supplies, at Root's Prices. Catalogue free; send for same.
common wrapping-twine long enough to tie around the frame. Then lay a frame on the strings and take the ends of the strings that are under the beehive and lift them up. Against the bottom-bar of the frame on the strings I lay a thin strip of wood the same width and length of the beehive, but long enough to fit inside of the end-bars of the frame, and I am then ready to place the combs in the frame. I have then a sheet of the full size of the frames as the combs will permit, keeping the combs against the top-bar, and then cutting them even on the lower side, so that the strip that fits inside the brood-frame will touch the lower edge of all the pieces of the comb to prevent any cross cleavage, if possible.

In tying the combs I press the strip of wood firmly against the bottom of the comb, and then take the comb against the top-bar of the frame, and hold it firmly till my helper ties the strings, trimming off the strings to within 3/4 of an inch of the knot, always having the knot come on the edge of the top-bar.

I then take another board larger than the brood-frame, and press hard enough with it to level the "crink" out of the comb. I next take the first board, comb, frame, and all, to the hive I wish to put the bees into, put the frame into the hive, and proceed thus until all the combs are used, and the work is done for a week. After that length of time I take the stick off, and what strings the bees have not reached as a rule I get as the combs as if the bees had done the work in the first place, full sheets of foundation excised.

It is always easiest to transfer during mid-bloom.

ARTHUR A. HOSHER.
McDonough Co., Ill., June 5.

Cold Spring Hard on Bees.

I have had to feed my bees a good deal this spring, because it has been so cold until now, when they are beginning to store a little honey.

D. J. BLOCKER.

First Honey Taken Off.

I took off my first section of honey to-day. It is light amber, and has a very fine flavor, but I have had nothing in my past experience that will aid me in determining what source it was gathered from. Come you Pennsylvania readers give me any assistance you can.

I planted two hives here in the spring, May 34, 1900, and kept record of the work in the bees as done by the bees. Do you want the notes? It was something owing to fortunate showers, but not at all my credit.

Bees wintered very poorly in this locality. I have 36 colonies left out of 52, and all but five have been robbed and the stock reduced to store sweet clover as soon as it blooms.

C. SALISBURY.

(Perhaps some of our Pennsylvania subscribers can answer as to the source of that first honey.

Yes, we are always glad to receive notes of an interesting or helpful kind, bearing on the subject to which the Bee Journal is devoted."

—EDITOR.

80 Percent of the Bees Dead.

This is a very poor year for honey in this locality, and 80 percent of the bees are dead. In the evergreen woods the blacks have starved. I still have 16 colonies.

Geo. W. SHREIDER.

Comments on the Score-Card.

As a member of the committee on score-cards, I wish to say to Mr. Hasty that the reason why I ignore drones is because the C. A. C. is the only bee club in North Dakota, and the drones are mostly killed off in an emergency. I believe it is a rare thing to see drones in uncap in September, unless they are queenless.

To that item of "Color and Markings," I would prefix the word "Uniformity," so that it would read "Uniformity of Color and Markings," especially where the golden Italians and the leather-colored compete in the same class.

I like to see the comments and criticisms on the score-card, and hope it will be perfected at the next meeting of the Association.

Juneau Co., Wis., June 10. F. WILSON.

Bees Numb With the Cold—Covers.

Early yesterday morning (June 9) I noticed bees around their drinking-places numb with the cold. I have many times warmed up the water to prevent them from getting chilled.

Last fall white clover was very abundant—almost like blue-grass sod. But it was not protected by the snow during the winter, and much of it was destroyed. It is only to be found in hollow places, and where it was protected.

Basswood trees have no buds, as far as I have been able to ascertain. Sweet clover is very rank and abundant; the yellow variety is gaining a foothold yearly; and its friends are increasing. We have had no swarms as yet, and there are no prospects of any.


Frost and Ice the Last of May.

We had a frost here last night, and ice formed. Bees are killing off drones this morning.

J. F. ANDERSON.
Cook Co., Ill., June 1.

Influence of Queens.

D. B. Norton says in the American Bee-Kepper:

"It is a notion with me that a young Italian queen from good stock is a panacea for all bee-diseases. Many a colony dwindles in spring, or is robbed during a dearth of honey in summer because its queen lacked spirit, either from age or some other cause. If you would see the influence of a queen on her bees, take the mildest colony that you have, and also the most irritable, and exchange their queens and note the effect 20 hours after the queens are liberated."

Wintering in an Inside Cellar.

Ira Barber claims that for the best success in wintering not the slightest quantity of air should be allowed to enter directly from the outside, the slightest breath of outer air making the bees anxious to get out. An experience at Medina makes Editor Root seem inclined to become a disciple of Mr. Barber. Thirty-eight colonies were wintered in an inside cellar in the basement of the machine shop. This basement (perhaps it ought to be called a cellar) is 38x56 feet, with a floor above 7 inches thick, and inside of this was an apartment 4 feet square with no provision for entrance or exit of air other than through several thicknesses of heavy matting and carpeting which formed one of the inside walls. The temperature in the bee-chamber stood at 48 degrees, and there was plenty of fresh air in the surrounding larger room at 40 degrees or more, outer doors or windows being open when necessary to keep down the temperature to 42 degrees. Notwithstanding the bees were left entirely alone, subject to the trembling of feet and the rumbling of machinery above, the first examination (Feb. 21) showed the bees per-
BASSWOOD AND ALFALFA HONEY
in 60-pound tin cans, f.o.b. Chicago—two cans in a box—at these prices: 9 cents a pound for one box of two cans; two boxes (4 cans) or more at one time, 8½ cents a pound.

We have only a limited quantity of the Basswood honey. Sample of either kind, postpaid, 10 cents. Address

GEORGE W. YORk & CO., 144 & 146 Erie St., Chicago, Ill.

25 cents Cash * This is a good time to send in your Beeswax. ** low, upon its receipt, or 27 cents in trade. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORk & CO., 144 & 146 Erie St., Chicago, Ill.

Marshfield Manufacturing Company.

Our Specialty is making SECTIONS, and they are the best in the market. WISCONSIN BASSWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free illustrated catalog and price-list.

Marshfield Manufacturing Co., Marshfield, Wis.

Red Clover Queens

LONG-TONGUED BEES ARE DEMANDED NOW.

ONE Untested Italian Queen FREE as a Premium for sending us TWO new subscribers to the American Bee Journal for one year (with $2); or, one Tested Queen free as a premium for sending us FOUR new subscribers with $4.00.

We have arranged with one of the oldest and best queen-breeders (having many years' experience) to rear queens for us the coming season. His bees average quite a good deal the longest tongues of any yet measured. The Breeder he will use is direct from Italy, having imported her himself. Her worker-bees are large, somewhat leather-colored, very gentle, and scarcely requiring veil or smoke. They stored red clover honey last season.

All queens guaranteed to arrive in good condition, and all will be shipped, unless otherwise ordered.

CASH PRICES of these fine queens will be as follows: Untested, $1.00 each; Tested, $2.00 each. Send all orders to

GEORGE W. YORK & CO. 144 & 146 Erie St., CHICAGO, ILL.

Principles of Breeding.

Like those who raise sheep and cattle, beekeepers are breeders of live-stock. The first principle in breeding—the one which every breeder accepts as sound and worthy of all ascending—is that "like produces like." This is a rule as old as the Scripture that affirms its truth by asking "Do men gather grapes of thorns or figs of thistles?" It is easier, for you all remember Jacob, the thifty keeper of the flocks and herds of his grandfather Laban, and how wisely he managed the breeder, with the inevitable result that "the feeder were Laban's, and the younger Jacob's.'

We expect the offspring to be like the parents. We are sure that the little will not produce the great; we are no less sure that the large will not produce the small. We expect the striking characteristics of the parent to be repeated in their children.

The first rule, then, to be kept in mind by the breeder is, that to have the best he must have the best. This is the law. He who violates it suffers the penalty which most of us must bear as best we can, and get along with what is worse than the best. But the law that "like begets like" must not be interpreted too rigidly. Each of the lower animals has two immediate parents, and grandparents without number, and they all have their influence under the same law. The father and the mother are very like alike, and the differences in the grandparents are occasioned by the change in the environment. For what looks like a law of nature is only a law of the environment 

25 cents was a pound — BASSWOOD — a record-breaker. 

Each man is a little landscaper, and he who selects his plants and trees with a view to environment is a true agriculturist. And he who selects his bees and makes them the best he can is a real beekeeper.
OILY BOOK FREE, 64 pages, illustrated and written by R. J. BUCK, Inland Poultry Journal, Indianapolis, Ind.

Improved Swarthmore Queen-Nursery Cages, by mail, 75 cts., complete. Address, THE SWARTHMORE APPLIANCE, Swarthmore, Pa.

Please mention Bee Journal when writing.

HONEY AND BEEWAX

MARKET QUOTATIONS.

CHICAGO, June 19.—New comb honey has not yet reached this market. It would sell at 15c. if choice white, and the amber at 13c. and 5c. The market is entirely thin with exception of a few cases of a lot that we had held for, expecting it would be needed. Prices are high, but shipments will be started by July 1. Very little trading is done in extracted, as large dealers will not contract this season unless for low figures; some sales of amber have been made at 22c. for 5-lb. cases. White is held at 55c. Beeswax sells at 30c.

S. R. BURNETT & Co.

DETROIT, June 8.—Strawberries are taking the attention, very few sales of honey are made, but prices seem to keep up on good lots.

Beeswax in fair demand at 26c.

M. H. HUNT & SON.

CINCINNATI, May 17.—No demand for comb honey, also stock of it well exhausted. Extracted very dull; sales are more or less forced; lower prices from 3c. to 1c per pound.

PETERS Bros.

BOSTON, June 14.—There is practically no comb honey in our market, and owing to warm weather is not extracted. It would appear some new comb early next month. Market for extracted dull, at 95c.

BLAKE, SCOTT & LEW.

OMAHA, May 1.—Comb honey, extra white, 30c. per case, per case, $3.50; No. 1, $3.25; amber, $3.00.

NEW YORK, June 1.—Extracted honey is exceedingly dull and very little moving. We quote for fuel beeswax: 1-lb. case, 60c; light amber, 54c; amber, 50c. Some demand for comb honey at unchanged prices. New crop is now beginning to arrive from the South, and sells at 12c. and 8c., according to quality and style. Dealers are busy buying. HILL & STORKE.

ALBANY, N. Y., June 18.—Honey market is dull with no receipts or stocks of any kind. Demand is between seasons now. Prospect of good winter in the South, and comb honey which is left is greater the portion having been killed by foul brood extended. 12c. up.

BUFFALO, June 14.—No demand at all. Few old lots here almost unurable. When new is ready it will sell moderately well at fair opening prices.

KANSAS CITY, June 14.—Very little old honey on our market but what is damaged by being out of season. We quote for amber, No. 1 grade No. 1 Colorado, amber, 15c. Beeswax firm at 65c.

W. K. CROMWELL PRODUCE CO.

Successors to C. C. CIEMONS & Co.

SANTA FE, June 5.—White comb, 11c. 1c; amber, 4c. per 5-lb. case; 35c. per case, per case, $3.00; amber, 50c. B. R. R. C.

RIO GRANDE PRODUCE CO.

Dealers are very bashful in their ideas, but are not securing much honey as the prices they name. A small way to special trade an advance on quotations is being realized.

California! If you care to know of its climate, crops, agricultural products, fruits, vegetables, or other resources, need a sample copy of California's Favorite Fruits and Vegetables. The Pacific Rural Press.

The Pacific Rural Press, the leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, hand-sold and delivered in every county. Sample copy free.

PACIFIC RURAL PRESS, 300 Market Street, SAN FRANCISCO, CAL. Please mention Bee Journal when writing.

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We have a Large Stock on hand and can ship promptly.

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BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of THE AMERICAN BEE-KEEPER free. Address, THE W. T. FALGONER MFG. CO., JAMESTOWN, N. Y.

We mention Bee Journal when writing.

ITALIAN QUEENS, warranted

Tested, $1.00; Untested, 75c. by return mail. RIVER FOREST APIARIES. 214 River Forest, Cook Co., I11. Please mention Bee Journal when writing.

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

5 lb. 10 lb. 25 lb. 50 lb.
Sweet Clover (white) . . . . . . $1.20 $2.50 $12.00 $25.00
Sweet Clover (yellow) . . . . . $1.50 $2.80 $12.50 $25.00
Alike Clover .................. 90c 1.70 4.00 7.50
White Clover .................. 90c 1.70 4.00 7.50
Aftalia Clover .................. 90c 1.70 4.00 7.50
Prices subject to market changes.

Single pound packages at more than the 5-pound rate, and 10 cents extra for postage and pack. Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street, CHICAGO, I11.

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AT HOME: by my thorough method of training. With my complete course I guarantee to train and cultivate your voice or refund that money. The best musical knowledge specially arranged especially for Home Study. Has Highest Endorsements. Beautiful Portable Beautiful free. Address Prof. G. M. Waters, Kalamazoo, Mich.

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1 Untested Queen. . . . . . . $1.00
2 Untested Queens. . . . . . 1.50
1 Tested Queen . . . . . . . . . . . . . . 1.25
2 Tested Queens . . . . . . . . . . . . . . 2.50
1 Selected Queens . . . . . . . . . . . . . . 1.50
2 Selected Queens . . . . . . . . . . . . . . 3.00
3 Selected Queens . . . . . . . . . . . . . . 4.50
4 Selected Queens . . . . . . . . . . . . . . 6.00
5 Selected Queens . . . . . . . . . . . . . . 7.50
6 Selected Queens . . . . . . . . . . . . . . 9.00
7 Selected Queens . . . . . . . . . . . . . . 10.50
8 Selected Queens . . . . . . . . . . . . . . 12.00
9 Selected Queens . . . . . . . . . . . . . . 13.50
10 Selected Queens . . . . . . . . . . . . . . 15.00

Circular free, giving particulars regarding each class of Queens, conditions, etc. Address, G. M. DOOLITTLE, 114A 26th Borodino, Unadonna Co., N. Y.

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THE W. T. FALGONER MFG. CO. 144 River Forest, Cook Co., I11.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised, The classic in Bee-Culture—Price, $1.25, by mail.

Beeswax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

Please mention Bee Journal when writing.

A Bee-Keeper’s Paradise.

En route to El Paso—I have just come from a county about 40 miles square that has more bee-keepers to the square mile than any other locality of its size I ever visited. The inhabitants talk bees at the hotels, on the streets, and everywhere, just as farmers talk crops and business in the North. This county produces more honey than any equal area, I believe, in the United States. Some say that its yearly output is a whole trainload of honey; but many aver that this is too low, and that two whole trainloads would come nearer the truth. Of course this great amount doesn’t go all in one lot, but in large and small shipments.

The average per colony is high, and there is a honey crop every season. It is estimated that in this one county, outside of the towns, nearly one-half the population are bee-keepers.

The great bulk of the honey is of the very best, and some of it is literally water-white. There are thousands and thousands of acres of honey-plants on cheap land; and bees—there are not enough to gather it all.

The bees commence swarming early in the spring; and, when the main honey-flows commence, actually stop swarming, destroy cells, kill off the drones, and commence business. Did you ever hear the like of it before? You say, “No, and no one else.” Well, I think I can prove every statement; but for the present I am not at liberty to give the place or other details; but very shortly I’ll tell the whole story, with some fine pictures.

This is only one of the good things in store for readers of Gleanings in Bee-Culture. Send 15 cents for three months’ trial or 25 cents for six months’ trial, or $1.00 for one year and one untested Italian Queen. Send $2.00 and we will send Gleanings one year and one of our Red Clover Queens. Speak quick if you want one.

THE A. I. ROOT CO., Medina, Ohio.

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3 Selected Queens . . . . . . . . . . . . . . 4.50
4 Selected Queens . . . . . . . . . . . . . . 6.00
5 Selected Queens . . . . . . . . . . . . . . 7.50
6 Selected Queens . . . . . . . . . . . . . . 9.00
7 Selected Queens . . . . . . . . . . . . . . 10.50
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9 Selected Queens . . . . . . . . . . . . . . 13.50
10 Selected Queens . . . . . . . . . . . . . . 15.00

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Please mention Bee Journal when writing.
MR. TOFIELD LEHMAN HIVING A SWARM ON THE RASPBERRY BUSHES.—(See page 418.)
Pan-American Apiarian Exhibit.—We have received the following from Superintendent O. L. Hershiser, which he desires to have read by the New York bee-keepers especially:

NEW YORK STATE APIARIST EXHIBIT AT THE PAN-AMERICAN.

Nearly all the honey in the New York apiarian exhibit is to be replaced by honey of this year's production, as soon as the latter can be obtained from the beekeepers of this State. A goodly number of New York beekeepers are now represented, but it is desired by the latter. It is impossible to name the number of the New York Apiarist Exhibit, with a view to sending in an exhibit. There will be absolutely no expense to the exhibitor further than the extra pains he takes to produce fine exhibition honey, and in the extra care taken to ship the same in a manner to minimize danger of breakage.

Orell L. Hershiser, Superintendent.

Mr. Hershiser writes that everything points to a good convention for Buffalo. The use of the lecture room, committee rooms, etc., of the Buffalo Society of Natural Science has been tendered for the use of the National Bee-Keepers' Association, so they are therefore ready with a good hall. He believes that entertainment will be reasonable, and looks for a very large attendance. We hope there will be an even larger gathering than met here last August. But that was a record-breaker. Will Buffalo equal it? Having the extra attraction of the Pan-American the Buffalo convention ought to equal the one held here in 1893, during the World's Fair.

Fat and Lean Bees.—W. W. Case talks about this in Gleanings in Bee-Culture, explaining how it is that a bee-keeper may be mistaken about the bees of a certain colony being larger or smaller than the average. He says that bees get fat or thin according to food conditions, although the fattening process does not enlarge the thorax. He might also have added that a bee may increase perceptibly in size within a few minutes by filling its honey-sac. He says:

In going through my apiary when honey has not been gathered for a month, I have often been struck with the thought, "Are my bees degenerating?" they seeming smaller in appearance than usual; but after a week's run of honey I am struck with the thought, "What fine, large, shelf-looking bees they are!"

Strong Colonies for Big Yields.—More than one reason can be given why strong colonies should be kept, but it is a very hard thing for a beginner to get away from the thought of the number of bees he has with bees in them rather than the total number of bees in his apiary. Give him his choice between 10 colonies of 10,000 each, and 18 colonies of 20,000 each, and it is quite possible that he may prefer the latter. The 18 colonies look more to his from the outside. It is true that in the latter case he will have eight more colonies, but he will have 40,000 less bees.

Even some with more experience might make the mistake of thinking that 28 colonies of 20,000 bees each would store just as much honey as 10 colonies of 40,000 each. Without thinking, he may say, "There will be just the same number of bees in either case 400,000, why will they not gather the same amount of honey?" Let us figure. Schachinger's experiments showed that when 20,000 bees stored daily 1 1/2 pound of honey, 30,000 3/4, 40,000 1/2. Thus doubling the size of the colony will in all cases give eight times the stores, for a colony of 50,000 bees would not be likely to store eight times as much as a colony of 40,000, and the ratio would vary as the size of colonies would vary, but the general rule will hold good, that in all cases there is great economy in having a little number of a very large colony rather than to have them divided up into a number of smaller colonies.

This matter will appear less strange when it is remembered that a certain number of bees are needed at home to keep up the heat and take care of the brood, and the proportion of these will be less in a strong colony. It can easily be seen that it will not require twice as many bees to protect two frames of brood as it will to protect one.

It is especially recommended to beginners to give this matter careful consideration, and to remember that their success does not depend on the number of hives with bees in them, but upon the number with a strong force in each.

Placing Comb in a Wagon.—Considerable discussion has occurred, especially in Gleanings in Bee-Culture, as to the proper way to place combs to prevent breaking in hauling. All agree that on a car the frames should be placed parallel with the rails, the ends of the frames pointing to the engine. As to hauling on a wagon, however, there was not entire agreement. But a great deal of testimony is to the effect that either on smooth or rough roads the greatest jolting is sidewise, and that the frames should be crosswise, with the ends pointing toward the wheels and not toward the horses.
Contributed Articles.

"Jouncing" Bees Out of Extracting-Supers.
BY C. DAVENPORT.

THE editor of the Bee-Keeper's Review, one of the most prominent men in our ranks, has said that freeing combs from bees is one of the most beautiful parts of the bee-keeper's art, and that the bees must be extracted quickly. Probably all will agree with him in this, for it is certainly a great deal of work to brush the bees from each comb separately, and for a number of reasons escape-boards are far from being as satisfactory to clear full-depth extracting-stories of bees as they are comb-honey supers. Why this is so I will not take space to explain, for I wish to describe the method I practiced last season, to clear full-depth extracting-stories, also comb-honey supers, and what I shall say about this may, in my opinion, be of more practical value to many who are engaged in our pursuit in a large way than the subscription price to this journal would amount to in 25 years.

I feel perfectly free to say this, because the method was not original with me, and I claim no credit whatever for practicing and describing it. Rambler, of California, is the man to whom all honor about this is due, and this method illustrates not only the value of taking out bee-papers, but also of reading all there is in them. For years I have read those rambles of the Rambler, in many of which there was little said about bees, or anything connected with them, and in some of them he had to say about girls rather than about bees—not that I have any objection whatever to reading about girls, (far from it,) but if it was otherwise I should be many times repaid for reading all he wrote.

If some one was to offer me $50 not to practice this method for 10 years, I would not object. I have had an opportunity of using it for 12 or 13 years, and I have always done as well as it was possible to do—far enough.

The method is this: Rambler called a "jouncer," and having, I trust, given full credit to his inventor, I will describe my method of using his invention.

Mine is simply a box about 20 inches long, 12 inches wide, and 10 inches high, ends made of lumber 1 inch thick, and the sides of boards 1 inch thick. Now there is to it—it is simply a box without top or bottom. Rambler's was better, and made somewhat differently, but mine works well enough.

The method of using it is to set it down in front of a hive with this, or extracting story we wish to clear of bees. After taking off the cover and giving the bees a few good, strong puffs of smoke, the upper story is taken off and set down on this jouncer, so it rests across the side, one and one-half inch thick. Now, by the cleats or hand-holes at each end, the super is raised up an inch or so, and then suddenly dropped on the thin side-pieces of the jouncer. This is repeated a few times, and the results are surprising. With full-depth extracting-stories, a half-bushel or so of bees will be on the ground around the jouncer.

As I have said, this is set right in front of their hive and the bees soon crawl in. Until one tries it he would not believe the ease and rapidity with which bees can be jarred or jounced out in this way, after one acquires the knack of doing it just right. It takes longer and requires more jouncing to clear a super of comb-honey than it does an extracting-story, many a time when they fall from the combs, strike the bottom of the sections, which prevents them from falling out. With extracting-combs there is nothing to prevent their falling out on the ground. But most of the bees in the sections can be jarred out in this way more easily, in my opinion, than the supers can be cleared by escape-boards. Besides, what I regard as a great advantage of this plan over escapes is, that the work is done at once, in one operation, as the man goes through the whole section with all surplus that came off the hives. And, seriously, I consider it one of the most valuable things I have learned in regard to our pursuit in many years.

Of course not all the bees can be jarred off in this way, but near enough so I pay no attention to what are left. The honey-house is right in the yard, the windows of which are arranged to allow bees inside to escape, but they prevent those outside from entering; so after jarring out in this way what bees I readily can from a super, it is carried in, and what bees are left are soon find their way outside. When a large number of supers are carried in at one time, they are piled cross-wise of each other. This is important, to have the bees leave the supers and house readily. When the supers are tiered up tight in the regular way, many of the bees will range up and down the whole tier a long time before they seem to feel convinced that they can not find their friends and mother somewhere in the piles.

I have seen it advised where the honey-house was in or near the yard, to carry in the supers—bees and all—or at least carry away of the honey; but I do not believe this advice was given in the use of smoke. But this plan, as no doubt those who have practiced it in a large way will be willing to testify, is a very poor method to practice. It will work in a small way, but when a good many bees are in each super, and a large number of supers are to be extracted, it is not a very pleasant task to see a mass of bees inside that they can not very soon leave by an ordinary escape; and when there are such great numbers they do not, for some reason, seem to wish to leave. I have had large bunches of bees, hundreds and thousands, overhead for days, when there was nothing to prevent their escaping, and after being thrown outdoors many of them would hover around the door and windows, and again enter the supers and leave again. But this would not seem a chance in, the noise and confusion that occurs, or something else, seems to effect or derange many in some way so that they take little interest in the world afterwards, or even seem to know where they are or belong. Some may think that the flying bees are not in the knowledge of their hive; they are bees of all ages—young, middle-aged, and old—and during the working season it is not difficult to tell pretty closely how old a bee is; but the worst part of this method is that it is considered a considerable amount of it may be consumed and damaged by these bees that stay in the house and supers so long, for they do not hesitate to eat what honey they need, or rather apparently, all they can possibly consume.

But what bees I can not jounce out leave the house readily, and with extracting-frames what few bees are left bother but little, even if extracting is commenced as soon as the supers are carried in.

It could be made plain to one that it would be hard, heavy work to jounce in this way full-depth stories that are well-filled. It is not, though, for a man of average strength with 8-frame hives; and it is a great pleasure to see the bees roll out.

Still, many who read this, and try the plan, may regret that I ever wrote anything in regard to it, for by this method it is a very easy matter to break extracting-combs, especially new, unwired ones. I broke a number before I acquired the knack of doing it right, and found out just how hard a jounce new combs could stand. But this was little loss, for I fastened them in the frames again with tine, and the bees attended to the rest even cutting off and carrying out the strings after they had the combs fastened.

Sections, the combs of which are but slightly attached at the top only, can also be readily broken loose by jouncing; but I use bottom starters in sections, which insures the combs being fastened to the wood more than strong enough to endure what jarring is necessary to clear them of bees. This jouncing does not need to be heavy and hard—a very quick, light jounce will accomplish more. The supers should be raised but slightly at first, and the quick, rapid jounce that causes the bees to loosen their grip and roll out.

Southern Minnesota.

Prove Theories Before Accepting—A Correction on the Dicke1l Theory.
BY F. GRINER.

On page 359, Prof. A. J. Cook gives as a very interesting article on the Dicke1l and Dicke1l theories. After reading it carefully I am satisfied that no one else would note it as ablly and use all the scientific reasoning correctly. The article contains two minor points which, according to my conception, are not fully true, to which I draw the attention of the Professor as well as the thinking reader.

"Professor Cook says in regard to the queen laying fertilized and unfertilized eggs: 'The queen adds or withholds the sperm-cell at will.' It is pretty clearly proven by the late experiments of Weism, that the queen does lay fer-
An Italian "Atlas of Bee-Culture.

BY C. P. DADANT.

An Italian "Atlas of Bee-Culture."
No. 2. — Some Reminiscences of an Old Bee-Keeper.

By THADDEUS SMITH.

IT is not my intention to go into the history of the first invention or use of the movable-comb hive, as I have done so often in previous essays of this nature. Mr. Langstroth’s patent, I think, was issued in 1852, or about that time, and he admits that some kind of movable combs were used in hives in Europe by Mr. Thomas, of Wiltshire, England, who patented his hive design ten years before his invention or improvements on the hive. I have not even Mr. Langstroth’s book before me to refer to on these matters, and I do not wish to go beyond my own memory for a reference to some numbers of the old American Bee Journal.

The invention and introduction of movable-frame hives certainly created a new era in bee-keeping in this country, and the introduction of the Italian bee about the same time gave a still greater impetus to the business. But the Italian bee would have made slow progress in this country had it not been for the movable-comb hive—probably it never would have been disseminated here at all to any great extent.

When Mr. Langstroth offered the first practical working movable-frame hive to the country, involving principles that had never been used in any hive in Europe, there were many, I have no doubt, inventors of imitators and those who professed to have made improvements upon the standard Langstroth hive by making all sorts of changes, mostly of little, and many of no importance; and on many of these changes and so-called improvements patents were taken; but of these the only ones that I am acquainted with among them were the movable-frame principles of Mr. Langstroth’s patent. Scores of these hives, patented and non-patented, were offered and highly commended to the bee-keeping public, with the object of encouraging the bee-keepers of the country.

We had the Quinby hive, King hive, Alley hive, the Flanders three-cornered or Diamond hive, Thomas hive, American hive, Adair’s “New Idea hive,” the Long Ideal hive, Gallup’s Revolving hive, and— I think I would better end the list here, for time and space forbid the mention of all of them. Mr. H. R. King was probably the most persistent of these so-called new hive inventors, in trying to invalidate Mr. Langstroth’s claims to originality in his invention he made a trip to Europe and spent thousands of dollars for the purpose of collecting evidence to disprove Mr. Langstroth’s claims. He found, as I have stated in the beginning of this article, that frames of some kind had been used by certain ones in Europe some years previous to Mr. Langstroth’s invention; but they all proved so different from Mr. Langstroth’s hive, and so crude in comparison, that it was impossible to have the same claim that was brought to test the matter. N. C. Mitchell was another hive patentee who violently assailed Mr. Langstroth’s claims, and established a new bee-paper for that purpose. In the early seventies the battle of the bee-hive men waxed warm and heated.

The only hive besides the Langstroth, of the new patents, that I was ever induced to try, was that of J. H. Thomas, of Canada. Mr. Thomas set forth the claims of his hive in numerous letters to the American Bee Journal and other papers, and boldly stated that he had “the best hive in America.” About that time I had left “my old Kentucky home, far away,” and was located in the Queen’s home, and I was very desirous to get Mr. Langstroth to come with me the Langstroth hive as made in Cleveland, Ohio, I concluded to try the Thomas hive, and ordered half a dozen.

This hive was an admirable adaptation of frames to the form of the old box-hive—tall in proportion to length and breadth, was well made, and of neat appearance. For surplus there was the ordinary cap, covering a neat honey-box with glass in each end. There were but eight frames, and it was on this account as to the size of the hive that peculiar arrangement were very easily handled. It had a sloping bottom-board with a lot of minor “ fixings” of no especial value. The frames, of course, were large. Soon after this I had the right to use the revolving frame extractor, and the Thomas hives did not suit me. I abandoned the use of them, although I had made a number besides those I bought. There is one about now, in first-rate state of preservation for having laid in the lumber-room of my barn for the past 20 years; others went for hen’s nests and chicken-boxes.

As so many were getting up new hives—patented and non-patented—your humble thought could he get up one, too—of course, an improvement on anything that he had seen or heard of!

I early became greatly interested in Mr. Gallup and his writings, of whom I may have more to say under another head; and this led me to study the so-called model—with changes and improvements, of course! May I be pardoned for giving an extract from an article on “The Hive Question,” printed over 30 years ago, descriptive of my hive, as I wish to make some comments on it in connection with other topics.

“T have made a hive on the plan of Mr. Gallup, that I believe possesses many advantages, and is capable of being used more widely, with the same size frame for all the different styles, than any hive I have prescribed. Mr. Gallup’s hive, I understand, is, about exchangeable with Mr. Langstroth—11 inches wide, 11 inches deep, 18 inches long, or as much longer as may be desired. The frames are hung across the narrow way and can use the same frames—12 in a hive—on top room on top for surplus boxes; 2d, by extending the length to any desired number of frames; frames for surplus honey may be put in each end for empting with the extractor; 3d, it can easily be made a two-story hive with the same size frames in the upper story; 4th, by having movable side-boards it may be made a non-swarmer, on Mr. Quinby’s and Mr. Alley’s principle, and piles of honey-boxes may be put on the sides and top. I have one with 15 frames, 16-pound boxes form the sides, and three 12-pound boxes on top—all enclosed in a box-hive. I have been using this design of hive, and I think that I have hit the golden mean in width and depth,—I call this hive, with its non-swarming and box arrangements, the ‘Quinpye—Reveresible—Removable Frame—Surplus—Reversible—Hive.’ It is said there is nothing in a name, but if I could only get Mr. Price’s ‘Reversible—Removable’ attachment, with the privilege of adding the same name, then I would be satisfied in adopting this compilation for the modified arrangement.”

Of course the name was intended as a burlesque on the many claims of some other hives. But I was in earnest in thinking that I had the “golden mean” in size, and a good thing in a hive that could be used in so many different ways with the same frame, but I never applied for a patent nor offered a hive or a "territory" for sale, though I had material got out in the flat for 30 hives for my own use.

Mr. Gallup had a hive made with open side and side-boxes, as described—the non-swarmer; I put two hives together endwise, and had the "long-ideal" hive. I put two side by side, with one side of each open, and had the "twin hive," and by putting one on top of the other I had the two-story hive or three stories, if desired, as I have sometimes used them.

I have recently read where the writer of the article said in effect: "Before you go into side-storing surplus arrangements extensively, first find out if you have the side-storing kind of bees." I was not long in finding out that my bees were not the side-storing kind, and all my hives except the two stories went to the lumber-room. I thought the hive was a good one and kept it in use, using some of these hives now as two-story—25 frames for extracting; and they make good supers for my chief Langstroth hives. For better wintering I made some with double walls with air-spaces.

In the interim I had found it the advantage to use the extractor, and these frames work well in it. I bought the Peabody as soon as I heard of it on the market. It looks as if it would never wear out, but I got a better one a number of years ago—the Cowan reversible.

It is undoubtedly true that there have been many improvements made upon the original Langstroth hive in the first form given to us, especially the box that contained the frames. The general use of section surplus boxes, and general advancement that has been made in bee-keeping in the last half century, demanded something different—more simple in construction, and yet retaining the same principles of the movable comb that Mr. Langstroth invented; and the great majority of the hives now in use have the same size frame, with the same relative proportions as first recommended by Mr. Langstroth, and that I believe is the way in which the Langstroth frame are in almost universal use in this country.

And where are the hives of King of Thomas, of Flushing; and of the whole list of these so-called improvements to hives? Echo answers, "Where?" We certainly hear but little from them now through the press. And their makers and inventors? Many no doubt, like Mr. Langstroth, have passed over the border to the Beyond, where they are in a place we hope, from till, envy and strife. And the rest of us old fellows—their contemporaries—must, in the nature of things, soon follow. Ontario, Canada.
Swarming—Moving Bees—Queens, Etc.

BY J. M. DAVIS.

LOOK! that's a whoppin' big swarm, whars yer cowbell? Guess I ken stop 'em.

"Oh! Tom, don't hop so excitedly, and don't punch a hole in the bottom of my wax-extractor. Just let them in. I think we'll get left behind the beat music. Hand me that little wire cage off the shelf, and come with me, no danger at all. See, here's the queen climbing this blade of grass. Ah! that's accommodating. Just moving up the grass again, Tom, they are clustering in the top of that apple-tree?"

"Wal, Kunnel, that's the fust swarm of bees I ever saw stopped without a racket. That's the prettiest and longest best swarm I ever saw, why, she is as yeeller as gold. Wat was the skrittin' in the grass fur? That's kings went up with the swarm."

"Well, Tom, you stick to your kings, loyally—but you will have to desert your culors. Queens rule here. I keep one and two and three and four and five, and nearly all the bees in the swarm, and if you want to keep them leavin' with the bees. See this one has her wing clipped."

"I declare, the idea of cuttin' off a bee's wing, Sara Jane cuts her chickens' and turkeys' wings off to keep them out of the garden; but I never'd a thought of cuttin' a bee's wing on a saw? You jist clime that tree and saw off the limb for you, Kunnel."

"Oh! never mind doing that, Tom. Please just help me move the old hive back here—that's alright. Now, kindly help me place this new hive in place of the old one, there, now place the caged queen at the entrance over at that shady corner. You will now see how I hive bees."

"Yes, and I told you Kunnel, to let me rap on the old basin, or they will lite out."

"No, Tom, you just wait, see they are coming down to the new hive on the old stand, and are going in nicely—now you may unstop the cage and let the queen go in with them. See how quick she went in; now the job is done, they will all be back in a few minutes, and soon be at work again. As you see, he's got the imported bees tight, and have their flight; so let's take a look at her ladyship, the queen.

Why, yes, they are working as nicely as any colony in the yard, although they haven't been here two hours. I will first remove the screws that hold on this frame covered with wire-cloth, you see they have all gone down. This frame is two inches deep, but when we arrived it was full of bees clustered so as to relieve the brood-chamber of as much heat as possible. In warm weather they need fresh air, therefore when we move them far, an extra space for a part of them to cluster in should be furnished, and the hive covered with wire-cloth, then there is less danger of fanning the bees, and of losing them down."

"What's thet sponge for Kunnel, tha don't cypher do tha?"

"No, Tom, that held their drinking water, see [squeezing] in there, Tom, that's a good thing. This enable them to keep the young brood alive during the journey. A few folds of old linen, or cotton cloth, answers very well soaked with water, and laid on the frames as was spoiled here.

These corrugated sticks were put in to hold the frames apart, one at each end on top and one in the center at the bottom. I will place them in this new hive as I remove the frames and then I won't be bothered with the corrugated sticks in the bottom."

"Why, Kunnel, they seem to fit jist as well in this gum as t'other. How do you hapan to git 'em so alike, four hundred miles away?"

These pieces are made and shipped all over the country: every piece fits any hive, no matter if you buy it in Australia. It would be a great help to us for all beekeepers to use a standard frame; and I will be glad to see one adopted. See, here is the queen and a fine one she is. She is just three years, or a trifle older, and you will have to rest after her sleep. Notice the shoulders and longer than t'other colony, but not so party gold-like, as t'other one, and these bees are longer too, but three strips of gold around them. T'other was nearly all gold lookin'. Say, Kunnel, what on earth is she crawling like that, do you know? She has got to rest to get her lungs all dry."

"Ha! ha! why she is depositing an egg. Tom, see, she is through, and peeping into other cells to find an empty one there, watch her."

"Now, if that ain't funny, didn't she hump that long back and crawly like, Tom. Say, Kunnel, I heerd of hens layin' two eggs a day, but I never bleved they cud do it. Look, that old huzzy is humpin' her bak agin. Well, that's three in a minute and a half, is she all eggs?"

"Just like them nearly all. I could see you had sent a box from four to four thousand eggs in a day of twenty-four hours. You see, they do not stop at night. These eggs would make a pile about as long as the queen I think."

"True, whis', and I reckon them Italian chickens and geese and turkeys an' ducks. Can't you 'port'em Kunnel?"

"We could get them, Tom, but they would be no better than yours, you prob'ly got two or three thousand bees. You see, they are in three long lines, climbing around, just going about as you'd think the queen was waving her handkerchief, and here I've been over two hours without going up to see whether she was dead or alive. I became so engrossed with my bees that I forgot everything, and I just now remember I haven't had my bread and dinner. You see she pets me some when I've been away."

"Thanks, Kunnel, I just jotted of it, Bil Johnin' sed he'd cum to my house at ten o'clock to buy my yearlings and I think I will go out an' help you. Jake is a peart lad, jist twelve yest'day an he's mitty fond of bees. I see your wife shakin' that 'kerchief at you, and you had better go, or she will be after you. Good evening, Kunnel."

"Good evening, Tom, I shall expect you."

"Good mornin', Kunnel. Jake and me hav been here two hours and Sara Jane shet we would be late."

"Good morning, Tom, and Master Jake, I am especially glad to see the little boxes, and the bees in the end. Tom, you see the bees are cross early in the morning. The sun has warmed them up now, so we will get to work, everything is ready."

"Well, Kunnel, Johnin', they mighty struck and ses he's goin' to be a bee-keeper and get some hidalan' bees."

"Alright, my boy, I will help you get started. Now bring out the wheel-barrow, and nine dry combs, while I start the smoker, I always have it handy—but use it as little as possible. I find cedar bark, well packed, lasts longer, and gives the best volume of smoke of any fuel. Here is number one, see, I gently pry off the top, and use just a little smoke, push several frames just a little nearer together, so as to get room to draw out a frame or two of the bees. You see, the bees give a quick jerk, which you see clears the comb of most of the bees, and this long turkey feather soon gets off the balance; now as we have out three frames of honey, I will put in one of the empty combs every day, I shall do a full one. Here is one full of honey, but not capped; we will leave that as it is too thin when not sealed to make a good grade of honey. It is not ripe. After extracting this honey, we will exchange the empty combs with number two, for her full combs, and so on through the apiary. Tom, draw your honey-knife across the sharp edge of the cross-piece over the uncapping can, to clear off the honey, and while the knife gets gummy put it in a bucket of water, which dissolves the honey, and every time you take off the cappings nicely. Here is a new tender comb, and I will have to turn the extractor much slower to prevent breaking the comb."

"Tom, the sum of these combs are made of black wax, and sum of white wax, what do they get the different colors?"

"All combs are like this new one when first made, but become dark with age. I can shake a comb from a jar and make it as thin as a yearling, or a piece of thistle, when the leaves are only six years old, but I get just as nice clear honey from them, as from these new ones—besides they are tough and stand more rough handling than new comb."

"Tom, Kunnel, here is a low gum. What we gon' to do here?"

"Let us see how they are getting along. Oh! nicely, they are sticking on little bits of white wax along the top cells, and are crowded with bees. Hand me that queen-excluding zinc off the wheel-barrow, and I will put on these freshly extracted combs, which will put them right to
work in the super. Jake, you run up into the extracting room and get me my empty frames for the next hive. Well, this is the last hive, and we take about four thousand pounds in ten and a half days. Now, I want to arrange cells for a few hundred queens. We will not need our smoker, as I do not breed from cross bees.

"Watt's them little yaller things you're gittin', Kunnel?"

"Queen-cells, Tom."

"They is mighty purty, Kunnel. Does the queen stick them on the little stick that way?"

No, Tom. Queens do something except deposit eggs. My little daughter, Annie Dane, makes these for me, it is just fun for her, and saves me a great deal of time, as I use hundreds of them. Now, this hebet child is only eight years old, an makes such nice little things! Looks to me like it would take a regler jneler to do sich work, how on aarth does she make them so thin and smooth at the mouth and so round and smooth?"

"I will lend you a book, written by Doolittle, that explains this fully, and let me say right here, Tom, I would not go back to the old method of queen-rearing for one thousand dollars cash. That book is worth its weight in fine gold."

"Well, Kunnel, I will put it under my pillow every nite and bring it back soon as Sara Jane and me and Jake reads it; an we will be mity proud to read it. Watt's that quill spoon, Kunnel?"

"This is to transfer the larve from the worker-cells to the queen-cells. I will show you the modus operandi. Here are eighteen cells in this hive nearly ready to cap over, and four cells that will be futher, and rather smoother. I always destroy such cells, so I will take these four, and use their royal jelly to put in these new cells—hand me the stick, Jake."

"Hey, Kunnel, here's a worm in this one, is it a moth?"

"No, Tom, it is a young queen, see I can throw them out this way, and dip up a small quantity of the royal jelly with my quill spoon, and place it in the bottom of the new queen-cells, thus newy twenty cells, and I can get the larve from the 'Berberini' imported queen. See, I remove this dummy first, and find the queen."

"There she is, Kunnel, on that frame."

"Thanks, Tom, your eyes are keen. You see I can not afford to risk dropping so fine a queen in the grass or to injure her, therefore I never take any chances. I will just take this frame and leave her in the hive. See, here is plenty larvae just the right size, about twelve to twenty-four days old. I slip my quill spoon under them this way, raise them out and slowly lower them into my queen-cells, until the point of the quill just touches the royal jelly at the bottom, and by drawing it back, the little larvae sticks to the royal jelly which is in it, and then gently ease it into place."

Now all the cells on this stick have larve in them. I will place it between these two combs of brood in super of number 50. See the stick fits tightly in this frame half filled with comb, and it will help keep the cells warm, as the bees cover these comb all the time."

"Why, Kunnel, won't the little queens fall out, with the mouths of the cells down the way? And how on aarth do you take little worker-bees an make queens outen them?"

"No, Tom, they won't fall out, the jelly holds them, and its their nature to grow with their heads down. Never horizontally, like a worker-bee. The peculiar food given them creates their shape, and they are in large perpendicular cells, transforms them into queens. Now, that I have my one hundred queen-cells stocked with larve, I will take out some ripe cells."

"Watt do you mean by ripe cells, Kunnel?"

"A ripe queen-cell is as easily distinguished as a ripe apple. See this stick of queen-cells. The points are all light-colored and pointed, these will be not be ripe for sev- eral days yet. These must be put up to-morrow. See they have blunt flat ends that are brown and rough. The bees knowing that the young queens will want to come out to-morrow, are helping them by trimming off the points of the cells. I take them off the day before they are due, and carefully place them in the half-inch holes you see in this block, with the points resting on the little wool cushions so as not to jar, or injure the young queen. I have only twelve ripe cells this time. Tom, here is what we call a queen-nursery, which is merely a very small swarm of bees—enough to cover well, two or three Langstroth combs."

See this patch of brood? I place the cells thus, just above the brood-comb, I put in temperature, no danger in pressing a Doolittle cell into a comb that way, but a very light pressure would destroy a natural cell. This nursery has been queenless two days, and will gladly accept the cell. Now here is a nursery containing a queen that I wish to take to-night. Here she is; see I remove the cork in the end of this cage, and pick her up by both wings poke her head in the hole from which I took the cork, thus. See, she went in nicely, and to keep her there, I place the end of my thumb over the hole. See, I will get about dozen worker-cells not too young. Now all are in, I replace the cork, tack on the cover, thus. Now I will put on a one-cent stamp and send them to the post-office. I will have to protect the cell, or the bees will destroy it before they miss their queen. This wire-cell protector prevents this, and by the time the young queen emerges from the cell, they will have discovered the loss and will gladly receive her. In two days she will be laying and I will ship her, give them another cell, and you done the rest.

"Well, Jake, here is the new hive with foundation, all ready to hive your swarm on. You shall have a nice queen, a descendant of the Berberini stock, as soon as your colony is ready for her, and I predict that a progressive young bee-keeper will make his start with this colony."

"Progressive Bee-Keeper."

Questions and Answers

Conducted by

Dr. C. C. Miller, Marengo, Ill.

(THE Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—Editor.)

Swarming—Long-Tongued Bees.

I take some encouragement from the letters of C. H. Harlan and F. M. Creighton, page 398, in knowing that sharp eyes are upon me with kindly hearts behind them. Mr. Harlan's statement is exceedingly interesting, and I am wondering whether he has exceptional bees or an exceptional locality. I wish he would give a little fuller light upon it. When he hives the first swarm in a new hive, if I understand him, he cuts out all queen-cells but one in the old hive, and then a little after this a swarm-issues with the young queen from the cell that was left. Now, how long after the cutting out of the cells does this swarming occur? Then he does mean that from this same old colony a third swarm will issue six or eight weeks after the issuing of the second?

Mr. Creighton thinks that long tongues would be of no advantage in his locality. He is no doubt in a very large company who think only of red clover as the one honey-plant, give value to long tongues. A correspondent in the Southland Queen speaks of a honey-plant with tubes so deep that the bees only get part of the nectar, and he thinks long tongues are needed to get it. Mr. Doolittle says, page 292, "long-tongued bees would be an advantage to those residing where red clover and other long-tubed flowers abound." (Italics mine.) Is it not possible that these long-tubed flowers are generally distributed everywhere? Does Mr. Creighton know that when he finds his bees there are no flower-tubes so deep that his bees can not reach all the nectar in them? If he does not know this, then he does not know that long-tongued bees "would store no more honey" for him. If he does know it, will he kindly tell me what he knows? But how all this does apply any hat with him, and hurrah for the bees that don't swarm, in preference to the ones that get the red clover honey. C. C. Miller.

Swarm Left After Being Hived.

At noon to-day I had a large swarm of bees, then set the hive beside the old one that the bees came from, intending, when I came home from the shop at 6 o'clock, to change places with them, putting the new one where the old one was; but at 6 o'clock there were no bees in the new hive. Do you think they went back into the old hive, or left for
the woods? The entrances both faced the same way, and were close together. The new hive contained full frames of comb with a little honey in some of them. CONNECTICUT.

Answer.—I don't know, but I'm afraid they went to the woods. At any rate, without knowing anything about the cases except that 100 large swarms after being hived had deserted their hives, I should feel pretty safe in saying that not more than one or two of the bees had gone back to the hive from which they came. You ought to be able to tell something about it by the appearance of the old colony. If the swarm did not return to it, the scarcity of bees ought to be noticed. The position of the hive had no bearing on the case, except that it would help to make the bees desert if the hive stood in the hot sun. The chief factor in inducing a swarm to desert its hive is heat. Be sure that the hive is very open at the bottom, and for a day or so it is well to have the hive in the shade if the hive does not stand in a shady place use some means to shade it, if nothing better to cover it with an armful of long grass or hay, anchored down with two or three sticks of stove-wood. Some make a practice of giving to a swarm a frame of brood.

Self-Hiving Arrangements for Swarms.

Can bees, when swarming, be transferred to a new hive by closing the opening in the old and new hive so as to be queen-tight, except a wire gauge connecting the two hives through which the queen could pass into the new hive, and the worker-bees to pass out and in as usual? If this plan would not work at all, please say what the objections would be.

Answer.—Several different arrangements have been gotten up on the principle you mention. I don't know enough to tell you exactly as to the objections, but I think none of them have given enough satisfaction to be continued.

Are Bees Taxed in Wisconsin?

Are bees assessable for taxation in Wisconsin?

Answer.—I don't know. A lawyer, or an assessor, ought to be able to tell you. There is no reason why they should not be taxed as well as other property.

 Wants to Be a Big Bee-Keeper.

I am a boy of 16, and I love to handle bees. I have an apiary of six colonies, and would like to enlarge it to 75 or 100 by next spring. I can buy bees in this county at from 50 cents to $3.00 per colony in box-hives, and I think there will be a boom in bee-keeping in this part of the country in a couple of years, as the little open field has been the one that save the existence, and the famous alfalfa is taking its place. There will be thousands of acres in alfalfa. My apiary is situated on the banks of Big Pipe creek, and its fertile valley will yield acres of alfalfa. The farmers can't get a stand of red clover any more, and almost every farmer has a patch of alfalfa started for seed, and in three years the Big Pipe valley will be all alfalfa. Will the bees work on alfalfa in this country? How can I start a big apiary here? I have the beehive and nothing will stop it but heats of colonies of bees.

MARYLAND.

Answer.—Alfalfa is grown on a large scale in the West, and many tons of alfalfa honey are secured, but I have never known of its yielding honey anywhere east of the Mississippi. To decide the matter for your locality, wait till alfalfa has been in bloom a few days then watch to see whether bees are busily engaged upon it on bright, hot days.

If you want to run your six colonies up into the hundreds, I will be advisable for you to gain a full knowledge of the business by carefully studying one or all of the books on bee-keeping you can get, and also gaining practical knowledge by actual work with the bees. By studying a good bee-book, you will learn something about the principles of bee-keeping that will allow you safely to take in your own hands the matter of increase if you do not prefer increase by natural swarming. If you want to increase from six to 75 or 100 this year, it should be mainly by purchase. Aside from what you purchase, it will hardly be advisable for you to increase the six to more than 18, and 12 would be better. Your increase of knowledge and experience should keep you in line with your bees and the coming in of the old and outrun it, and unless you have had considerable experience with bees it might be better not to increase this year, either by purchase or otherwise, to more than 25 or 50. When you have thoroughly studied your text-book there will be questions arising to trouble you, and it will be a pleasure to help you out in this department.

Any Nectar in Mullen?

Is there any nectar in the mullen-bloom? IOWA.

Answer.—I don't know. I never saw a bee at work on it, but it is not plenty where I live.

Requeening by Hiving Swarms.

I have some colonies of bees that are building up slowly, the queens being probably old or inferior. If I remove the queens and in a day or two a new swarm in with them, would you approve or disapprove of this plan of queening them? If it meets your approval, would you give me a first or second opinion on it? WASHINGTON.

Answer.—It would probably work all right. Unless the colonies are very small it would be as well to use second swarms.

The Georging Bee-Veil.

A correspondent writes in defense of the Georging bee veil, referring to page 313, and says that he has used just such a veil himself in the hottest days without infliction punishment on himself, and thinks it "the all-around best for beginners." He says:

"A beginner doesn't want a patent bee-veil, nor an expensive one, nor that is hard to make, bungle some to wear, or easily torn when worn among trees and bushes. A veil, the whole of which is made of bobbinet or cape-lace, may do very well for a regular bee-keeper, as it will keep off the meanest day ever sown or worn. But the beginner will not do so well for a man or woman needing one only occasionally, and then perhaps in climbing a tree after a swarm. Did you ever try the bee-veil, Doctor? If not, your criticism is not up to your usual grade."

I may say in reply, that I hardly see why a beginner should not have the same kind of a veil as a regular bee-keeper. The bobbinet veil I spoke of wearing is not patented, nor expensive, it is simpler to make than the Georging, and it is not so easy to make, nor is it as easy to work with, even in the hottest weather. A veil is more easily torn than cheese-cloth, but I have little trouble with its tearing, even when climbing trees. I do not know that there is likely to be clearer sailing in the apiary of the beginner than in that of the veteran. The beginner in bee-keeping is likely to have his place just as well kept as one who has kept bees for years, and in either case I should rather have a veil that requires care to prevent tearing, than one that would be uncomfortably warm.

No, I do not remember ever to have worn a veil of cheese-cloth. Neither have I ever worn one made of woolen flannel. But I know without wearing a woolen-flannel veil that it would be warmer than one of cheese-cloth. Do you really think I can not know that a cheese-cloth veil would be warmer than a woolen-flannel veil, without actually wearing it? For me the most open veil I have ever worn is a punishment on a very hot day, and I doubt that I am more sensitive in that respect than most persons. So I should not advise the general use of cheese-cloth for bee-veils, either for a beginner or a veteran. If any one is so exceptionally constituted that he will feel no inconvenience on the hottest days from a cheese-cloth veil, by all means he should use the closer, firmer material.

C. C. MILLER.

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, and use the Bee Journal as a guide to success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.
**The Home Circle.**

Conducted by Prof. A. J. Cook, Claremont, Calif.

**THE TRUE HOME THE CORNER-STONE.**

I need not say in these "Home Circle" papers—I need not say anywhere, for it surely goes in all our blessed country without saying—that the true home is the very corner-stone in the structure of society.

The child that knows no home is bereft indeed. The child that knows not the true harmonies that alone can make the true home, loses the best that can enter into the life—the soul—of any child.

I feel all this in other form before. It will bear repetition. I may wisely say it over and over. I hope my readers may take up the song and give it warm, glad utterance. Let us wake in the hearts and minds of all our dear children, the idea of the blessedness of the best home, that we may beget in them an absorbing ambition each day to be the head or centre of the very best home felicity. To this end let me have all your ears to-day as I press the importance of our home.

**SPEECH IN THE HOME.**

I am a believer—a sincere believer—in prayer. The man whose life is not braced and anchored in prayer lacks a best help to make his own life superlatively excellent, and his own home what the "Loving Father" wishes it to be. I wish we might all daily pray: "Oh, God, may the words of my mouth this day and ever be such as becometh the gospel of peace." Of course, good words mean a good heart. "Out of the abundance of the heart the mouth speaketh." So we may build up that prayer, not only within our clean heart, oh, God! But let us apply to all this by the statement of Mrs. Gleenings in the BEE-Culture that $1,059,565,787 is the annual drink-bill of our people. I hope Gleenings made a mistake. I fear it is all too true.

Oh, friends! is there not a terrible pathos in these figures?

A woman comes to our house each week to help us. She has great energy, has marked intelligence, and has a family of bright, winsome girls. She has had a hell of a home. An intemperate husband is her ill—her terrible—fortune. When drunk he is a very fiend, and no one's life is safe. She loved the father of her precious children. Over and over she received him back as the prison-doors unlocked and let him forth as sentence for repeated debauches expired. At last, in sheer despair, she has, with broken heart, sent him forth to return no more. Who of us that have been saved from such woes and anguish, can possibly appreciate the misery and despair of those hearts and that home? Who of us will not say with deeper anguish, We will do everything to remove this anachronism of our day and civilization—the saloon—from our country? And I wish here to speak of one way.

Do we joke at intemperance? Do we laugh and exclaim in merry mood as the poor, besotted wretch passes us by? Or the rather, does our face sober, and our whole demeanor tell of our sorrow and regret for the fallen soul?

Not long since I was in a Los Angeles street-car. At a stopping, we were brought to face a policeman leading a young soldier in soiled uniform, who was staggering drunk. His maudlin utterance and reeling gait caused almost all in the car to laugh, and even jokes were made at this awful sight. I wondered then—I wonder still—how any one could even think to laugh. "A soul on the dozen grade!" Or has such a scene could suggest the Eightsome word. I rode away sorrowing, and have sorrowed ever since when the picture has returned to memory.

Oh, can we not commence so early to impress our children with the horrors of drunkenness, and the awful evils of the drink habit, that they will not only abhor the saloon and all its vile belongings, but will sorrow, and speak grave words, almost before the heart is depicted?

There is another evil greater than intemperance. It is well called "the social evil," as all others sink before it. Yet who has not seen the grinace, and heard the joke even from her whom we claim to be those of Christian tendencies? Oh! fellow parents, let us pray, study, think, plan, that we may so culture and refine our dear boys and girls that they may ever walk in ways of cleanliness and purity, and that they may sorrow with inutterable sorrow as they become conscious of the ruined, hopeless lives that cloud even our American society. And may never help, by look, word, or act, to add to the gruesome company that form the sorest blot on our body politic.

**CHURCH-GOING.**

I hope there may not be too much sermonizing in this manifestos to our homes. Nearly everybody goes to church here in Claremont. The same is true of Pomona. I have heard it stated that over 90 percent of the Pomonaites, including children, are church-goers. Though Pomona has several thousand people, like Claremont she has no saloon. Church-goers and saloons do not flourish on the same soil.

One of our Claremont citizens is a nice man, and has a nice family. His wife always goes to church. She formerly brought all the children. I often remarked to Mrs. Cook, "Oh! that that man could see his mistake." Later the oldest boy ceased to come with the mother. This summer that boy with two others ran away from home. No one knew where they were for days. There was sold grief in those homes. Would not that father, who had gone to church, given the dear wife the richest of comfort? Would he not have been likely to have received inspiration that would have helped him to say better words and do better things before those bright children? Would he not, more than likely, have prevented that sorrowful episode in the home that all felt to be a disgrace?

Now I notice that the second boy is not coming, and only the little girl keeps the mother company. Here, where nearly every one goes to church, how easy to have kept the boys in church and Sunday-school. We have a model Sunday-school in which splendid men and women in prospective are being beautifully fashioned. I truly believe that if our fathers only knew how such meetings helped to make grand men and women, as well as beautiful and obedient boys and girls, not to say worthy and excellent citizens, they would soon be found of a Sunday morning leading the family to the house of worship. And, oh! how that would rejoice the yearning, lonely heart of the mother.

Two years ago I stepped off the train in the great Grand Trunk depot of Chicago. I had written our friend, Mr. York, that I would come on that train. He had written me that I was to wait till he came. It was in the early evening of Sunday. I waited long. It was not tedious. I never am lonely in such places or at such times. The people, some good book or magazine, always make the hours, like birds, fly by. Later our good friend came. He was lost from church, where he and his delightful wife always aid in the worship.

God be praised that the old American Bee Journal has a Christian editor, who fears God and desires above everything else to keep his commandments. This fact makes for the refinement and betterment of every reader of our beloved American Bee Journal.

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"Wildwood Aerie" By R. V. Goss—See page 418.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at $1.00.
To Our Shippers.

About May 1st last, we removed our business from the buildings 120-122 W. Broadway to larger and more commodious quarters at Nos. 265-267 Greenwich St., and 82, 84, 86 Murray St., and we duly sent to our friends in the trade a notice of our removal. Shortly after we vacated the premises (120-122 W. Broadway,) one Joseph M. McCaul, rented a portion of our old quarters, and hung out a sign, "Hildreth, McCaul Co., Jos. M. McCaul, Prop.," with other large signs to the effect that his business is "headquarters for honey, beeswax, maple sugar and maple syrup."

The mercantile agencies report that Jos. M. McCaul is the sole proprietor of the new business, and that he claims to have paid to one Henry P. Hildreth (who has no connection with our business,) a consideration for the use of his name.

We will not comment upon the act of leasing our old quarters and exposing thereon the sign, "Hildreth, McCaul Co.," further than to state that we have instructed our attorneys to apply for an injunction restraining the said McCaul from using the name of "Hildreth" in connection with his business in any manner whatsoever.

We value highly the good name and business we have established by many years of satisfactory dealing with our friends in the trade, and we therefore send this notice so that you may not possibly confound us in any manner with the so-called "Hildreth, McCaul Co."

Our firm name remains as heretofore, and all our business is carried on at our new quarters—

Nos. 265=267 Greenwich Street,
and Nos. 82, 84, 86 Murray St., New York, N.Y.

Respectfully yours,

HILDRETH & SEGELKEN.
AMERICAN BEE JOURNAL

July 4, 1901.

THE MODERN FARMER & BUSY BEE.

EMERSON TAYLOR ABBOTT, Editor.

A live, up-to-date Farm Journal with a General Farm Department for Dairy, Horticulture, Livestock Poultry and Veterinary, Home and General News. Edited by one who has had practical experience in every department of farm work. The product of two decades and the result of years experience and study, its rank will grow until it bids for a place in the farm world. For the busy rancher, the vocational student and the rural worker, its scope and present and future value will be seen and acknowledged.

MODERN FARMER,
ST. JOSEPH, MO.

Please mention Bee Journal when writing.

The American Poultry Journal

325 Dearborn Street, Chicago, Ill.

A Journal that is over a quarter of a century old and is still growing. Its success is due to the fact that in every department of poultry work, the fowls, hens and chickens, the price of eggs and other poultry products, the care and feeding of the birds, etc., the same is fully covered by an expert bee-man. Besides this, the editor tells all about California Agriculture and Horticulture. $1.00 per year; 6 months, $0.50; single copy, 10 cents.

The Rural Californian

Tell all about Bees in California. The yields and Price of Honey; the Pasture and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by an expert bee-man. Besides this, the editor tells all about California Agriculture and Horticulture. $1.00 per year; 6 months, $0.50; single copy, 10 cents.

Barnes' Foot Power Machinery

Read what J. L. Parent, of Charleston, N. Y., says about our Foot Power Machinery. We sell a complete line of Combine Machines, last winter, 50000 hives with 5c, 10c, 15c, 20c, 30c, 40c, 50c, 60c, 10c honey boxes, and a great deal of other work. You cannot make half the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will do." Catalog and price list free.

Poultry Book FREE, 48 pages, illustrated with a map and table description of our book, the INLAND POULTRY JOURNAL, Indianapolis, Ind. Please mention Bee Journal when writing.

1901—Bee Keepers' Supplies!

We furnish you with The A. L. Root Co.'s IITDS CATALOGues of retail or wholesale prices. We also save you freight, and ship promptly. Market prices paid for these two large catalogues. M. H. M. H. HUNTS & S. HUNT, Beloit Branch, Wayne Co., Mich. Please mention Bee Journal when writing.

BLACK BEES vs. ITALIANS.

I expect to stir up a veritable hornet's nest with what I am about to say, nevertheless here goes:

In looking over the advertisements in Glennialus in Bee-Culture and the American Bee Journal, I can not help noticing that everybody is trying to sell either Italian or queen bees (as they are always the "best"), or is just about to advertise for Italianize common black bees. I wish to make the assertion that the black or brown bee is the best bee for this locality, and for the average person who keeps a few hives and doesn't pay close attention to them.

In the first place, they always winter better here; and the reason for it, is that they have more good, sound, common-sense, and use more judgment, than the Italians, and do not


Prospects for a Large Yield.

Bees watered well throughout this country, and are very busy now making alfalfa and clover. The prospects are good for a large yield of honey. The American Bee Journal comes regularly, and is a welcome visitor. W. H. Horton, Santa Fe Co., N. Mex., June 13.

No Nectar in White Clover Bloom.

We have the finest crop of white clover bloom in this section that I ever saw, but there is not a drop of nectar in it, and as this is the only source for a honey-flow at this time the bees are starved. There has been just enough rain to enable me to make seasonable, and plenty of nice, hot, sunny days, and it does seem as though everythign was favorable, but there is no honey. Some one would like to ask the reason for this, if any one can tell.

M. D. ANDER.

EMERSON TAYLOR ABBOTT, Editor.

Dittmer's Foundation! Retail—Wholesale—Jobbing.

I use a PROCESS that produces EVERY ESSENTIAL necessary to make the HEST and MOST desirable in all respects. MY PROCESS AND AUTOMATIC MACHINES are my own inventions, which enable me to SELL FOUNDATION and WORK WAX INTO FOUNDATION FOR Cash at prices that are the lowest. Catalog giving Full Line of Supplies, with prices and samples, free on application.

BEE WAX WANTED.

GUS. DITTMER, Augusta, Wis. Please mention Bee Journal when writing.

A SMALL SNAKE.

may go through PAGES with Stich, Pencils, but не rabbit, chicken, pie, hog, horse nor bull can.

PAGE WOVES WIRE FENCE CO., ARABIAN, MICH. Please mention Bee Journal when writing.

QUEENS

QUIRIN—The QUEEN-BREEDER has now on hand, ready to mail, 500 young, long-tongued Red Clover Queens, Golden or Leather Colored. We have one of Root's best breeders from his $20, long-tongued, Red Clover Queen, and a Golden Breeder which we are told is worth $10, if there is a queen in the U. S. worth that sum. J. L. Gandy, of Humboldt, Neb., tells us that the colony having one of our queens, stored over 400 pounds (mostly comb), honey in a single season. A. L. Root's folks say that our queens are extra fine, while the editor of the American Bee Journal tells us that he has good reports from our stock from west of the Mississippi. We have years of experience in mailing and rearing Queens, Queens positively by return mail from now on. Prices for balance of season as follows:

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Extra selected, tested, the best that money can buy, $0.00.

H. G. QUIRIN, Parkertown, Ohio. Parkertown is a Money-Order Office. 27thst Please mention the Bee Journal.

BLACK BEES vs. ITALIANS.

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In the first place, they always winter better here; and the reason for it, is that they have more good, sound, common-sense, and use more judgment, than the Italians, and do not

Experiences of a Beginner.

Last fall I went to an auction sale where there were a few colonies of bees for sale, and bought one colony for the small sum of $1.00. I placed them in a box, with about two dozen frames, in all from that time until now, have only one of the for left alive to-day, and she is a complete failure. I have had no good show as the bees are doing in every respect, and were from different breeders, all the way from Richland to Washtenaw.

If any queen-breeder take exception to this, all right: but I am through buying Italian queens.

G. R. B. WATTS.

Linn Co., Oriz., June 15.

Outlook for a Fair Honey Crop.

Last March we moved our bees from Fond du Lac County to Richland County, there being but little bee pasturage in the former county, and the locality was also overstocked, consequently they have had but two fair honey crops the past two years.

There is a good outlook for a fair crop of honey in Richland County. It has been quite cool all through the feeding time, did not get very warm, but fast, and we are having warm days and nights now, with a little rain about once a week. There is plenty of clover here, but there has been in the past two years. Brook-chambers are filled with honey, and the bees are doing fine and raising brood fast. Most of the beekeepers are here for working for extracted honey, we being the only ones working exclusively for comb honey.

A. M. REYN. Richland Co., Ws., June 15.

Good Report from Michigan.

Michigan is to the front again with a large honey-yield. Last year my colonies averaged 129 lbs. each of combs, and 15 pounds each of extracted honey—the finest I have ever tasted. And now, notwithstanding the late spring, they are better than they were a few weeks last year. I did not remove the winter packing until June 1, on account of the cold weather. The bees had a hard struggle to feed the young brood up to that time. June 3 they cast their first swarm—one day earlier than last year. In just one week this young swarm had seven brood-chambers filled with honey and comb, and that without comb foundation being furnished them. To-day they have 1 brood-chamber filled, and one section and old comb cast the second swarm—larger than the first—on June 13, and has filled 36 sections of brood-chamber. My large colony—that is, seems to be the most populous—has not swarmed in two years, but it has filled 76-pound sections since June 3, and I will put 74 more on to-morrow. I do not know where they procure the honey, as I have not had time to investigate. There is white clover in abundance, but I have failed to see the first bee on its blossoms this year. I am not using any cotton-seed for reasons, but have a much better and cheaper device, which I will describe later.


Weather Hard on the Bees.

I had 18 colonies of bees, spring count, but two of them were very weak, and have since died.

The weather this spring has been the most unfavorable for many years. April came in cool, dry and cold, with only 53 hours of sunshine the whole month. May was a little better, there being only 67 hours of sunshine, and very cold, and mention the May third, May 21, and May 35 it commenced to rain, and continued cold and rainy, the bees having only about 3% of the sun this month. The weather has been very fine for the past two weeks, and although I cannot see from what source they are gathering, they are storing honey very fast.

I have had only five swarms so far this season, but they are working hard, having just started in the sections.

Basswood is very scarce here, but there are enough of white clover, and this year and white clover; also goldenrod in great abundance. I find many useful hints in the Bee Journal.

C. H. STOUT, Co. X. H., June 14.

Bees Working on White Clover.

There is an abundance of white clover, and bees are doing fine. We have had only one swarm, and have divided four colonies.

A few of the colonies have taken the new variety, nearly all of honey.

C. A. FAIRBANKS. Jones Co., Iowa, June 17.

Bees Rolling in the Honey.

My bees are just rolling in the honey now, and keep busy on both honey and swarms. I have 70 colonies in all.


Do Bees Select Their Future Home Before Swarming?

We are all interested in anything pertaining to the habits of our bees, even it. It does not have a commercial aspect; and any one having a bee section in his yard will know that the swarm is contributing something of value to natural history. Hence, the question of bees selecting their future home before swarming is not altogether without interest. Prof. Cook thinks they always do, and mentions having seen several hovering over the feeding station, and the next day a swarm took possession.

I had the temerity to question the statement that they always select their home before swarming; Mr. O. B. Griffin, of Maine, on page 111, thinks that, “in the majority of cases,” they do not. And now comes Mr. D. H. Metcalf, of Michigan, who thinks (page 157) that “first swarms always do—second swarms, sometimes do, and swarms of seeing ‘scouts’ (as I, being an old soldier, call them) investigating a bee-tree, and one where the swarm has previously appeared, who would have taken possession only he had filled the tree. This looks pretty solid, on the face of it, for the alternative side of the question, and yet it is only what the writers would call "prima facie,” or first-view, evidence. If Mr. E. C. Smith had not raised the swarm issue, and followed it up to the bee-tree, the chain of evidence would be more complete; but I would think in this case would not have been mentioned by Prof. Cook. Have you any evidence to show that the swarm was not already chosen? or some other agents upon which it might be seen? This will cover the whole point of contention.

I think you would like to ask the fundamental question: Why does a swarm cluster at all? There would be no need of it if they had already selected their home. Prof. Cook, in “To rest the queen.” I can think that the Professors were serious when he made that statement. For bees have as much sense as they...
Overstocked with Bee-Hives


Address,
EMERSON T. ABBOTT, St. Joseph, Mo.

Tennessee Queens!
Fine lot of Choice Tested Queens reared last season, daughters of select imported and select proven queens, reared 2½ miles apart, and mated to select drones, $1.50 each; untested warranted Queens, from same breeders, either strain, 75c each. All been owned more than ½ miles. None impure within 3, and but 2 within 8 miles. 2 years' experience. Discount for large orders. Good customers with dealers a specialty. JOHN M. DAVIS, Spring Hill, Tenn.

Please mention Bee Journal when writing.

Marshall Manufacturing Company.

Our Specialty is making SECTIONS, and they are the best in the market. Wisconsin BASSWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free illustrated catalog and price-list.

Marshfield Manufacturing Co., Marshfield, Wis.

Red Clover Queens

LONG-TONGUED BEES ARE DEMANDED NOW.

ONE Un tested Italian Queen FREE as a Premium for sending us TWO new subscribers to the American Bee Journal for one year (with $2; or, one Tested Queen free as a premium for sending us FOUR new subscribers with $4.00).

We have arranged with one of the oldest and best queen-breeders (having many years' experience) to rear queens for us the coming season. His bees average quite a good deal the longest tongues of any yet measured. The breeder he will use is direct from Italy, having imported her himself. Our worker-bees are large, somewhat leather-colored, very gentle, and scarcely requiring veil or smoke. They stored red clover honey last season.

All queens guaranteed to arrive in good condition, and all will be clipped, unless otherwise ordered.

CASH PRICES of these fine queens will be as follows: Un-tested, $1.00 each; Tested, $2.00 each. Send all orders to

GEORGE W. YORK & CO.
144 & 146 Erie St., CHICAGO, ILL.

Please Mention the Bee Journal when writing.

Advertisers....
I think it would have been unwise to depend upon tongue-length alone. But I do insist that the advantage of long tongues has not been proven to be exclusively associated with red clover; and it is possible—not probable, I think—that the gain from other flowers with long tubes may be greater even than from red clover.

Straining Extracted Honey.

Elis Fox gives his plan in Gleanings in Bee-Culture as follows:

I have six large barrels, holding about 600 pounds each, arranged around my extracting-room on a strong bench, with heads out, and manholes-gates near the bottom. Each barrel is supplied with a fine cheese-clot strainer tied securely over the head. I draw the extract from the extra-fine, 8 ordinary, water-pail, and transmit to these barrels through the strainers. This takes out the minutest specks. It is left in these barrels from one to six weeks (according to the time in the season of extracting), when it is drawn off into 9-pound cans, caps screwed down tight, and placed in cases, and securely nailed, ready for shipment. I have practiced this method for the past 20 years, and have never had a word of fault found.

ITALIAN QUEENS FREE

BY RETURN MAIL.

For sending us One New Subscriber for one year, to the American Bee Journal, with $1.00, we will send by return mail, a fine Untested Italian Queen free as a premium. This offer is made only to our present regular subscribers.

We will mail one of the above queens alone for 75 cents: or 3 for $2.10.

Please do not conflict the above offer with the one on another page which refers to Red Clover Queens. For sending us two new subscribers, and $2.00, we will mail free as a premium an Untested Red Clover Italian Queen.

GEORGE W. YORK & CO.

144 & 146 Erie St.
CHICAGO, ILL.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, June 3.—New comb honey has not yet reached this market. It would sell at 1500 lb if choice white, and the ambers at 1280c.

The market is entirely bare with exception of a few cases of a lot that we had held for us, expecting it would be needed. Ad vises that shipment will not be possible until July 1. Very little trading is being done in extracted, as large dealers will not buy more than at low figures; some sales of ambers have been made, 400c. for 50-lb. boxes; delivery; white is held at 55c. Beeswax sells at 32c.

R. A. BURNETT & Co.

CINCINNATI, May 17.—No demand for comb honey. The trade shows no sign of improvement. Extracted very dull; sales are more or less forced; lower prices from 1/2 to 1 cent per pound.

C. H. W. WEER.

BOSTON, June 14.—There is practically no comb honey in our market, and owing to warm weather very little call for it. Are expecting some new comb early next month. Market for extracted dull, at 95c. and 97c.

BLAKE, SCOTT & LEE.

OMAHA, May 1.—Comb honey, extra white, 24-frame cases, per case, $5.60; No. 1, $5.35; amber, $5.60; No. 2, $5.45; ambers, $5.85. We buy and ship comb.

NEW YORK, June 1.—Extracted honey is exceedingly dull and very little moving. We quote for the present: Single amber, 5566c.; amber, 55685c. Some demand for comb honey at uncharged prices. New crop is now being sold in the market, and sold at from 1250c. up; according to quality and style. Lisboa, 75c.; South America, 50c.

ALBANY, N. Y., June 18.—Honey market is dull with no receipts or stocks and little demand. It is between seasons now. Prospect of good year. Honey is being received from the South. But there are left, the greater portion having been killed by foul brood exterminators. H. E. WRIGHT.

DETROIT, June 24.—Very few sales of honey, but prices are well maintained. The new crop will start out at good prices, and with little old honey to interfere will be in fair demand at 275c. and $1.

M. H. HUNT & SON.

BUFFALO, June 20.—Honey not wanted till cool, fall weather. Little old honey here and dragging, 60c. Extracted not wanted. Fruit takes place of honey now.

BATTISON & Co.

KANSAS CITY, June 14.—Very little old honey on our market but what is damaged by being grated. Sales are light at 15c. per lb for best grade No. 1 Colorado. Amber, 18c. Beeswax firm at 25c.

W. R. CROSWELL PRODUCER CO.,

Successors to C. C. Clemens & Co.

SAN FRANCISCO, June 5.—White comb, 115c. at 125c. Estates; amber, amber, $1.50 to $2.25; we quote:

Extracted, white, 55c.; light amber, 45c.; dark amber, 60c. Beeswax, 35c. plus.

Dealers are very bearish in their ideas, but are not securing much honey at the prices they name. In a small way to special trade an advance on quotations is being realized.

At the Pan-American

I can accommodate five or six persons who wish to spend the Pan-American, Rates reasonable. Good car service half a block away. If any wish to correspond in advance, address,

M. RICKARD,

244 Dodge Street, BUFFALO, N. Y.

(Mr. Ricks is White-Honey man, and will take good care of his patrons.—Editor.)
24th Year Dadant's Foundation. 24th Year

We guarantee satisfaction. ** ** Why does it sell so well? ** **

What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SADDING, No LOSS. PATENT WEED PROCESS SHEETING.

Because it has always given better satisfaction than any other. Because in 23 years there have been no complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Very fine pure-bred BARRIED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised, The classic in Bee-Culture—Price, $1.25, by mail.

Beeswax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

Please mention Bee Journal when writing.

ITALIAN.

BEES, QUEENS, and Belgian Hares ....

We have some choice stock for sale at the following prices:

One Un-tested Queen 3.00
One Tested Queen 1.50
One Select Tested Queen 10.00
One Breeder 1.00
One-Comb Nucleus 5.00
No Queen 1.00
One Fair Belgian Hares 3.00

Write for Catalog:
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ITALIAN QUEENS, warranted

Tested. $1.00 Un-tested, 75 cents, by return mail.
RIVER FOREST APIARIES,

21st Mention the American Bee Journal.

We have a large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR Hives, Extractors OR ANYTHING YOU WANT IN THE BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of THE AMERICAN BEE-KEEPER free. Address, THE W. T. FALCONER MFG. CO., JAMESTOWN, N. Y.

F S W. M. GERRISH, East Nottingham, N. H., carries a full line of our goods at catalog prices. Order of him and save freight.

Please mention Bee Journal when writing.

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ITALIAN QUEENS, warranted

Tested. $1.00 Un-tested, 75 cents, by return mail.
RIVER FOREST APIARIES,

21st Mention the American Bee Journal.

I ARISE

ARISE

To say to the readers of the BEE JOURNAL that

DOOLITTLE...

has concluded to sell QUEENS in their season during 1901, at the following prices:

1 Un-tested Queen $1.00
3 Un-tested Queens 2.25
3 Tested Queen 1.25
3 Tested Queens 3.00
1 select tested queen 1.50
select tested queen 2.00
1 Select Tested Queen 10.00
last year's rearing, 2 1/2
Extra select bred, the very best - .50

Circular free giving particulars regarding each class of Queens, conditions, etc. Address, G. M. DOOLITTLE, 11 A.M. Borodino, Onondaga Co., N. Y.

Please mention Bee Journal when writing.

A Bee-Keeper's Paradise.

En route to El Paso.—I have just come from a county about 40 miles square that has more bee-keepers to the square mile than any other locality of its size I ever visited. The inhabitants talk bees at the hotels, on the streets, and everywhere, just as farmers talk crops and business in the North. This county produces more honey than any equal area, I believe, in the United States. Some say that its yearly output is a whole trainload of honey; but many aver that this is too low, and that two whole trainloads would come nearer the truth. Of course this great amount doesn't go all in one lot, but in large and small shipments.

The average per colony is high, and there is a honey crop every season. It is estimated that in this one county, outside of the towns, nearly one-half the population are bee-keepers.

The great bulk of the honey is of the very finest, and some of it is literally water-white. There are thousands and thousands of acres of honey-plants on cheap land; and bees—there are not enough to gather it all.

The bees commence swarming early in the spring; and, when the main honey-flow commences, actually stop swarming, destroy cells, kill off the drones, and commence business. Did you ever hear the like of it before? You say, “No, and no one else.” Well, I think I can prove every statement: but for the present I am not at liberty to give the place or other details; but very shortly I'll tell the whole story, with some fine pictures.

This is only one of the good things in store for readers of Gleanings in Bee-Culture. Send 15 cents for three months' trial or 25 cents for six months' trial, or $1.00 for one year and one un-tested Italian Queen. Send $2.00 and we will send Gleanings one year and one of our Red Clover Queens. Speak quick if you want one.

THE A. I. ROOT CO., Medina, Ohio.

GEORGE W. YORK & CO. 144 & 146 Erie Street, CHICAGO, ILL., are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO. Send to them for their free Catalog.
W. W. Whipple, His Apiary and Kingbird Destroyer.—(See page 434.)
American Bee Journal

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IMPORTANT NOTICES.
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The Wrapper-Label Date of this paper indicates the first of the month to which your subscription is paid. For instance, "Dec. 1" on your label shows that it is paid to the end of December, 1900.

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Advertising Rates will be given upon application.

National Bee-Keeper's Association.

OBJECTS:
To promote and protect the interests of its members.
To prevent the adulteration of honey.
To prosecute dishonest honey-dealers.

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Eugene Secor, General Manager and Treasurer, Forest City, Iowa.

Membership dues, $1.00 a year.

Weekly Budget.

Hot Weather Hint.

"Hot weather? Yes; but really not. Compared with weather twice as hot. Find comfort, then, in quoting this. And you'll pull through victorious:

For instance, while you gasp and pant
And try to catch your breath,

--With soda, cream, and lemonade,
The heat at ninety in the shade—
Just calmly and coolly.

These same degrees, with ninety more
On top of them, and so concede.

"The weather won't cool indeed!"

—J. Whitney Riley.

Mr. C. A. Hatch, writing June 22, had this to say:

"We had poor luck in wintering bees the past winter, so we have not an extra-large force of honey-gatherers. I think fully 50 percent of the bees in this part of Wisconsin died. My own loss was about 20 percent—perhaps the heaviest for many years. We hope for better luck next time."

Dr. A. B. Mason, secretary of the National Bee-Keeper's Association, has been appointed judge of the bee and honey department of the Ohio Exposition, which will be held at Columbus next month. A total of only $74 is to be awarded in that department, so the Doctor ought not to have a very long or hard job.

The Doctor wrote us, July 1, as follows about his trip:

"No honey from the world of white clover we have, but sweet clover is getting nicely in bloom, and the bees are busy on it. We have colonies with two, three, and four and a half stories, to give room to the bees, and running over at that, and no disposition to swarm."

Mr. W. W. Whipple and his apiary, of Arapahoe Co., Colo., are shown on our first page this week. Mr. W. is a native of Michigan, and in his boyhood days learned the printing business. He then drifted into western Iowa, in the early fifties, and went to Colorado in 1869, during the Pike's Peak gold excitement. He has worked as printer, job printer, miner, and lastly as a bee-keeper, and will probably follow the latter occupation the remainder of his days.

Mr. Whipple has met with varied success in bee-keeping, but is fairly well satisfied, although he says the bee-keeper has no picnic in Colorado. He must be constantly on his guard to keep clear of that pest—foul brood. When he first went to his present locality there were many farmers who had a few colonies of bees, and when a colony died they would not know the cause, or even that it was dead (and in most cases it was foul brood that killed it), until the colony was robbed of its stores, and they were spread far and near, making trouble for the bee-keepers. Bee-keeping there would be a pleasant and profitable business if it were not for this, so Mr. Whipple says.

They are expecting a good alfalfa honey season this year, as the crop of alfalfa is very forward and seems likely to bloom abun-
dantly. He expected the flow to be about June 20, when there would be busy days, and he thought it possible the "hum of the bees in the alfalfa bloom" could be heard on all sides.

FREE as a Premium
A Foster Stylographic Pen.

This pen consists of a hard rubber holder, tapering to a round point, and as well as a fine nib. The point and needle of the pen are made of platinum, alloyed with a substance of great durability which are not affected by the action of any ordinary solvents.

They hold sufficient ink to write 10,000 words, and do not leak, if kept dry.

As they make a line of uniform width at all times, they are unsuited for ruling purposes.

Pens are furnished in neat paper boxes. Each pen is accompanied with full directions, filler and cleaner.

FOSTER MANUFACTURING PEN ON THE MARKET.

19,000 Postmasters use this kind of a pen. The Editor of the American Bee Journal uses the "Foster." You should have one also.

How to Get a "Foster"

FREE.

Send two new subscribers to the American Bee Journal for one year, with $1.00, or send $1.00 for the pen and your own subscription to the American Bee Journal for one year; or, for $1.00 we will mail the pen alone.

Address,

President of the Pen
GEORGE W. YORK & CO.,
144 & 146 Erie Street, Chicago, Ill.

The Bee-Keepers' Guide;
Or, Manual of the Apiary.

By Prof. A. J. Cook.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published to-day. Fatty illustrated, and all written in the most fascinating style. The book also takes the beekeeper to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without The Bee-Keeper's Guide.

This 16th and latest edition of Prof. Cook's magnificent book of 460 pages, has neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

Given for TWO New Subscribers.

The following offer is made to PRESENT subscribers only, and is also extended to the two new subscribers—simply the Bee Journal for one year.

Send us TWO new subscribers to the Bee Journal with $2,000, and we will mail you a copy of Prof. Cook's book FREE as a premium, Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for both for only $1.75. But surely anybody can get only TWO NEW subscribers to the Bee Journal for a year, and then get the book as a premium. Let every body try for it. Will YOU have one?

GEORGE W. YORK & CO.,
144 & 146 Erie Street.
CHICAGO, ILL.
**Are You a Member of the National Bee-Keepers’ Association?** If not, you should be. But perhaps you would like to know more about being a member. If so, write to the general manager, Mr. Eugene Secor, Forest City, Iowa, for circulars explaining the objects and work of the Association.

You will remember that last week we began the effort to secure a membership of an even 1000 by the time of the Buffalo convention, in September. Send in the dollars for dues, so we can begin to publish the list of names. We want to receive over 200 during July and August. Are you a member of the Association?

**The Buffalo Convention.—**We have received the following notice and information in reference to the next meeting of the National Bee-Keepers’ Association at Buffalo.

**STATION B, TOLEDO, OHIO, JULY 1.**

Mr. Enslow.—Please say in the American Bee Journal that the next convention of the National Bee-Keepers’ Association will be held in the Soldiers’ and Sailors’ Room of the Society of Natural Sciences, on the 10th, 11th and 12th of next September, commencing on the evening of the 10th. The place of meeting is in the Buffalo Library Building, corner of Washington and Clinton Streets, near the business centre of the city.

Railroad rates will vary in the different passenger association territories from one cent a mile each way to one and one-third for the round trip. Each one can readily learn the rate on enquiry at his or her railroad station.

The Buffalo bee-keepers will try to provide entertainment at reasonable rates for all attending the convention who will notify Mr. Sidney S. Steeper, Holland, N. Y., by Sept. 2. In a letter recently received from Mr. Steeper, he says:

> "I want all who can to come for we wish to make the Buffalo meeting the most pleasant and instructive one that was ever held in America. We will have the cooperation of all the scientific as well as the school boards; then he names some professional men who are interested in one specialty, and will be at the convention to help; and a long letter from Mr. Herrisher closes by saying, "Call upon me for whatever further assistance you may need to render," and Mr. Penton, ex-president of the Erie County Bee-Keeper’s Society, and others, have promised to do all they can to provide for the comfort of the delegates.

As stated in my previous convention notice in the American Bee Journal, there will be no fixed program, and no papers, the time being fully occupied in asking, answering, and discussing questions, except that on the evening of the 12th there will be a joint session of our Association and the American Pomological Society, to discuss "The Mutual Relations of Bee-Keepers and Fruit Growers," Prof. Beach, of the New York Agricultural Experiment Station, and Prof. Fletcher, of the Central Experiment Farm of the Dominion of Canada, will help talk for the bee at that session. It is hoped that much good will result to fruit-growers and bee-keepers from this joint session.

If any bee-keeper who cannot attend the convention has any questions he would like to have answered at the convention, will send them to me, I will see that they are presented. Made this same request in my previous communication, and perhaps you will remember of writing me to the effect that with such a request in all the bee-papers I would be deluged with questions, and in the last week’s American Bee Journal you talk very nicely editorially on the same subject, and still I’ve not received a single question, except about 30 I’ve sent myself, and I have several more in my mind that I’m going to send to the secretary.

A. B. MARSTON, Sec.

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**In-Breeding,** as treated by C. P. Dadant in this journal, seems to puzzle Deacon Hard-scrabble, a bright writer who has suddenly appeared in the horizon of the American Bee-Keeper. He is confused at the two statements that nature abhors in-breeding, and that 'in natural conditions a colony may be several miles from other bees and probably requires all the drones that it may produce.' He didn’t notice that "may be," says Deacon. You know there are exceptions to all rules, and nature doesn’t in all cases find things to her liking. She’ll remedy that by planting a colony at such swarming-time between the two districts so that the drones can pass the distance between.

**Several Laying Queens in One Hive,**—Swarthmore says in Glenings in Bee-Culture that the secret of success in having several laying queens kept throughout the season in one hive, lies in the giving them all at one time to bees that have been queenless for but three days. "An indefinite number of queens may be confined in boxes or cages arranged in such a way that none can come in contact, yet allowing the bees freedom to go and come, to do as they will."

**Watercress Honey.—**W. A. D. Perd reports in the British Bee Journal that he gets quite a quantity of honey of very good quality from watercress bloom. He says the bees store very fast from this source, and will fill a super in a few days. We have never heard of watercress yielding honey in this country. Perhaps some of our readers can report on it. We understand that watercress is shipped to Chicago by the barrel, being used as greens.

The Illinois State Fair premium list for 1901 is now issued. A copy of it can be had by addressing W. C. Garrard, Secretary, Springfield, Ill. It will be the 45th annual exhibition, under the auspices of the Illinois State Board of Agriculture.

Under the heading, "Bees and Honey," we find the following list of premiums offered, which are "open to the world."

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<tr>
<th>Award</th>
<th>Description</th>
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<td>1st 2nd 3rd</td>
<td>12 or more pounds of white honey from different flowers</td>
<td>8 5 3</td>
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<tr>
<td>4th 5th 6th</td>
<td>12 or more pounds of amber or dark honey from different flowers</td>
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<td>7th 8th 9th</td>
<td>White clover comb honey, 12 to 24 pounds</td>
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<td>Case of sweet clover comb honey, 12 to 24 pounds</td>
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<td>Casewood comb honey, 12 to 24 pounds</td>
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<td>22nd 23rd 24th</td>
<td>Frame of comb honey for extracting</td>
<td>5 3 2</td>
</tr>
<tr>
<td>25th 26th 27th</td>
<td>Display of candied honey</td>
<td>20 15 10</td>
</tr>
<tr>
<td>28th 29th 30th</td>
<td>Display of beeswax</td>
<td>15 10 5</td>
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<tr>
<td>31st 32nd 33rd</td>
<td>One-frame observatory hive</td>
<td>4 3 2</td>
</tr>
<tr>
<td>34th 35th 36th</td>
<td>One-frame observatory hive gilded Italian bees</td>
<td>4 3 2</td>
</tr>
<tr>
<td>37th 38th 39th</td>
<td>One-frame observatory hive Carniolan bees</td>
<td>4 3 2</td>
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**Honey-vinegar, 1 gallon, with recipe for making.**

**Honey-treacle, 1 gallon, with recipe for making.**

**Display of designs in honey of beeswax.**

The judges will be governed by the code of rules adopted by the Illinois State Bee-Keeper’s Association. 300 pounds will receive full score for quantity in displays of comb and extracted honey, and 200 points in displays of candied honey. 50 pounds will receive full score for quantity in display of beeswax. Only one entry will be allowed by each exhibitor for any one premium. There is over $300 offered to bee-keepers in the above list. For some years there have been very creditable apiarian exhibits at the Illinois Fair, and we trust that this year will be no exception. All who can possibly arrange to do so, should begin to plan to make an exhibit. The State Fair will be held at Springfield Sept. 30 to Oct. 5.

**Hot Weather for Honey.—**Editor Root says that in the Salt River valley, Arizona, the bee-keepers want the heat to be from 95 to 110 in the shade to get the best results in honey storing. When the temperature is below 90 there is quite a perceptible decrease in the inflow of honey. "Apparently," he says, "the Arizonians want more heat than we of the North. Yet this year’s hot weather, and the hottest nights, seem to be the best in the North for a big flow."
Storing Comb Honey and Surplus Combs.

BY G. M. DOOLITTLE.

A CORRESPONDENT wishes me to tell, through the American Bee Journal, how I would fix for storing comb honey and surplus combs in some building already on a new place he has just moved to, where this equipment is necessary. As I quite frequently have this question or similar ones asked, I will gladly comply with the request.

For a honey-room the first thing necessary to know is that there is a good foundation under that part selected for the room, and sleepers of suitable strength, so that when we happen to place several tons therein, there will be no danger from breaking down. Knowing this, the next thing is to make the room mouse-proof. This I would have cost me $200. I had to tell the owner of the very inch of it with tin, for the filth from vermin about honey is not to be tolerated at all. Having the room mouse-proof, all that is necessary afterward is to be sure the door is kept shut when not in use.

It is not to be expected this room in the southwest corner of the building, and paint the outside of the two walls which come next to it, black, or some very dark color, so that the rays of the sun may be so absorbed as to heat the honey-room as much as possible, as the hotter and dryer it is when off the hive, the better it will ripen and keep afterward.

The door to the room should be on the side next the general entrance to the building, so as to save as much travel and lugging as possible. Then there should be two windows in the room, one on the south and one on the north, which are to be opened on warm, dry days, so as to ventilate thoroughly the room and pile of honey. Over these windows, on the outside, is to be placed wire-cloth, so their efforts being directed toward the open windows, where the fresh scent of the honey comes, and, by so fixing, your room is kept clear of bees, flies, and other insects all the while.

In hanging the door for this honey-room, do not make the mistake that some do, of having it swing into the honey-room, for if you do you will regret it some year when you have a bountiful crop of honey, as it will be greatly in the way at such times, and more or less at all times. Let it swing out into the main building, and hang it so that when you wish, it will swing clear against the side of the room, thus being entirely out of the way.

On either side of the room fix a platform for the section honey, which should be at least six inches above the floor. This platform should be built nearly as solid as the floor has been, and should be so arranged that the air can circulate up between and around each section or tier of sections. Or if you store the honey away in the supers, then, no matter what style of super you may use, this platform is to be so arranged, that each super is separated from its neighbor an inch or so at the bottom, top, and all around, so that the air can circulate through and all about the honey. In cutting this out, leave as little wax as possible, for it costs little more to have it so your crop is always growing better, instead of becoming of less value, and after once fixed, the labor required for universally sending off a good article is not so great as it is to fix up that which has partly spoiled after its production.

Then you wish your honey stored and piled as above, so that the fumes of burning sulphur, or something of a similar nature, can penetrate the whole pile, should it be necessary. The greater the distance on the top of your frame is long, using as many of these as you think you will ever have use for. Now nail strips of stuff, 2½ feet long by five inches wide to theseصدي، لتسمح لهم أن يسوخوا في داخل هذه الديون. Let the distance between each strip form one to two inches greater than the depth of your frame, so as to give sufficient room to manipulate the frames handily. Three inches from the ends of these strips run a partition clear across the space, to separate them from one another, and from the other side, two combs, which partition is to have close-fitting narrow doors placed in it, spaced so as to be most convenient. Close up the ends, and see that top, bottom, and sides are as tight as possible, so that in fumigating there shall be as little waste of the gases as may be.

Now hang in the combs whenever you have any not occupied by the bees from any reason, and see that all have this use, and then let the bees rove afterward somewhere else. As often as any signs of worms are found, put in a pot of burning sulphur, close the doors, and the work is done.

Onondaga Co., N. Y.

Is a $200 Queen a Fake?—Queen Values.

BY DR. C. C. MILLER.

On page 391, G. M. Doolittle has gone beyond anything I have seen in print in showing that there may be justifiable confidence in placing a queen in a box, no matter where she was obtained. Granting his premises, the 10 pounds of honey and the 4,000 queens, it is hard to get away from his conclusion that we have $3,750 as the worth of that queen.

Coupled with that is a repetition of the strong intimation in page 392 that a queen in business when they advertise that they have a $200 queen. Mr. Doolittle refers to it as being like the work of a fakir, and says a fakir is a "street vender." Looking at the dictionary I find that a faké-r or a street vender and a faké-r is "one who originates a fake, humbug, or swindling contrivance." Mr. Doolittle's line of argument is somewhat hazy, but clearly discernible through the haze is the intimation of dishonesty on the part of the A. I. Root Co., for it says, "There is no value in a dollar. If that be true, then there is no value in $200, and he should hardly find fault with attaching to a queen a price of "no value," but he seems to object to a queen "having only a dollar-and-cent value attached to her," and says, "the simple saying that this queen is worth $200 without any qualification... expresses no value, save that which comes from the wear and tear of the lungs doing the hawking." Elsewhere he says, "But not to appear as a fakir, we should know that the queen has real value in the work accomplished by her bees and those from her queen daughters, putting that work out to the world as her real worth, rather than saying the value is merely a dollar or a dollar and a half.

It is not entirely clear just what it is to which Mr. Doolittle is making objection, but it sounds a little as if he were objecting to placing upon an article a value in dollars and cents. Surely he can hardly object to a thing which is already in the public eye necessary to the transaction of business without which the wheels of commerce would stand still. Mr. Doolittle himself puts a dollar-and-cent price on the queens he sends out. O. L. Hershiser told me he got a queen for $50 from Mr. Doolittle, and he told me she was worth $50 to a breeder. What wrong was there in that? The dollar is the unit of value, and there is no other way by which he could in so few words express the value he placed upon that queen than to say how many dollars she was worth. And if it was right for him to say she was worth $50 because her progeny were beautiful (I saw them, and they were beauties), is it wrong to say another queen is worth $250 if she really possesses such value? Again, on page 580 of the American Bee Journal, H. G. Omolad advertises a golden Breeder from Doolittle, saying that Doolittle says, "If there is a breeder of golden bees in the U. S. worth $100,
this one is worth that sum." Notwithstanding the condition attached, there is the value "at so many dollars." There seems no impropriety in the universal custom of naming values in dollars and cents, the only question being whether the article is to be sold at the price named. The fact that some one else may lyingly say he has a queen worth $1000 when she is not worth one-tenth of that sum, although it may have some bearing upon the policy of the case, has none upon its honesty. And it is the honesty rather than the supremacy of the A. J. Root Co. against which Mr. Doolittle is training his guns.

If he thinks $300 is too large a valuation for the queen in question, he has a right to say so, and to show cause why it is not so. The present valuation appears to be based upon length of tongue and increased harvests. Taking Mr. Doolittle's figures and using a simple proportion, we have $3,750 is to $200 as 10 pounds is to 85; ounces. So according to his valuation, one queen is worth $3,750, but the queen in question, and one out of four of them makes an increase of a little more than half a pound in the annual harvest, then $300 is none too high a valuation to place upon such a queen. McHenry Co., Ill.

Co-operation—What it Has Accomplished for Our Bee-Keepers.

Read at the Longmont meeting of the Colorado State Bee-Keepers Association, April 30, 1901.

BY W. L. PORTER.

I PRESUME there are few bee-keepers present who have not been thinking of a plan by which we may sell our honey and buy our supplies in a co-operative way. The fact that we are so far from markets in the East, where our honey is to be sold, makes it necessary that we should sell our honey in a combined way. Freights are so high that we must ship our honey in car-load lots.

Over two years ago the State Association called a special session of the membership for the purpose of organizing a co-operative association. On investigation it was found that, to do business under the statutes of Colorado, it was necessary to form a stock company. Hence the bee-keepers organized a limited partnership with a stock company with a capital of $10,000, a share being $200. It was stated that we should call this the "Colorado Honey-Producers' Association." A constitution and by-laws were adopted and the Association was incorporated in January, 1899.

Before co-operation was entered into, the tendency was for the price of honey to be lower each year. For ten years I have noticed this to be the case, so that in 1897 I was compelled to sell my crop of fine honey at $1.70 for 24 pound cases. At this time the Denver Bee-Keepers' Association decided that something must be done to better this condition. We advanced a small sum of money and one of our number opened a correspondence with parties in the East. At the same time we pledged our honey, provided we could get the best price for it, to the credit of the stock company, and pay cash on delivery, if satisfactory. We were successful in getting buyers to come on and we sold our honey in the far East at better prices than we could otherwise have realized.

The Colorado Honey-Producers' Association, upon opening for business, found it a difficult task to get the honey together, as it was very much scattered through the country. We have one or two places with a warehouse, and a room was rented. The first year, the manager was at the wareroom two days in a week to receive the honey, and it was brought and placed on deposit, a receipt being issued for the same, and the honey was kept fully insured. There was some opposition from the commission houses, as they thought we would have all the honey-business and leave them out. But at present they are very friendly, as they say the price of honey is more stable since we have organized the company, and a chance to make a steady profit. They have found it a convenience: when they have a shipping order to fill, they know where they can get the honey to fill it, and can see the honey delivered, and get just what they want.

At this point I wish to make it clear that none of the bee-keepers understand that it would be to their advantage to sell through the Association. They were also skeptical as to receiving any rebate.

Perhaps it would be well for me to explain here that at the first meeting of the Association, it was voted that one-half of the dividend should go to the stockholders, and the other half to be divided pro rata per case of honey. This was found to be an unjust division as some of the stockholders did not sell any honey through the Association. Yet when the adjustment was made the man who had a ten-dollar share got $8.50 dividend. So at the annual meeting, 1900, the by-laws were changed so that Sec. 10 reads:

"Any surplus money accruing and above the expenses of the Association shall be divided as follows:

1. A dividend of one-dollars shall be paid on each share of stock issued.

2. The balance of any surplus money remaining after said dividend has been declared shall be returned to the stockholders in proportion to the amount of commission paid them by the Association during the year, said dividends to be paid and returned to the stockholders previous to August 1 of the year in which surplus accrues."

As you will see by this plan, it is to the stockholder's interest to sell as much of his honey crop through the Association as possible, as by so doing it would not only increase the volume of the business, but also increase the price paid to him. At the close of the meeting we were authorized to raise the price paid for as much silver as we have been able to obtain in a miner's place where it was always on display, insurance was carried on the honey while in storage, and the honey was sold and loaded on the cars, the money collected for it, and all of this was done at an expense of only $5 per carload in the way of transportation to the stockholders. This proved a very satisfactory to the members. It was also satisfactory to the buyers, as it is better for them to have the honey stored where it can be displayed and they can see it before buying. It saves them five or six months in getting to the market to buy the honey, and when the honey is stored at the railroad, it can be easily loaded at short notice.

The producer is benefited in another way. When a buyer comes here he is at an expense of at least $10 per day, and that must be paid by the producer. Our difficulties have not been with competitors or in finding market for honey, but to inspire faith in the doubting bee-keeper. Instead of its being hard to find a market for the honey, it has been hard to get the honey to fill the demand created. But the two years' business has given us confidence. I don't think any man who has given his patronage, that would wish to sell outside another year. Of course we must take into consideration that last year was very favorable for us. Honey was scarce in most sections, and we most of the time we were able to sell at the open percent commission to run the business. But should we have an unfavorable year, there are still great advantages in associated work. Buyers, when honey is cheap and plenty East, will not come here as they did last year and we can take our honey East and lay it down in the market at whatever price the producer is receiving. We are on an equality with him, and the rare excellence of our honey is in our favor.

I have now given you a brief history of the workings of the Colorado Honey-Producers Association. I wish now to point out the results of co-operation, and the obstacles in the way. As to the possibilities, I believe we can find a market through the Association for all honey except that which is required to fill our local demands. Each bee-keeper should try to encourage his consumer, and sell as much in this way as he can, at the same time holding up the market. After that is done, he can market his remaining crop through the Association cheaper than he can do it himself. This has been my experience in the past few years. It took a good deal of time to deliver in small lots to my customers, and very often I had to stop in the midst of urgent business to deliver a single case of honey. This is just what we have now done through the Association, and receive a better price. This can be true of every bee-keeper in the State. To illustrate this I wish to give you an example: Lately, a bee-keeper in a remote place, wrote us that he had a large amount of comb honey. He had sent agents to Denver several times, and they could not place the honey. He finally put it in our hands. By the time the honey reached Denver, it was sold in the East at good figures, and the draft was at the bank in Denver to pay for it. I consider quick work.

I wish now to point out some of the difficulties: It costs money to do this work. To go into the office you will see on file hundreds of letters that have been promptly answered, telegrams and correspondence that have been expensive. We issue, also, a crop report. We receive bulletins, posting us on the crop of honey from Colorado, Utah and Arizona. This report is paid for. Money, money, is what it takes to carry on business. We
seem to have some members who do not understand this, and more that are not members that don't understand it. They come to us like this: What are the prospects for honey this year, and what is the condition of the market? I answer, "Well, we have the hives, and the bees, and as I have described you, I wish to sell my honey myself. I don't wish to undersell you. What price shall I hold at?" All this information he comes for has cost the Association hard money. But he goes away without offering even to consider the cooperation a success, all must co-operate, otherwise there is friction. To have a successful, intelligent and just co-operation throughout the State, there should be a certain other plan in the larger districts, and the Association should take and place for storage and should send a printed notice to each member, saying on what day or days of the week he will receive the honey. Then on the designated days (say Friday and Saturday) he can come there and take the honey. One day in the week will make the expense light, and in small towns storage can be rented quite cheaply.

When the honey is ready he should see to loading the car and billing it out. All this to be done under instructions from the general manager. This expense of rent, salary, insurance and of loading should be paid from the general office.

The expense of all points in Eastern Colorado is the same, hence all will pay to the central office the same per cent for selling the honey. That is, the general office pays all expense for storage, salary, etc., and the producers in all parts of the State pay the same for handling. To be sure to have all expense paid, we will say we make the commission ten percent. Then at the annual meeting in January, we have the business summed up and a rebate declared to each member, proportioned according to commission he has paid. The local associations of such members as have a local association only have a part of a car it can be loaded and shipped to the association in the next town. In such a case, there is a charge of five dollars for switching the part to the next association, but has only part of a car, and in case each town has only a part of a car this expense should be borne equally by them.

Co-operation carried on in this way will enable the general manager to do all the corresponding with parties East, and perhaps sending a few telegrams. Unless there is harmony among the local associations, as I have described, there must be friction, the same as we had when selling as individuals. Buyers will take advantage of this and we lose the good that should come through co-operation.

So far, I have not touched on the supply business. This can be managed the same as the honey. If local points wish part of a car, they can have the car so loaded at the central office. On the part can be loaded and part at another, and pay a little extra to have the car moved to the next point, and parties at this point should pay the extra charge. I would also suggest that the local managers be directors and should meet in conjunction with the board of directors, elected by the Association. The membership fee of the local association should be the same—ten dollars. This should go to the State Honey-Producers Association. A point would be known by letter, as for an illustration, Longmont, Division A, and next locality that organizes, Division B. Such an organization throughout Colorado will enable us to do business in a very intelligent way. The expense for negotiating the sale, the local manager can call on himself and do for very little more than for a part of the crop. The price can be maintained because we are not selling against each other. The larger we can make our Association, the more widely will our influence be felt throughout the country.

We soon would be a concern that would be known by every buyer throughout the land. We would be a powerful factor in selling honey in our own State, as we would have strength enough to push our products into the most remote parts of the country. We would sell them, as they are, in the same district. The local association can be managed the same as for a local brand, which, when established, would be always called for, as people would know exactly what to order, and would know that the honey would be the same each time.

The market that we are to be is one that will be patronized by all. It is surely true that an organization of this kind will benefit every bee-keeper that produces a pound of honey to sell, whether he supports the organization or not.

No. 7.--Practical Lessons for Beginners in Bee-Culture.

By J. D. Gehring.

(Continued from page 48.)

Mr. BOND drove into our yard the next morning while we were yet at the breakfast table, and proceeded to unhitch his team without waiting for an invitation. Hastily excusing myself to my family, I went out and accompanied him to the watering-trough, about 50 feet distant from his wagon. As he came to meet me he began the following explanation:

"I'm on hand earlier than you expected, you see. Well, when I got home last night and explained things about my plan, which I tied up in a sheet to the bees in the hive, and Harry had done some bee-business, too. 'The little fellow,' she said, while playing in the grove, found a large swarm of bees hanging to a limb of a small tree: and we hived it.' Well, when I went to look at it, the idea came into my head like a flash, that the best thing for me to do with that swarm would be to bring it along with me this morning and get you to put it into one of your hives. This I could take it back home with me in the evening. There it is," he concluded, pointing to the wagon. "I tied it up in a sheet to keep the bees in the hive. But some of them got out in spite of my precaution.

"I expected they would attack me and the horses, but they didn't; they were marvellous kind. The hive, and somehow managed to keep up with the wagon till I got here. But, you see, more and more kept coming out. That's the reason why I was in such a hurry to get the horses unhitched."

"That's a new idea of yours, Mr. Bond," I replied.

"But I'm thinking that the scheme will not work out as you have planned, because I have an idea of my own about it: I'll furnish the hive and tell you what to do, but I shall expect you to do the rest. This I could take it back home with me in the evening, however, it will be proper to put your horses in the stable, for the job will have to be done right here; or near by, at any rate.

"Yes, you see, Mr. Bond," I continued, seeing by a look in his face that he did not approve of my plan, "if we carry that bundle of yours over to the apiary and you do the transferring there, all these bees here that are flying around where they know the hive to be, will be lost to the swarm, because bee can't make them follow you if you can't afford, for, as you see, there are now several thousand outside, and more coming out all the time. There is no help for it, that I see, and no time to be thrown away in discussing the question. Therefore, while I go and get a hive, and my smoker, and a bee-veil for you, you hurry those horses into the stable. I'll be back inside of five minutes."

"Well, to tell the story as briefly as possible, inside of 30 minutes Mr. Bond's bees were contentedly humming within and near one of my 10-frame hives. Quite naturally he regarded those flying bees as very dangerous enemies, but I explained to him that bees thus situated never, or seldom, attack any one.

After carefully adjusting his bee-veil I assisted Mr. Bond in lifting his unique bundle out of the wagon, and together we carried it to a shady corner of the barn-yard, where I had placed my hive. Soon the sky began to show now that I was giving my instructions—until the corners of the sheet and laid, the ends out flat, one end toward the new hive and as close as possible up to the bee-entrance. Then he tipped the box over and carefully held it in place, side, with the open end, bottom, toward and near to the bee-entrance of the new hive. In the top-end of the box-hive had been bored two one-inch holes for bee-escapes, which were plugged. Wilddriving these plugs Mr. Bond began blowing smoke
into the hive, thus driving the bees out and toward the receiving-hive.

One thing, however, I did to assist Mr. Bond: With a small copper scoop, such as grocers use in handling teas, which I had brought from the house with me. I took a few bees from the body of the box-hive to the new hive, putting two scoop-fulls in among the frames. This established bee-connection between the two hives; and the bees were not slow in seeing it.

I remember, however, that I did not forget to direct my pupil's attention to the fact that there was only one right way to use that scoop without irritating the bees and killing many of them.

I wouldn't do all to scoop up bees as you would potatoes," I explained to Mr. Bond. "It has to be done in such a gentle, careful, and yet quick way, that the bees will not find out they are being scooped.

"And if you—" Mr. Bond said. "And if most of the bees had been driven out of his hive, there are quite a lot of bees inside that box of yours yet, and the best way to get them out and into the new hive is to tip your box bottom-side up.

They will soon all be on the wing, unless the queen is yet with them—that, however, is not probable. In a few minutes you will see that these, and the bees flying about where the wagon stands, will have united, and gradually all of them will go in where the queen is with the swarm.

But this evening you can take them home with you safely and in good shape; but not done up in a sheet, Mr. Bond. I'll show you a better way."

"What do you do that for?" asked Mr. Bond, when he saw me set a piece of board slantingly against the front of the new hive.

"I do that," I replied, "in order that the bees that fly out will mark the location of the hive before leaving it. It is not necessary to do this when a swarm is first hived. Being else, a hive of bees is moved from one location to another, or a colony is transferred from one hive to another and the location changed, it is always best to take this precaution; because without it many of the worker-bees will never be able to find their way back to it. I have after leaving it from a location they have never marked.

"Well, Mr. Bond, you have had a very important practical lesson in bee-keeping this morning; and without getting any stings, I believe. We are now ready for something else. I hope you will learn about drones to-day. I presume you remember what I said yesterday about looking after drone-brood in the parent hive of that swarm we hived. Well, that's where you will get your next lesson.

"Here you see the lesson that's before you now." I said to Mr. Bond, as he was getting to the super behind the frame of the old hive, after I had removed the cover."

"That super has to be removed before we can properly proceed with our drone-lesson. That is plainly apparent to both of us. Here you see the drone-brood, and if you learn one of the important lessons in bee-keeping. It is something that can't be avoided without detriment either by the great or small bee-keeper. If you should conclude to remove the weight of it, or put upon it surplus honey, let me help you learn how to do it. It is not a pleasant lesson, but that which is necessary in the hive."

"All right, I'm ready!" exclaimed Mr. Bond, enthusiastically. "What shall I do first? Smoke into the hive to make them still?"

"No," I replied, "the bees in this hive are nearly all baby-bees and don't require heroic treatment. The first thing is, to pry the frames loose from the super with this chisel. This will make a rush toward the drone, but give them a little smoke. They are rather timid, and easily subdued.

Then you lift the super off and set it down on top of the other. Remember to put it on with the bottom of the super upward."

"But in setting it down please be careful that none of the bees on the under side are crushed. That can be avoided by setting the super down rather slowly, and moving it carefully as you give the little things time to get out of the way.

"Be careful now, Mr. Bond." I cautioned, when he bent down to lift the super. "Make sure that you get a good hold at each end before you lift it; because if your hold slips, you may have another fracas with my bees, worse than the first."

"I thought you said, just a minute ago, that baby-bees wouldn't sting," remarked Mr. Bond, looking up, his eyes twinkling mischievously.

"I beg your pardon, Mr. Bond; but I did not say that, exactly. Such an event as your dropping that super was not then thought of. I think there are lots of bees in that super, and in the hive, too, that are old enough to sting if you hurt them and smash their treasures." "Besides that, Mr. Bond, I wish to impress this upon your mind to serve you in the future as a bee-keeper: Bees rank very high in the insect world; in the degree of intelligence they possess. I have always been guided by that idea—which to me is a fact—in any manner of managing my bees. I believe that bees—young bees—can be spoiled for life after ill-treatment; about as babies in general are prepared for the world at the beginning almost as soon as they are born. Now, right here we have a good illustration, which I shall use in order to fix the principle of the matter upon your mind.

(To be continued.)

Questions and Answers

Conducted by DR. O. C. MILLER, Marion, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail—EDITOR.]

Swarming-Time Troubles.

What is the matter with me or my bees? I have had eleven swarms and have but two left. They all settled in the best possible case and the swarms which have come out again the same day, and others the next day. Some I put in the third time and then they went away. I clipped the wings of one queen, and still they went away and got her.

My hives are of my own make—Langstroth size, made of white pine with white poplar frames, and foundation starters.

ILLINOIS.

ANSWER. I don't know what is the trouble, but can make a pretty safe guess. The great probability is that your bees would not stay in the hive because it was too hot for them. A cool, shady place for the swarm will help matters. Even in a dense shade it may be so close, with so little chance for a breeze, that I have known combs to melt down in a hive where the sun never shone. On a very hot day, after a swarm is hived, it helps to cool them off to sprinkle well the hive with water. Perhaps more than anything else it is important to see that there is abundant ventilation in the hive. Raise the hive on blocks half an inch to an inch, and at least for a day or two leave the cover partly open, so the air can pass readily through the hive from bottom to top. If the hive must be out in the sun, provide shade for it in some way. Boards laid across the top and front will do it. Give an inch or two of a regular shade-board. An armful of long grass laid on top, held down by two or three sticks of firewood, will answer a good purpose. Some give a frame of brood to a swarm. They are not so likely to desert brood.

I can hardly think the bees absconded without that clipped queen, or some other queen. They may have gone back to their old hive; they may have gone into another hive; or they may have gone off with a young queen which joined them.

A Half-Dozen Questions.

1. How do you separate the honey from the comb in old combs, without an extractor?

2. What is a Van Deusen wax-tube? What is it like, and used for?

3. How do you fasten foundation in shallow extracting frames, 5x18 inches with a groove in the middle of the top-bar, and how do you use wax and rosin in fastening foundation?

4. There was an article in the American Bee Journal of June 6, by F. Greiner, on the management of out-apiaries, where he furnishes them a new hive with six Langstroth frames, with starters. (The supers, he says, should be put over an excluder, which, however, may be taken off after a week's time.) What is the super for? I suppose it has been on the hive and he is putting it back.

5. I have some Langstroth frames with thick top-bars,
and grooved for wedges. When the wedges are taken out, doesn't the partition come out and make the frames of no account? It looked that way to me.


Answers.—1. I don't know of any satisfactory way except to let the bees empty out the honey. Of course, you can melt the whole business, but you will not get a nice article of honey.

2. One of the bee-supply catalogues, says of the Van Deurst hive: This is a very convenient tool for fastening foundation by the melted-wax plan. It is a tin tube for holding and running out melted wax.

3. Slip the edge of the foundation into the groove, then run melted wax along, or drop a few drops at intervals. Anodiftung of bees, packing, and put the string down into the hive beside the foundation. You can use wax and rosin half and half, but it is much better to use pure wax. Years ago I used wax and resin, and when I wanted to melt up an old comb I had to throw away the upper part, for I didn't want wax mixed with resin.

4. The super is for the bees to store surplus in. The excluder is to keep the queens from going up into the super. After the brood-nest is established in the lower story the excluder can be taken away, but of course the supers remain.

5. I don't see why the partition should come out when the wedge is taken out, and I don't see that it would matter much if it did. What do you want to take the wedge out for? The comb is to be built by the bees and last a lifetime. If the time should ever come that you would want to replace the comb with foundation, I think you would want a new frame, too, I have had comb that had been melted from the frame, and I have put old combs into new frames, but I don't remember ever putting foundation into old frames.

6. I think they are not liked as well as formerly. For my own use I much prefer no bevel.

**Newly-Hived Swarms Deserving.**

I have had two large swarms. Of the first one I put some comb in the frames before I hived it, and a couple of hours afterward they left. On examination I found the comb had broken from its fastenings, and lay in the bottom of the hive. The second I let go a week before disturbing, and then only to straighten the comb, of which there was a large quantity partly filled with brood and honey. Two days afterward they left the hive; after settling in the new hive, and they are apparently contented. On examining the hives, I saw that they had broken down—a piece about six inches square. The weather is warm. Do you think it the right thing to work with them in hot weather? The hive they left had a double handful of bees, packing, which are coming in. Would they develop a queen? I have no frame of bees to give them.

**Indian.**

Answer.—There is very little for doubt that there was no trouble except that the hive was insufferably hot. At all times it is important that a newly-hived swarm shall be kept cool and well ventilated, but the remarkably hot spell that occurred at the time you mention made it especially emphatic. Ordinarily a swarm is safe to remain after the queen has begun laying, but in such exceptionally hot weather results of breaking down may be sufficient to drive the bees out of a hive in which even a good start has been made. The breaking down of that comb did not drive the bees out of the hive, but the heat was made noticeable for the comb to break down was what did the business.

Yes, a double handful of bees may rear a queen if they have eggs or larvae less than three days old, but it is not likely to be a very good queen reared by so small a number of bees. It is, however, possible for brood to be kept in such scorching weather than one reared by the same number of bees in cooler weather.

As to its being right to work with bees in hot weather, if there is anything to be done with them the hotter the better so far as the bees are concerned. The only thing against the hot weather is the discomfort of the bee-keeper. As I write this the thermometer stands 99 degrees in the shade with a chance that it may be higher later in the day, and I am eager to get out to work at the bees. But that does not say that the bees should be kept as hot as possible in their hives. Raise the hives half an inch to an inch from the bottom-board by putting a block under each corner. It may be well to raise a hive still higher when a swarm is hived, and the cover may be left partly off for two or three days, so that a draft of air can pass directly through the hive. Sprinkling the hive with cold water will bring temporary relief. In the case of a swarm which left the hive after occupying it a week, the probability is that there would have been no such desertion if the weather had been normal, or if you had raised the hive.

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**The Afterthought.**

The "Old Reliable" seen through New and Unreliable Glasses.

By E. E. Hasty, Sta. B Rural, Toledo, O.

MR. DONALDSON'S SWARM-CATCHERS.

Nice-looking swarm-catchers for a nice-looking apiary, and a nice report Mr. Donaldson makes of their success. Pages 305, 512. Other swarm-catchers of the same patent have been known to me for years—very much the same. The sound less than thunder, and no sight less flamboyant than a regiment of soldiers marching close by, would be altogether sure of attention.

WATER, POLLEN, AND HONEY.

Man's mouth calls for two indispensables—food and drink; and therefore he easily forgets that the bee's mouth calls for three indispensable—water, pollen, and honey. It appears that when he supplies the two former abundantly, and they can not find the latter in the fields, nuclei swarm out at a terrible rate, and he, perchance, scratches his head and can't imagine what's up. Page 315.

THAT PROPOLIS CHAP.

Aha! That chap offered 25 cents a pound for propolis because he didn't intend to use it. Would you believe the price high to get many offers; and figured (correctly) that some of them would consent to the bargain of pay on delivery. Page 322.

NATIVE BEEDEES NOT ALWAYS BEST.

The maxins that the native breeds of a country are the most fit for that country (as per page 323) is liable to some very heavy discounts. That which is the most fit to run wild is also not the most valuable for commerce. Again, aboriginal fitness is often only the lack of severe competition. Most countries have their native rats; but they all have to yield to the Norwey rat when he comes around. Most countries have the pirate who does not hold his own; but they all have to yield to the English sparrow when he comes around. South America has a great many species of honey-storing bees (Meliponas, Trizonas, etc.), but they will doubtless yield the ground, to a great extent, to the foreign bee with which we are familiar. The same may apply to breed as well as to species. Had South America a breed of Apis mellifera it might be nearly on a level with the Meliponas and Trizonas, and much inferior, even on its own soil, to the foreigner.

**Comments on Dr. McLane's Suggestions.**

I incline to tell the doctor (Dr. McLane, page 324) that if he mixes a pound of honey with a quart of water it will be likely to get spoiled long before a family will take it up a spoonful at a dose. Say one-fourth of the quantities. Canton flower to hold honey on the skin for medicinal objects, eh? Thanks. But when honey is used for stings it will hardly do to have it in the nap of flannel, as the main object then is to keep the pores of the skin from letting in air.

**Mr. Doolittle and Our Country.**

Anent Mr. Doolittle's lost $1,400,000,000. I'm glad the old motto has been amended. It used to be, "Figures can not lie." Now it reads, "Figures seldom do anything else but lie." Not quite sure we need the amendment this time. Thousands go pleasures in Europe with full pockets and come home with empty pockets. Millions of cash have been sent here for investment, won large profits, and then went home, and all. Many millions every year are sent abroad as interest on all sorts of bonds and things—and that's the last of those millions. Once in awhile a rich American (Waldorf Astor fashion) expatriates himself, millions and all,
The Home Circle.

Conducted by Prof. A. J. Cook, Claremont, Cal.

The Kalamazoo of California.

I have spent Sunday in the Kalamazoo of Southern California. Some one will say Pasadena, but it is not. It is even more to my mind than is lovely Pasadena. It is none other than

BEAUTIFUL REDLANDS.

As we look up from San Bernardino to the East the Sierra Madre Mountains form a U, and the incomparable city of Redlands nestles right in the bend of the arch. San Bernardino Mountain, "Old Gray Back," the highest mountain of Southern California, ever stands close by, and ever looks down in kindly manner on the valley. The Smiley brothers—Alfred II. and Albert K.—visited this place years ago, and sighted a thin, barren hill rising high up on the southwest of the town, and overlooking a deep pass to the south, through which the Southern Pacific Railroad trends as it stretches eastward between the two great peaks, San Bernardino and San Jacinto.

These great-hearted and far-seeing brothers, whom to know is to love, at one saw the possibilities of what are now famous and successful places. They purchased the barren hill-site, carried thither brains, taste, water, cultivation, and all kinds of beautiful plants, and to-day those old, barren hill-sides are transformed into marvels of beauty. To stand on "Smiley Heights" upon those magnificent grounds is to have a wealth of beautiful and thriving orange orchards known to the world, is to view a scene of incomparable beauty.

I hardly need to say that all Redlanders take pains in adorning their home grounds, and homes. All this touches the refinement and sweetness of the life and heart. I have been privileged to look in upon those homes, and share their hospitality. Theirs are such homes, and theirs such home-circles, as taste and beauty must ever fashion. Oh, that there were more Smileys to set the pace, and more laymen to follow in their wake, that we might have more of beauty and loveliness about our homes; that we might have more of cheer and beauty about us. I think the world of those have grown upon the lovely homes often almost hidden amidst the most beautiful and thriving orange orchards known to the world, is to view a scene of incomparable beauty.

I hope to visit the lovely city of Redlands and to be privileged to see for myself when and if the "Hymn of the Bees in the Apple-Tree Bloom" comes out. If you can not get your hands upon a second-hand copy of our Wood Binder, or hear me whistle jubilantly as I cut the great fleshly stems, that seem to regard Jonathan's goody as they stretch up in a night. I commiserate the home that has not its asparagus garden.

Asparagus.

I sometimes wonder if the peas are jealous as they see me look so eagerly out for the asparagus plants, or hear me whistle jubilantly as I cut the great fleshly stems, that seem to rival Jonathan's goody as they stretch up in a night. I commiserate the home that has not its asparagus garden.

Our Wood Binder (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of $1.00 for your Bee Journal subscription a full year in advance, we will mail you a Wood Binder free—if you will mention it.

"The Hymn of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugenio Secor, and music by Dr. Miller. It is the only song some be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hymn." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one year's yearly subscription to the American Bee Journal at $1.00.

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get our Journal and who may be some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hymn." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one year's yearly subscription to the American Bee Journal at $1.00.

Oftener still, a rich American sends millions to a worthless foreign count—and thus, in a daughter hands them small furnishings. If we could let this together without any rebate we should get quite a total, sure enough. Glad we have a country big enough to stand it all—stand it all as ox in pasture stands the loss of blood the flies take—stand it all and, indeed, and, perhaps, profit. And sometimes a major instead of a minor among the parts of speech. Page 306.
To Our Shippers.

About May 1st last, we removed our business from the buildings 120-122 W. Broadway to larger and more commodious quarters at Nos. 265-267 Greenwich St., and 82, 84, 86 Murray St., and we duly sent to our friends in the trade a notice of our removal. Shortly after we vacated the premises (120-122 W. Broadway,) one Joseph M. McCaul, rented a portion of our old quarters, and hung out a sign, "Hildreth, McCaul Co., Jos. M. McCaul, Prop.," with other large signs to the effect that his business is "headquarters for honey, beeswax, maple sugar and maple syrup."

The mercantile agencies report that Jos. M. McCaul is the sole proprietor of the new business, and that he claims to have paid to one Henry P. Hildreth (who has no connection with our business,) a consideration for the use of his name.

We will not comment upon the act of leasing our old quarters and exposing thereon the sign, "Hildreth, McCaul Co.," further than to state that we have instructed our attorneys to apply for an injunction restraining the said McCaul from using the name of "Hildreth" in connection with his business in any manner whatsoever.

We value highly the good name and business we have established by many years of satisfactory dealing with our friends in the trade, and we therefore send this notice so that you may not possibly confound us in any manner with the so-called "Hildreth, McCaul Co."

Our firm name remains as heretofore, and all our business is carried on at our new quarters—

Nos. 265-267 Greenwich Street,
and Nos. 82, 84, 86 Murray St., New York, N.Y.

Respectfully yours,

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GUS DITTMER, Augusta, Wis.

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Our stock is so carefully bred and selected, as to secure carloads of Locality, free from foul brood and other bee diseases. Prices: 1 untested Queen, $1.50, 6 for $7.50; best imported Queens, $6.00; fair imported Queens, $3.50.

ADAM L. PICKARD.

1897.

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Of O. P. Hyde & Son, Hutto, Texas, IS FOR SALE.

This establishment consists of three entire apiaries, 500 nuclei, and everything connected with the business. Hyde's superior long-tongued stock of straight Goldenflecke and light home bred 3-banded, have no superior for sale. Comfortable quarters, prices, cause for selling, etc., made known on application. If interested write at once.

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2-frame nucleus with Untested Queen, $2.00, purchaser paying express charges.

Naperville, Ill., May 28, 1911.

Dear Sir:—Bees arrived in good condition. Transferred them to hive and gave them honey. Have reinforced them with hatching brood. Are working when not too cold. Have right number of hives for a week. Alaske and white queen are yielding well now.

E. K. MEREDITH, Batavia, Ill.

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Untested. $3.75 $4.00 $7.00

Tested. 1.25 6 90 1.00

Select Tested. 2.00 90 1.00

ITALIANS, which leaves descriptive list free. D. J. BLOCHER, Pearl City, Ill.

2Atf Please mention the Bee Journal.

Prospects for a Large Honey-Flow.

The prospect is good for a large honey-flow this year for the following reasons: 1. It has been a warm spring; 2. The weather has been a week. Alaske and white queen are yielding well, now. Wood Co., Wis., June 29.

Jan. H. KNOTTS.

April Weather Hard on Bees.

I put 42 colonies of bees into winter quarters, and 40 of them came through safely, but one died in April of spring dwindling. April was a very hard month on bees, only 14 days out of the first 25 being sunny. On April 6 I lost my 29 colonies of bees from Bigsby to this place, and there were not 30 days in March that the bees did not go out foraging. This year there were five days in succession that no bees were flying. John T. COOK.


White Clover Dried Up.

White clover is about dried up, three weeks ahead of its usual time. Basins is just beginning. It won’t tell what will yield yet, but it looks well.

E. F. JOHNSON.

Den Co., Wis., July 1.

Finds Bee-keeping a Pleasure.

I was born in Hillsdale Co., Mich., April 16, 1889, and lived on a farm until about 18 years of age, when I began attending high school in Hillsdale. From that time until now I have been in the school system as student or teacher.

In the fall of 1906 I married Miss Mazie E. Harmon, of Mason County, Ohio, because of the lack of opportunities of school work, my health began to give way, and we decided to locate on a fruit farm. So here we are in the midst of the Persimmon and Huckleberry locality, with more than a hundred trees to look after. We have daily mail delivery, telephone connections, and are pleasantly located.

During the fall of 1896, while making a small business transaction with one of my neighbors, he proposed to turn three colonies of bees over to me in the deal. I knew nothing about bees, that is, so far as management was concerned, but I have a honey-tooth, and am somewhat curious to learn the habits of plants, insects, etc., so the deal was made. The neighbor agreed to deliver the bees and pack them for us, which he did as he agreed, but he packed them too tight.

Of course, as soon as I purchased some bees I began reading everything I could find on that subject, getting ready to manage them the next spring. Spring came, and one fine day my neighbor came to unpack the bees and get me started. As I said before, he had packed them too tight, and all were smothered. This was a blow, but the bees were dead. My neighbor was perplexed and disappointed, and of course I was. But he left me the honey, and gave me another colony in a very poor box-hive, and I began to work with my bees.

During last summer, I drained the hive, and I hired the new swarm on the old stand, and soon transferred the old colony to a movable-frame hive. I did not get much surplus last season, but bought another good colony in the fall, and

I am Now Prepared to fill orders promptly for Untested Queens reared from a breeder of the HUTCHINSON SUPERIOR STOCK, or a select GOLDEN breed of the best quality, with a charge of $25 each; $4.00 for 6, or $7.50 per dozen.

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22A1f
Creek, Warren Co., N. C.

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16A1f MINNEAPOLIS, MINN.

Please mention Bee Journal when writing.

Some Kinks in Bee-Keeping.

Take a piece of fine wire-cloth over the valve on the smoker bellows. This will keep other people from spoiling the spring by sticking their fingers through, as well as to serve to keep bees, etc., from getting in and preventing the valve from closing.

In wiring frames for the tack slanting, then fasten the first end of the wire to the bottom, and the last one to the top. Driving the tack draws the wire tight. The "B R C" book says, "Do not have it tight," but with an experience over 10,000 frames this season shows that the tighter the wire the more good it does.

Two horizontal wires seem to be enough even with large smokers, and except to hold the whole weight of the bees.

If one end is held against the bottom, put the spacing staples on the bottom and the end of the top by so doing one will avoid smashing bees when lifting the frames out in a hurry. This is the old method used by the Coggshall and other rapid workers. These staples should be used on all frames, either short top-bar or not. They also keep the ends from getting stuck fast at the bottom.

A pair of bicycle pants guards when at work in the apiary, and thus keep the bees from getting inside of your trousers.

Always give the visiting small boy (and the big ones, too,) a nectar and honey. When they know that they can get it by going when the owner is there, they will not visit his apiary for it when they leave. HARRY HOWE.

June 18.

Big Clover Crop—Bees Booming.

We have the biggest crop of white clover that I ever saw. Bees are booming, and I am putting on the second size. L. HIGGINS.


An Old Time Honey-Flow in Ohio.

The past spring here was a very poor one, and we have not been able to stock much of our nuclei the second time.

We are having a busy honey-flow for the first and two other districts and we speculate it very much. The prospect for its continuance is good. H. H. QUINN.


Bees, Bears and Turtles in the Mangrove Swamps.

Bees are in fair condition, but the honey season is very late here, and little honey has been stored yet.

I have moved over apriaries to the mangrove swamps, where we elevated the stands about seven feet above ground, so as to be sure they have them above water in case of a gale. I am now fixing to move 150 more colonies to one of another mangrove swamp, where there are about 140 acres of solid mangrove trees within a mile of the bees. You can imagine what a job it is to build stands seven feet above the ground for 150 colonies, and have room to work with them. Also to build a barred fire fence around that is bear tight and bull strong.

Bears are quite plentiful here. W. A. Martin and I are both of the opinion that the bears that come from Mr. Prang's home the other day, and upon investigating found two bears and bear cubs in the swamp and took the caves, that would weigh about 25 pounds each. Mr. Martin took the caves to Ft. Pierce, where he sold them for $10. He

packed them all on the summer stands for winter. Two of them came through the winter in good condition, and the other one not so good. They have warmed, and all are working well on clover now.

I consider that the knowledge gained and the pleasure derived from the bees pay well for the venture, and I expect to raise some fine honey this year, and continue to study the habits of the little bees. D. STOWELL.


California! If you care to know of its Fruits, Flowers, the Valley and Resources, send for a sample copy of California's Favorite Pages.

The Pacific Rural Press.
The leading Agricultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

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120 Market Street, 
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Please mention Bee Journal when writing.

$1.00 to Buffalo and Return $1.00 via the Nickel Plate Road from Chicago, for the Pan-American Exposition. Tickets on sale daily, good leaving Buffalo up to midnight of the 10th day from and including date of sale. Also tickets on sale at Buffalo and return at $16.00 for the round trip, with 15-day limit, including date of sale. $2.00 Chicago to Buffalo and return, good for 30 days.

Tickets Chicago, New York and return at special reduced rates. Write John Y. Calahan, General Agent, 111 Adams St., Chicago, for full particulars and folder showing time of trains, etc.

16A34

AMERICAN BEE JOURNAL.
July 11, 1905.
TENNESSEE QUEENS! Fine lot of Choice Tested Queens reared last season, daughters of select imported and select golden queens, reared 3% miles apart, and mated to distinctly Italian stock, $1.50 each; assorted warranted Queens, from same breeding, other strains, 75c each. No bees reared nearer than 3% miles. None impure within 3, and but few within 5 miles. FRED W. MUTH & CO., Spring Hill, Tenn. Please mention Bee Journal when writing.

Standard Bred Queens.
Acme of Perfection.
Not a Hybrid Among Them.

IMPROVED STRAIN GOLDEN ITALIANS.
World-wide reputation. 75 cents each for $4.00.
Long-Tongued 3-Banded Italians bred from stock whose tongues measured 35-100 inch. These are the red clover busters of America.

$1.00 each, or 6 for $5.00. Safe arrival guaranteed. Catalog on request.

Headquarters for Bee-Keepers Supplies, S. W. Cor. Front and Walnut Sts Catalog on application.

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Branch, G. B. Lewis Co., 19 S. Alabama St., Indianapolis, Ind. Excellent shipping facilities and very low freight rates for Southern and Eastern territories.

BEE-KEEPERS’ SUPPLIES.
THE FINEST IN THE WORLD.
Our New 1901 Fifty-Two Page Catalog Ready.
Send for a copy. It is free.

25 cents Cash paid for Beeswax.
This is a good time to send in your Bees-
 wax. We are paying 25 cents a pound—
CASH—for best yellow,
on its receipt, or 25 cents in trade. Impure wax not taken at any price.
Address as follows, very plainly,
GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

Our Specialty is making SECTIONS, and they are the best in the market.
Wisconsin BASSWOOD is the right kind for them. We have a full line of BEE-
SUPPLIES. Write for free illustrated catalog and price-list.

Marshall Manufacturing Company.

Red Clover Queens

Long-Tongued Bees are Demanded Now.

ONE Untested Italian Queen FREE as a Premium for sending us TWO new subscribers to the American Bee Journal for one year (with $2; or, one Tested Queen free as a premium for sending us FOUR new subscribers with $4.00).

We have arranged with one of the oldest and best queen-breeders (having many years’ experience) to rear queens for us this coming season. His bees average quite a good deal the longest tongues of any yet measured. The Breeder he will use is direct from Italy, having imported him himself. Her worker-bees are large, somewhat leather-colored, very gentle, and scarcely requiring vein or smoke. They store the clover honey last season.

All queens guaranteed to arrive in good condition, and all will be clipped, unless otherwise ordered.

CASH PRICES of these fine queens will be as follows: Untested, $1.00 each; Tested, $2.00 each. Send all orders to

GEORGE W. YORK & CO. 144 & 146 Erie St., CHICAGO, ILL.

Please Mention the Bee Journal when writing to Advertisers....

Supersede and Control of Queens.
Dr. C. C. Miller says in the American Bee-
Keeper: It is undoubtedly cheaper to let the bees themselves do the superseding than to replace queens. Superseding others, either home-reared or purchased; but the wise bee-keeper will still keep the whole matter under his control by superseding all poor stock and encouraging the good. From time to time he will seek to improve by introducing fresh stock from the best breeder he can, and not at that. He will keep tab on the performance of every colony, and be able to tell you just what the progeny of each of the queens did during that season or year, and what is likely to happen to them; and knowing this, he will know from which queen he is to rear. This matter of keeping a careful record of the performances of each colony is at the foundation of building up an apiary that is to bring in the best results. Bee-keepers do not care to keep any such record:

If you have never given the matter any attention, perhaps it may be well to recall some facts that you have probably noticed without carefully considering their bearing. You may have noticed that, as a rule, the colonies most given to swarming have not been among the best for storing surplus, and that those which have made the best super records have not wasted much time in swarming. If you have paid no attention to this, but have left the bees to run their own way, the bees most given to swarming are the ones that have given you increase almost entirely.

AMERICAN BEE JOURNAL.
Langstroth on... The Honey-Bee
Revised by Dadant—1900 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee-Journal—Chas. Dadant & Son. Each subject is clearly and thorley explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.25, or club it with the American Bee Journal for one year—both for $1.75; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

GEORGE W. YORK & CO.
14 & 16 Erie Street, * CHICAGO, ILL.

AMERICAN BEE JOURNAL July 11, 1901.

while your best colonies have given no increase. Don't you see that such a course, continued indefinitely, will inevitably result in ruinous bees. By keeping matters in your own control, you can make the current run the other way.

Introducing Queens With Tobacco-Smoke.

Here are instructions that I am sending out this year for introducing queens, and guaranteeing the safe introduction. After giving notice of the date when the queens will be sent, as follows:

As soon as you receive this notice, remove the queen from the colony to which you expect to introduce the new queen. When she arrives, put her away in a safe place until after sundown, just at dusk, then light your smoker, and when it is well going put in a pillow of smoking-tobacco, put on the cover, puff until you get an odor of tobacco, then puff with two good puffs into the entrance of the hive. Wait two or three minutes, then send in another good puff, remove the cover, drive the bees down with a puff of smoke, open the cage and allow the queen to run down between the combs, following her with a puff of smoke, and put on the cover. Half an hour later, light up the smoker again, putting in the tobacco as before, and blow two more good puffs in at the entrance. If no honey is coming in, feed the colony a pint of syrup each night from the inside of the hive, but don’t disturb the brood-nest for four or five days.—Bee-Keeper’s Review.

Weight of Wax-Scales.

E. F. Robinson gives this interesting bit of information in the Canadian Bee-Journal:

While making a display of the natural history of the bee a few weeks ago, I took the trouble to sort out a lot of wax-scales from some bee refuse, and arranged these natural scales, into the word WAX, but before doing so I weighed a number on a pair of jeweler’s diamond scales to find out how many went to the pound, for I could not find any reference to this in any of the many books on the bee. I find there are just 192 to the grain, and of course 1,474,560 to the pound.

Inversion of Brood-Combs.

This has been found profitable by Mr. L. L. Eshenower, of Pennsylvania. In the fall he takes away all combs not covered with bees, taking good care of them, and in the spring he returns them, against dawm. He uses an inervetible frame of his own making, and raise opens the combs of the colony when he returns them to the hive. He believes that he has prevented many cases of spring dwindling by this practice. He admits that inversion has been cast off long ago, but, very wisely, says that we sometimes cast away something that we think we have tried, whereas, we have scarcely made its acquaintance.—Bee-Keeper’s Review.

Co-operation Among Bee-Keepehrs.

The June number of the Rocky Mountain Bee Journal is almost entirely taken up with the matter of co-operation among bee-keepers. Those Coloradans are not merely theorizing on the matter, but have been putting in practice some excellent co-operative work, somewhat to the advantage of their pockets. It seems that they have so enlarged the work that they now have, under the title of “The Colorado Honey-Producers’ Association,” an office kept open in the pound in Denver by Mr. E. T. Snell, with Frank Rauchfuss as its energetic manager. The following interview with Mr. Rauchfuss is given in the paper mentioned:

1. What advantage, if any, accrues to stockholders in the Colorado Honey-Producers’ Association, besides dividends on their stock, in the purchase of supplies through that Association?

2. You should emphasize the fact that the Association was formed and is now able to send grains, and have the members, to market their honey profitably, at an advantage of price, but the price must be good, and the customers must be willing to accept a good grade of honey, and at the close of the season, be able to return them 16 percent of the usual commission. Handling only honey we could not afford to keep a store open the whole year. By expanding our business we are able to keep the store open all the year; to keep in closer touch with the bee-keepers upon the trade, and also get the best prices more successfully, because more intelligently. You know that supplies are cheaper than last year. Very little claims for pay this year. The State Association deserves part of the credit, perhaps the larger part. Any one who will look back to the record during these years can find out the advantages for himself.

3. Has the handling of supplies by the Association tended to cheapen the price of supplies in the city of Denver?

4. If you are comparing, as Mr. Rauchfuss has done, the price of supplies, abstracting the returns, they were to the advantage considerably.

5. Would you favor the establishment of branch associations for the handling of supplies, subsidiary to the main association in the smaller cities throughout the State?

6. Mr. Rauchfuss answered with an emphatic “Yes!” and then walked away to await an impatient customer.

Horehound Honey.

H. H. Hyde says in the Southland Queen that horehound is in his locality in Texas, “...and sometimes it ruins a good deal of honey in the fall, but in the spring it fortunately blossoms early enough so that all the honey is consumed in brood-rearing.”

Fastening Foundation.

C. Davenport fastens foundation in brood-frames or sections by means of something like a large medicine-dropper or pipette. He says in letters in Bee-Culture. 

Mine is made of a tin tube about 4 inches long, and not quite 1 inch in diameter. The lower end of this tube is gradually tapered down to a point, so that the extreme end is a little less in size than what it would be on an ordinary lead-penil if the lead were removed to the same size as the extreme end. A rubber nipple or ball is attached, and it is important to have this rubber fit over the tube tight enough to exclude air. When the lower end is placed in melted wax, or any other liquid, with the rubber bulb compressed between the thumb and finger, as soon as it is allowed to expand by air suction, it draws some of the liquid into the tube. By allowing the rubber to remain compressed, the tube will not leak when withdrawn, no matter what position it is held in. Pressure on the rubber forces the liquid out slow or fast, just as desired.

Does a Queen Carry Foul Brood?

The editor of the Australasian Bee-Keeper says:

Your opinion on the matter is so decided that should I need a queen from a foul-brood apiary I would introduce her into a healthy colony of bees without the slightest hesitation or fear of communicating the disease. I would, however, deal very deliberately with an apiary accommodating a case of foul brood, as one would be crushed and afterwards burnt. In my opinion, it is the bees only that communicate the disease, and not the queen. To back up my assertion, I may say I know of numerous queens from foul-brood colonies having been introduced to healthy bees, and...
have yet to find the queen blamed for communicating the disease. When I meet a queen from elsewhere, or an imported queen, I open the cage before a closed window, and after the queen is caged I destroy every bee. Most of them are readily washed when flying against the window glass.

Extracting. Supers Over Winter.

In the Southland Queen, Louis Scholl tells that he practiced putting enameled cloth over his brood-frames and pliing the extracting-supers above for winter. He says further:

But this had to be removed in the spring, last year I tried some of the heavy brown paper used by butchers, and putting it on top of the brood-frames, by just tiling back the supers and all above. If honey is in the top supers, a hole can be made in the sheet of paper to let the bees go for it. I would prefer to have the sheet of paper a little narrower than the 24" is wide inside, leaving a passageway next to the walls.

In spring, as soon as the colony gets more populous, and more room is needed, the bees will attend to the paper, gnawing it away, and saving the apiarist the labor of removing the paper.

The Emerson Binder

This Emerson stiff-boarded binder with cloth back and silver edges is cataloged in the Journal and sells for only 26 cents; or we will send it with the Bee Journal for only 30 cents. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this Emerson 8 quarto binding is necessary.

GEORGE W. YORK & CO.,
144 & 146 Erie St., CHICAGO, ILL.,

CATALOG FREE.

Bee-Supplies

1. J. STRINGHAM,
105 Park Place, NEW YORK, N.Y.

I will send Bee-Journal for 80c. Please mention the Bee Journal.

Reduced Rates to New York City.

From July 1st till further notice the Nickel Plate Road offers round trip tickets Chicago to New York City, returning in like manner, or going and returning by different routes, at option of passengers. No excess fare is charged on any of its trains. Meals served in up-to-date dining-cars, ranging in price from 25 cents up, but not exceeding $1.00 for each person served. Secure tickets and sleeping-car berths at City Ticket Office, 113 Adams St., Phone 2017 Central. 15-2A1T.

Catnip Seed Free!

We have a small quantity of Catnip Seed which we wish to offer our readers. Some consider catnip one of the greatest of honey-yielders. We will mail one ounce of the seed for sending us one ounce of the seed for sending us one new subscriber, or one ounce of the seed and the American Bee Journal one year—both for $1.30; or will mail an ounce of the seed alone for 50c. As catnip seed is very small, better order soon.

GEORGE W. YORK & CO.,
144 & 146 Erie St., CHICAGO, ILL.

Chicago, June 19.—New comb honey has not yet reached this market. It will sell at 1.50c if choice white, and the amber at 95c. The market is too large to be weathered, and we have had a few cases of a lot that we had held for us, expecting it would be needed. Advises that shipments will be sent, and that the market will be kept for the trade is being done in extracted, as large as the market will stand. A very heavy demand at low figures; some sales of amber have been made at 45c for early autumn delivery; white is held at 65c. Bee wax sells at 25c.

H. W. WERNER.

Boston, June 29.—There is practically no comb honey in the market, and the prices are very low, and will hold very little for call for it. We expect we will have a much larger supply of wax this month. Market for extracted dull, at 80c.

B. A. BURLINGTON & L.

OMAHA, May 1.—Comb honey, extra white, 2-frame cases, per case, $3.50; no. 1, 2c.; amber, $3.00. PEYTON E. BROWN.

NEW YORK, June 1.—Extracted honey is exceedingly dull and very little moving. We note for the present: White, 15c.; light amber, 59c.; Dark amber, 95c. Some demand for comb honey at uncharged prices. New crop is now being shipped, and the market is evidently at about 120c., according to quality and style. Bee wax, 2c.

HILDEBRAND & SIEGEL.

ALBANY, N. Y., June 18.—Honey market is dull and quiet. Receipts are small, and the market is likely to be held by fruit and bird exterminators. H. R. WRIGHT.

DETOUR, June 27.—Very little old honey in market, and no new honey is come in yet. Splendid showing for a good field of white clover honey. Bee wax, 2c.; demand light.

M. H. BENT & SON.

BUFFALO, June 28.—Honey not wasted till cool fall weather. Market dull, 60c.; Extracted, 80c. Extracted not wanted. Fruit takes place of honey now. BATTERSON & CO.

KANSAS CITY, June 14.—Very little old honey on our market but what is damaged by being granulated. Sales of comb honey are bound for the best grade No. 1 Colorado. Amber, 15c. Bee wax at 25c.

W. R. CROMWELL PRODUCE CO.,
Successors to C. G. CREAMER & CO.

SAN FRANCISCO, June 5.—White comb, 11% per cent; amber, 30c.; dark, 20c.; Extracted, white, 59c.; light amber, 45c.; amber, 35c. Bee wax, 260c.

Dealers are very bashful in their ideas, but are not securing much honey at the prices they name. I see a small way to special trade an advance on quotations is being realized.

Wanted

Fancy White Comb Honey inmodrip cases; also Extracted Honey. State price, delivery. We pay spot cash. PERCY & BROWN & CO., Front & Walnut Sts., Cincinnati, Ohio. Reference—German National Bank, Cincinnati.

We will pay 25c cash, per lb. for any one who will sell us 100 lbs. each of amber, 25c. per lb., and as soon as they are taken up, 25c. cash, per lb., for pure, dark beewax delivered here. We are a jobbing house. J. L. BUCKNELL, Des Moines, Iowa.

1901—Bee-Keepers’ Supplies!

We can furnish you with The A. L. Root Co.’s goods at wholesale prices. We can save you freight, and ship promptly. Market price paid for your comb honey. For descriptions and prices, send for our new catalogue.

Please mention Bee Journal when writing.
We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR

Hives, Extractors
OR ANYTHING YOU WANT IN THE BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes.

Order of him and save freight.

Please mention Bee Journal when writing.

ITALIAN QUEENS, warranted
Testsed, $1.00; Untested, 75 cents, by return mail.

RIVER FOREST APIARIES
Oak Park P.O. River Forest, Cook Co., Ills.

Mention the American Bee Journal.

SWEET CLOVER
And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

\[
\begin{array}{ccc}
\text{Sweet Clover (white)} & 50c & 75c \\
\text{Alfalfa Clover} & 75c & 1.00 \\
\text{White Clover} & 75c & 1.00 \\
\text{Alfalfa Clover} & 1.40 & 3.50 \\
\text{Japanese Buckwheat} & 30c & 50c \\
\end{array}
\]

Prices subject to market changes.

Add 25 cents more for a 10-pound order, for cash, if wanted by freight, or 50 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street, CHICAGO, ILL.

I ARISE

To say to the readers of the Bee Journal that

DOOLITTLE...

has concluded to sell

QUEENS in their season during 1901, at the following prices:

1 Untested Queen $1.00
3 Untested Queens 1.25
1 Tested Queen ... 1.25
3 Tested Queens ... 1.75
1 selected tested queen 1.75
Select Tested Queen last year's rearing 2.50

Extra selected breeding, the very best... 5.00

Circular free, giving particulars regarding each class of Queens, conditions, etc.
Address,

G. M. DOOLITTLE,
112 A 2d
Borodino, Onondaga Co., N. Y.

Please mention Bee Journal when writing.
TELLING THE BEES.

Out of the house where the slumberer lay,
Grandfather came one summer day,
And under the pleasant orchard trees
He spake this wise to the murmuring bees:

"The clover-bloom that kissed her feet
And the posy-bed where she used to play
Have honey store, but none so sweet
As ere our little one went away.
O bees, sing soft, and bees, sing low;
For she is gone who loved you so."

A wonder fell on the listening bees.
Under those pleasant orchard trees.
And in their toil that summer day
Even their murmuring seemed to say:

"Child, O child, the grass is cool.
And the posies are waking to hear the song
Of the bird that swings by the shaded pool,
Waiting for one that tarrieth long."

"Twas so they called to the little one then.
As if to call her back again.

O gentle bees, I have come to say
That grandfather fell asleep to-day,
And we know by the smile on grandfather's face
He has found his dear one's biding place.
So, bees, sing soft, and bees, sing low.
As over the honey-field you sweep-
To the trees a-bloom and the flowers a-blow,
Sing of grandfather fast asleep;
And ever beneath these orchard trees
Find cheer and shelter, gentle bees.

—EUGENE FIELD.
**Weekly Budget.**

"My Wife came pretty near calling me honey last night."

"So I."

"Yes. She called me beeswax."

Dr. C. C. Miller, of McHenry Co., Ill., wrote us July 10:

"102 degrees in the shade to-day. I don't remember a day in the month before. Neither do I remember so dry a summer before. Much of the grass looks as dead as in winter. A very blue time for bee-keepers."

The **Australian Bee-keepers' Review** is the latest candidate for the favor of bee-keepers. Pit; that a journal so neatly gotten up could not have had a name all its own, without the danger of its getting mixed up with a very excellent bee-paper published on this side of the globe.

Mr. J. T. Hairsont, of Cherokee Nation, Ind. Ter., wrote us July 9, as follows:

"We are having the most disastrous drought and hot weather ever experienced here. Corn and hay are beyond help, bees are doing nothing, so no surplus honey." I was wounded and shot April 12, my thigh being broken, and also badly cut. I am crippled for life. Six weeks later my little girl, Jennie, had her hand crushed in a feed mill. It has been amputated.

"I have 175 colonies of bees."

Surely, Mr. Hairsont has more than his share of troubles. All our readers will sympathize with him in his many misfortunes.

Mr. George B. Whitcomb's home apary is shown on page 455. It will be observed that he has both the unpainted and the painted hives, preferring the former in an excessively wet climate. The stands used for them are the best kind for there, and he thinks the advice given that person in Multnomah County was poor, when he was told that hives on the ground or near it, and covered with straw, were all right. Mr. W. has seen the snow flat as much water there that it would fill the ground and drown the bees. In fact, a neighbor keeper, Mr. Christensen, lost 40 cold colonies just that way. Also an observatory hive containing one comb would not work there, as the nights are too cool at any time of the year.

Mr. Whitcomb had just bought the apary of Simon A. Nickerson, situated in Linn County, and spent a few days in knocking out the swarming-fence; he believed he had succeeded completely. Mr. Nickerson is one of the old subscribers to the American Bee Journal, and has been counted one of the best-beekeepers in Oregon in his time, but he has been rapidly failing for the past two years, until now his lower limbs are completely paralyzed, and he is bedfast, being fastened to the upper part of his body, with a cord suspended from the ceiling, to which a handle is fastened. This is sad indeed.

Indooping over Mr. Nickerson's apary, Mr. Whitcomb can see the history of bee-keeping for a number of years past. The majority of his colonies were in modern dovetailed hives of the s-frame and dummy-board pattern, but a few were in the old 10-frame chamfered-edge A. I. Root pattern of 15 years ago, of which there are 30 or more neatly piled up along the fence.

The solar wax-extractor is there, and so is the Parlor bee-escape; the Alley queen and drone trap, and numerous other things have been tried, but the best thing Mr. W. has seen for real, downright good service is a pair of frame tongs. They are like pliers, made just wide enough when open to slip over the top bar and hold it firmly between two lugs (one in each jaw) that are pressed into the wood when closed; while one of the jaws is longer than the other, so as to be used in prying apart supers, hive-covers, etc. In fact, he thinks it is the best tool for handling cross bees 'that he ever saw, as with it he can manipulate the frames with one hand while keeping the smoker in the other.

Mr. A. I. Root is in danger of making trouble for the government. He is not entirely satisfied with its course in the liquor problem, and he thinks the Agricultural Department might issue a bulletin about tobacco just as well as about beans, sugar, eggs, etc., giving its value as an article of steady consumption. He says in Gleanings in Bee-Culture:

"I wish I had influence enough with the Agricultural Department at Washington to induce it to publish a bulletin with a heading something like this: "Tobacco, and its General Effect on the Human Family. Should its Cultivation and Dissemination be Encouraged or Discouraged?"

Then I should like to have a closing chapter something like this:

"The Effect of Tobacco on Children and Young People. Should its Use be Prohibited to those under a certain Age? If so, what Age? Also a Consideration of the Cigarette Habit."

Robert W. Polley, of Middlesex Co. Mass., writing us June 10, said:

"I have successfully transferred, united, Italianized, and fed up weak colonies all from colonies taken from the Apiary, which is not a small one; besides wintering bees safely; and, in fact, all the good I know about bees I have studied out of that paper. It is needless to add that I am very much pleased with it."

Mr. E. F. Hasty, of Lucas Co., Ohio, wrote us July 5, as follows:

"I didn't think, with such bad wintering and bad spring, that such a rush of swarms—the greatest for some years—would ensue. I thought there would be almost no swarms at all. That's the way when we keep bees. The unexpected happens."

**Queen-Clipping Device Free....**

The **Monette Queen-Clipping Device** is a fine thing for use in catching and clipping Queen wings. We mail it for 25 cents; it will send it FREE as a premium for sending us ONE NEW SUBSCRIPTION a day to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address GEORGE W. YORK & COMPANY, Chicago, Ill.
The Thousand Members of the National Beekeepers' Association (or the balance of about 200) which we are trying to secure among the readers of the American Bee Journal, are coming in slowly. As promised, we begin to publish this month of those that are going to help make up the number necessary to have an even 1000 by the time of the Buffalo convention in September. Since we began this effort, we have received the following names with a dollar each:

W. J. Forcheck.  C. H. Harlan.

We hope by another week to have a much larger list of names of new members to publish.

Are We Doing Our Best in Breeding?—While the theorists are having their say, and are doing some good by stirring up to a full knowledge of what is required in scientific breeding, are the rank and file of beekeepers doing their best with what they do know? It is not difficult for any one to understand that if he has a colony that gives twice as much as the average in surplus, and another that gives only half as much, if he makes his increase by swarming, and gets more swarms from the poorest than from the best, the old stock will be worth more instead of better. And yet are there not thousands who will get their increase just by allowing the bees to have control of swarming? And in that case is it not generally the case that the poorest storers do the most swarming? We can not control the matter of mating to a very great extent, but are pains taken to control it as far as possible? Are drones superceded in poor colonies and encouraged in the best? If we do the best we can with what we have and with what we know, will we not be doing a good deal better than we are now doing? These are trite words, but it is none the less important to stir up your pure minds by way of remembrance.

Bee-Keeping on Paper.—If a beekeeper is down with a fit of the blues, one way to cheer him up is to give him a good supply of reading-matter about bees, taking an average lot as found in agricultural and other papers. It is true that some agricultural papers have bee-departments that are reliable, but most of them are more or less re-liable. In the Twentieth Century Farmer is an article of some length telling about "traveling bee-colonies" owned by C. I. Graham, in California. Some of the Bees may be of interest to the readers of the American Bee Journal, who are left to separate fact from fiction.

The renascent activity of bees depends upon the coming of spring flowers, and early in the season it is easy to move them before they have aroused themselves from the winter's listlessness. When Mr. Graham moved his bees in April, it was predicted that they would desert him by the wayside, for while bees may be moved in winter, it is generally considered impossible to move them in the active season. The difficulty was solved by traveling at night. He has a wagon the size of a flat-car with crate on it holding 300 colonies. Under cover of darkness the crate is slipped from the car to the wagon, and the bees taken to some sweet bower before day-light. When the combs are full the honey is "strained."

The same paper contains an extract from the New Orleans Times, describing the Cuban bee. It says: "he is quite different from the American bee. The Cuban bee is lazy, trifling, almost slovenly, looking like a drone when compared with the American bee."

"The Cuban bee has a sort of oxcart movement when he goes about his work. The American bee is snappy, quick, and almost electrical. Now, why is this! I have my own theory, and I base it upon the best principle of science, a principle universally recognized for its potency in the shaping of character. It is a matter of environment."

"The Cuban bee has been surrounded by slow methods and awkward, crude ways of doing things. He simply reflects the life, the mannerisms and the methods about him. He is still the bee of the oxcart age, and buzzes about his business in an oxcart suit. He is a Cuban to the manor born. The American bee's industry may be accounted for in the same way. He is a natural-born hustler. He is an American, full-blooded and full-fed.

What Do We Know About Breeding?—Several writers have had considerable to say as to the ignorance of beekeepers with regard to anything like the intelligent breeding of bees. It is probably a fact that among the breeders of horses, cattle, swine, poultry, etc., there will not be found so much ignorance as to the laws of breeding as is to be found among breeders of bees. So it is well that of late years much has been said by experts of arousing attention to the subject, albeit it may be in the wish of many that more of instruction had been given by those who find fault with the lack of knowledge. To the question: "What do we know about breeding?" the plain answer probably must be, little or nothing.

After all, are beekeepers so greatly to blame for this? In intelligence they will probably rank with breeders of other classes, and other things being equal, they should know as much about the laws of breeding. But other things are not equal. The breeder of horses may make himself acquainted with the laws of breeding, and in applying those laws for best results one of his chief cares, if not his chiefest care, is to make a wise selection of the two intended parents of his future stock. Without this care in selection his efforts will count for little. In the ease of the bee-keeper such selection has been considered next to impossible of accomplishment. Of what avail to study carefully just the drone that should meet a certain queen, if the control of that drone is entirely out of the question? There is expense for the fact. If it be a fact, which is not here denied, that beekeepers know less about breeding than the breeders of any other class of stock.

At the same time it would be a gain if more were known as to the laws of breeding. Possibly we are just on the eve of entire control of fertilization, and it would be a wise thing to prepare for it in advance. Even if we have only a very limited control of the mating of queens, it will do no harm to have all the knowledge that can be used in that limited control.

Are Long Tongues of Value Per Se?—In an able article which we copy on page 453, Frederick B. Simpson says:

"To my mind the long-tongue agitation is too much like treating a symptom instead of the disease itself. I believe that long tongues are of value only in so far as they represent an increase in vigor: or, in other words, only when such increased length is the direct result of increased use of the tongue, indicating greater activity and vigor."

That might be understood as meaning that in and of itself there is no value in a long tongue, only as it is a sign of other qualities, just as there is no value in the hands of the Italian only as they are a sign of special qualities possessed by the Italian. It is doubtful that Mr. Simpson meant just this, for elsewhere he says, "Other things being equal, I want long tongues."

Given two bees exactly alike in all other respects, one having a longer tongue than the other, and there is no question that the longer tongue would have the advantage wherever there were flower-tubes a little deeper than the reach of the shorter tongue, and yet within reach of the longer tongue. At the same time it is a mistake to suppose that the length of tongue is an exact gauge of the value of two different bees. The bee with shorter tongue may have extra diligence to make up for shortness of tongue.
Contributed Articles.

No. 3.—Some Reminiscences of an Old Bee-Keeper.

BY THADDEUS SMITH.

The Italian bee was introduced into this country about 1650, or soon after, by the Spaniards in the ten-frame hive. I have not the statistics or the history of either event before me to enable me to give the exact dates, and can speak only in a general way from recollection; but both came about the same time, and in so doing gave a new impulse to the bee-keeping industry, and a momentous impetus to the growth of the business in this country that the last half-century has witnessed.

Many persons engaged in other pursuits—some who had never kept bees, and others who had only a few colonies—became interested in this new and strange interest, and this interest led to an investigation, both theoretical and practical; and as this investigation proceeded some became quite fascinated with the business. The ease with which one could examine the hive, and the economy of the hive with the movable-combs, and to introduce to a colony of native bees a queen of a new race and color, and seeing the natives gradually disappearing until in a few weeks they would all be gone and the new race occupying their places, afforded means of verifying and demonstrating many interesting facts in the natural history of the bee. The short life of a worker-bee in the working season was a revelation that astonished many who always supposed bees to have a long life. The usual demonstration of this by the introduction of an Italian queen would convince the most skeptical. And so were many other facts in the history of this wonderful insect demonstrated.

This new interest in bees caused by the Italian bee, resulted in adding twenty times the number of beekeepers. Some thought they would find a pleasant and profitable occupation in producing honey on a large scale for the market, as the Italians were, by the vendors, to be greatly superior to the native honey gatherers. Others saw a prospect of gain in rearing queens for sale at prices from $5 to $20 each; and the country was soon flooded with queen-breeders until the price got down to one dollar a bee, and many of them went broke.

Manufacture of patented and non-patented hives, also sprung up all over the country. An impetus was given to every department of the business. The literary department was greatly augmented, and we had new authors of bee-books, and pamphlets numerous, and many new contributors to the bee-papers from all classes and professions, some of whom have been of great advantage and a blessing to the fraternity.

I think it can safely be said that had it not been for the Italian bee, Mr. A. I. Koot would never have gotten up that interest and sustained enthusiasm on the subject that led him to give up a pleasant and profitable occupation to go into the bee business. The following is an extract from his publication, "A B C of Bee-Culture"—"There have been so many writers of books on bee-keeping, that it is an easy matter to collect all their facts and experiences: The bee-keeping public would never have seen those wonderfully interesting and instructive letters of "Novice" printed in the early volumes of the American Bee Journal. Gleanings in Bee-Culture never would have been published; neither would the standard work "A B C of Bee-Culture"—"A B C of Bee-Culture"—have been printed; nor would those great manufacturing and industrial establishments with all their various branches and departments. In existence today—such as this moveable-comb hive and Italian bee, many others were induced to go into the business who became prominent writers for the bee-papers, or large honey-producers and queen-breeders and hive patentees, and still others are made worthy of record, and a sketch of their work would be interesting if time and space would permit.

The moveable-frame hive caused much rivalry, and some jealousies, but the patentees, and those they spoke and wrote of each other in not very complimentary terms—in fact, in language hardly admissible in polite society; but there were still more rivalry and jealousy, and bickering, between the queen-breeders and sellers of Italian bees that had not the advantage of the Italian or who were too much or too little, or intolerant of the impost or the fraud. Various tests of purity were advocated that added still more confusion to the matter. One writer, greatly perplexed over the matter, said:

"One dealer in Italian bees says the workers are distinguished from the natives by a yellow band around the abdomen; another says, ..."
three yellow bands or rings: a third makes the markings of the queen a test of purity, a fourth the purity of a queen by her progeny; and a fifth makes the very amiable disposition of the worker, or the "impecableness of temper," a test of purity. A person entirely unacquainted with bees, and who might judge by the different opinions of these doctors, if he purchased a queen, purify guaranteed, would hardly know where to look for a reliable test.

As a matter of course, the writer became very much interested in these new bees. I had kept bees all my life, and I had known that honey is a product of both male and female bees in the hive I adopted it—in 1862 or 1863, I think—and I determined to have some of these new bees.

As I have stated in another article, I came to Pelee Island, Lake Erie, in 1866, and one of the first things I did was to purchase a few colonies of these bees. I got bought only one colony on the Island, and I bought that, and went to the main shore of Ontario and bought two more colonies. These I soon had transferred to Langstroth hives. I found that the Island abounded in good bee-pastures, especially the unbroken thistles, basilwood, and I am a great lover of honey as well as bees.

About this time a number of breeders of Italian queens had come to Kelley's Island, Ohio, because there were no black bees there, and it was beyond the flight of black bees from the main shore, consequently they could rear pure queens without the possibility of having them mated with black drones. Kelley's Island being only a short distance from Pelee Island, I crossed the international boundary line—I had a fine opportunity to see these bees, and was not long in taking advantage of it. I found a number of queen-breeders there—Aaron Benedict, W. A. Flanders—"Professor" Flanders with his Apianarian Institute and bee-club; Alexander B. Charles, one of the oldest settlers of Kelley's Island, and the first person to demonstrate the adaptability of the Island to grape-growing, was also engaged in rearing queens. I paid Mr. Carpenter Shaffer two dollars each for queens, and he gave them home all right and successfully introduced them to two of my colonies.

The humorous side of queen-rearing on Kelley's Island was given by the editor of the Ohio Farmer in his paper in 1867. After a visit to the Island, he tells what he saw there as follows:

W. A. FLANDERS—the Bee Man.—Prof. W. A. Flanders—you may have heard of him—has his Apianarian Institute on Kelley's Island, and of course we want to have bees and hornets, too. Mr. Flanders has three families dwelling in busy harmony under every green tree in the neighborhood. Talk of big prices for Merino rams! Flanders can get more money for an Italian queen-bee, with three rings around her tail, than any ram-peddler can get for the best Vermont Merino in his flock. Flanders showed us (in a vial of alcohol) one of these amiable little female sovereigns, which had lain fat and fume with another amiable little female sovereign, for which, he declared with a sigh—which came from as low down as the seat of his broad pantaloons—that he was worth in gold and silver. But then the truth can be settled by arithmetic. Here are 50 other amiable little sovereigns, bred from this insect in the vial, for each of which Flanders can take from 50 to 80 dollars, and there are 50 others—to the next—the value of the whole, worth more money than a short-horn bull. The idea would be ridiculous if it were not true. But Flanders has improved upon the original Dr. Jacob Townsend, and instead of being satisfied with the flagging full-blood Italian with three rings, has gone one better, and showed us a queen of his rearing with four rings around her body, all of the royal purple and gold.

(In continuation.)

In-breeding—If Practiced, It should be Sparingly and With Good Judgment.

BY FREDERICK E. B. SIMPSON.

It is to be regretted that those friends who have been foremost in agitating the subject of in-breeding, have not yet been able to get the matter before the public, and especially those who have the educational advantages which would be of direct benefit to the practical bee-keeper. In this connection Mr. A. C. Miller, in May I Gleanings, might well make his requirement known to the wise among them, and possibly add a college education as another requisite. There is no possible doubt about the great aid these requirements would prove to the queen-rearer; but is not it very exceptional when a bee-keeper possesses all these requirements, and not be a successful breeder? Why, for this reason, do we not favor the comparatively successful breeder to the exceptionally favored? is not the commercially successful breeder and queen-rearer practical rather than theoretical, commercial rather than scientific? And can not the best results follow by those who have the educational advantages which make it possible for them to be familiar with the general laws of biology, and therefore strong on these points? In cases be prevented from being broadly practical (on a large scale) by reason of occupation or circumstances—can not these students formulate plans based on scientific truth, which the practical man can use as a basis for systematic breeding? The same successful breeder, if he should like, can be made to realize the greatest success of queen-rearing and should be able to rear queens so skillfully that no large honey-producer could afford to do anything except receive from such bred stock. To the end that some of these men might be satisfied, I will contribute my site by saying some things about in-breeding; although be it understood from the start that I do not believe we will ever get any really conclusive knowledge on this subject except by actually breeding the bees; the more so from the fact that we have nothing in the nature of a domesticated animal which forms any real parallel to the bee.

Herbert Spencer says: "Remembering the fact that among the higher classes of organisms fertilization is always effected by a male from one species (or variety) mated with a female from another variety (or species) and the germ-cell of another, and joining with it the fact that among hermaphroditic organisms the germ-cells developed in any individual are usually not fertilized by sperm-cells developed in the same individual, the question of the reality that the essential thing in fertilization is the union of specially fitted portions of different organisms. If fertilization depended on the peculiar properties of sperm-cell and germ-cell, as such, then in the case of a several thousand organisms it might be the case whether the united sperm-cells and germ-cells were those of the same individual or those of different individuals. But the circumstance that there exist in such organisms elaborate modifications of differences of difference whether the union and derivative in the united reproductive centers is the desideratum."

Mr. Darwin says: "I will venture to add a few remarks on the general question of close interbreeding. Sexual reproduction is so essentially the same in plants and animals that I think we may fairly apply conclusions drawn from one kingdom to the other. From a long series of experiments on plants, given in my book, 'On the Effects of Crosses, the results, in a great many cases, seem clear that there is no mysterious evil in the mere fact of the nearest relations breeding together; but that the evil follows (independently of inherited disease or weakness) from the circumstances of the usually imperfect sexual constitution. However little we may be able to explain the cause, the facts detailed by me show that the male and female sexual elements must be differentiated to a certain degree in order to unite properly and the birth of vigorous progeny. The closest interbreeding does not seem to induce variability or a departure from the typical form of the race or family, but it causes loss of size, of constitutional vigor in resisting unfavorable influences, and often of fertility. On the other hand, a cross between plants of the same sub-order or family which has been grown during some generations under different conditions, increases to an extraordinary degree the size and vigor of the offspring."

Some kinds of plants bear self-fertilization much better than others, and we have a vast number of vagrant species and plants, and it is proved that these plants can do this that is a cross with fresh stock. So it appears to be with animals, for Shorthorn cattle—perhaps all cattle—can withstand close interbreeding with very little injury; but when they are bred from closely inbred stock with no any loss of their excellent qualities, it would be a most surprising fact if the offspring did not also profit in a very high degree in constitutional vigor.

Until we can get something solid proof that these arguments are applicable to the specific case of bee-breeding, it would seem unsafe for any queen-bee breeder to do any in-breeding with the intention of selling the resulting stock; but only as a matter of reserve, to go on and try it in experimental work through several generations of bees. Few queen-breeders will
consider that they can afford to do even this amount of experimenting in view of the fact that outcrossing has none of the objectional features in the public mind that in-breeding possesses.

One of the bottom facts of in-breeding is that Nature never intended it to be followed. It is more than likely that in-breeding as originally practiced by man, and in the majority of subsequent cases, has been largely due to the same cause— the absence of an unrelated individual at the time an unrelated one was convenient and, in a word, outcrossing was usually accomplished quicker by in-breeding than by outcrossing (where breeds are dependent upon one or a few characteristics, of which vigor, fertility and size are among the most important), which is a considerable incentive where it takes several years for an animal to become effective. But with these two propositions would seem entirely inapplicable; for we seem to be able to obtain an ample number of unrelated individuals of equal value with which to breed, and with which to improve, and still have the advantage which can be obtained in a short time renders the second reason of little or no force.

In the breeding of horse pedigrees, that a few words on these subjects may not be out of place here, although there being nearly as much pro and con, we can expect little new truth from these sources, and that the old Aryan is almost in parallel to beehive-breeding, whereas, in the other, the breed has not been established a sufficient time to secure any amount of uniformity.

The Jersey cow possesses a pleasing color and form with a decided exception of her degenerated horns which often require an expert to trim them to a regular shape—and at her best gives a very large quantity of very rich milk, of which a comparatively small amount is required. Good qualities have evidently been brought about at the expense of vigor, fertility and size, for which it seems evident that in-breeding is responsible.

But is the Jersey a fair comparison? Nature so situated her in the narrow confines of a small island where every chance of in-breeding cannot be avoided, and there arises the question of whether Nature endowed her with some inherent power by which the evil effects of in-breeding would be mitigated to a certain degree—sufficient with the aid of skill in the breeders to prevent the appearance of a breed which if left entirely to Nature would have long ago become extinct. For on an island of such fertility that animals are staked out instead of being turned loose for pasturing, it would naturally follow that the greatest personal care and attention would be bestowed on such animals so continuously handled.

Then, too, the pedigrees of renowned Jerseys abound in renowned ancestors to so great an extent that it is practically impossible to find a line of demarcation between what has been the result of in-breeding and that which is due to skillful selection independent of in-breeding. And if it had been possible to breed these animals with as much care as they are staked and inseminated, it is reasonable to suppose (see the quotation from Darwin) that equally good qualities would have been obtained, not only at no expense of these qualities, but even with an increase in vigor and size.

With regard to trotting-horses, the general proposition will be found to be true that where in-breeding exists in a good individual that is able quite uniformly to transmit his good qualities to his offspring, such in-breeding is merely an expedient and not an advantage, whereas the real cause of quality is skillful selection. Then, too, the sources of trotting families are comparatively few, which renders the incident of in-breeding more frequent, and the results of the breeders, if skillful and successful, is seldom close, and, therefore, has but little effect. When trotting-horses were a "fad" they were largely bred with no other quality than that of speed, so that, although speed was often obtained, where we failed to obtain it we had only a failure that did not possess enough other good qualities to make it valuable. But as soon as the "bottom dropped out," the lesson was learned, since which time our greatest aim has been to produce such an animal as will possess that balance of qualities which will make him the highest typical representative of his species. At any rate we quite uniformly get a high type of horse. If his speed and racing quality are sufficient, we have that. We have always been more interested in the horse of this grade where there may be sufficient quality for a first-class roadster, or an excellent carriage-horse; lacking this, the barborously inclined can cut off his tail, blindfold his fore-foot, and get an inferior type of Hackney. And, finally, if some physical injury should occur we will, often, still have a good individual to breed from.

From all the observations I have personally made when I have received first-class in-breeding, in trotting-horses, I am led to believe it is a total failure; except, perhaps, in exceptional cases where two individuals somewhat over-sized, with a tendency towards coarseness, possessing possessing offspring, only until such increased length is the direct result of increased use of the tongue, indicating greater activity and vigor. Doubtless the direct issue of the original [priced] queen possessed this increased size, but is there not...
Questions and Answers.

Conducted by

DR. C. C. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please don't ask the Doctor to send answers by mail.—Editors.)

Catching a Swarm on the Wing.

Is there any way of catching a swarm of bees after they leave the tree they first settled on? If so, what is the quickest and best way? MINNESOTA.

Answer.—I suppose you mean is there any way to stop a swarm when it has started to leave. It isn't the easiest thing in the world, but it is always worth trying. Perhaps the best thing is to take a looking-glass, run ahead of them, and reflect the sun upon them. That has been reported successful in driving them back in a number of cases. Some, however, will tell you that a better plan is to have a spray pump and throw a good shower of water upon them.

A Small Queen-Thick Combs.

1. I divided a strong colony of Italians in fruit-bloom, as you suggested some time ago, and the queen-cells started were all small. I left the largest ones, and, when hatched, the queens were not much larger than worker-bees, and feather-colored. I killed one of the queens and put the nucleus back into the old hive, and left the queen in the other division. The queen is two weeks old, and has not commenced to lay yet. Would you advise me to remove her and give them a larger queen? The old colony swarmed two days after I put the nucleus back, and the queen-cells started are large; the queen looks sleek, and is large like her mother.

2. I have considerable trouble getting straight comb in most of the frames having brace and burr combs on them. I don't think the frames were spaced properly when first put in. Would you advise buying an extractor, uncapping the deep ones, spacing the frames over again, and feeding sugar early in the fall? Will it pay me to get an extractor? I am running for comb honey and have eight colonies.

NEW YORK.

Answer.—1. If a queen does not begin to lay till after she is two weeks old, she will generally turn out very poor, and you will risk very little to kill her.

2. It might pay you to get an extractor, but not for the sake of straightening out your combs. Neither do you need to take any such trouble. If the center of the comb is in the center of the frame, and some of the combs are too thick (which I understand is the case), all you need to do is to keep crowding the combs together a few times on different days. The bees will trim off the parts that touch, all but a few points of attachment which you can remove, and a few operations will make all right. But you will be likely to have some brace-combs in any case.

Finding the Queen, Etc.

I have a very strong colony in an 8-frame hive which I wish to divide and can not find the queen, having looked the frames all over five different times. They have about seven queen-cells, most of them being capped.

1. What is the best way to find the queen?

2. Will a colony swarm if it has laying-workers in the place of a queen?

3. Will the bees build more drone-comb in the spring than in the early fall?

4. Can I divide, and use queen-cells? ILLINOIS.

Answer.—1. Usually all that is necessary is to look somewhat carefully over the frames. Avoid the use of much smoke, for if you smoke the bees till you get them to run, you may find as well give up finding the queen till another time. If you do not find the queen after looking over the frames once or twice, better close the hive and leave them for half an hour or longer. For the queen is probably hidden in such a way that it is impossible for you

HOME APIARY OF GEO. B. WHITCOMB, OF LINN Co., OREG.—See page 150

long-tongued colony will not go to waste but will be used to advantage in the more rapid storing of more easily reached nectar, regardless of its source. And it is quite pertinent to the subject, that the colony which has given me the most nectar to date, this season, from fruit-bloom, contains by far the longest-tongued bees I have, many having a reach of 22-100. And this also is a point in favor of my idea that the best bee is the best regardless of locality. Bee-Keepers' Review. Fulton Co., N. Y.

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest beekeeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at $1.00.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

The Premiums offered this week are well worth working for. Look at them.
Some Swarming Troubles.

Will a colony of bees swarm without a queen? I assisted my father in hiving two swarms of bees this spring. The first swarm was put in a new hive with foundation ready for work. They stayed three hours and then left the hive, and we hived them three times in the course of the day, and each time in a new hive. The third time they moved out as quickly as they would, all right. We looked them over and found them in the same condition, and before we could hive them again they all started for the timber.

The second swarm we hived twice, and the third time we put a comb of honey in the hive and shut the entrance. We put them down cellar over night. The next morning they were all dead but about a pint, and we could not find a queen among them. What do you think was the cause?

Laura.

Answer.—I knew one case in which a swarm issued when there was no queen in the hive. But I had removed the queen from the hive only a short time before, and I suppose the bees had not yet learned of her absence. So it is safe to say that a swarm will not issue from a hive without they have, or suppose they have, a queen present. But even should a swarm issue in such very exceptional case without a queen, they will not go off without a queen, but will return to their hive or to some other hive in the apiary. It is not always easy to find a queen in a swarm, and if I like, I am inclined to think that there is a queen present.

The probable trouble was that the weather was very hot and you did not shade and ventilate the hive. Putting that swarm in the cellar was not a bad stroke, but you probably shut them in too tight that they smothered. After putting them in the dark cellar you should have given them a very large entrance, raising the hive well. A frame of brood is better than a frame of honey to give to a swarm.

The Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. Hasty, Sta. B Rural, Toledo, O.

FINGER-ITCH FOR RECONSTRUCTING.

What shall be done to me for my everlasting meddlesomeness? Can't see a good thing without finger-itch to see if I can make it better by reconstituting it. Now there's the striking verse on here which W. S. Hutchinson quotes to open his excellent paper on page 327. I want it to run:

"For the want of a nail the shoe was lost;"
"For the want of a horse the rider was lost;"

And a friend his slave friend did bewail
When his noblest steed had got a hoof nail.

And, if that rider had been De Wett
A nation lost in the end we'll get.

STING-POISON IN HONEY.

And so (according to page 344) in each 62 pounds of honey the bees put an ounce of sting-poison. The German writer didn't think of the thing in that shape, or the enormity of the pilfering, until after his book was published. He could find no way of stopping it, and said it was much more reasonable and just such a thing as might happen, though he didn't want it very much, and if it did happen he didn't want it. But even on that we must remember that breathing the volatile part has a very bad effect on some persons.

DEEP-TUBED AILSELE AND WHITE CLOVER.

E. R. Root contributes a good point in a red-hot controversy when he says he has seen both ailsle and white clover too deep-tubed for average bees to fully reach bottom. Page 345.

PARTHENOGENESIS.

It was more than a hundred years after Columbus sailed before we gave wide and vitally important a truth as the circulation of the blood was discovered! It's amazing. And one of the constitutions of the atmosphere remained undiscovered until the American Bee Journal had become an old paper. Why should man, a reasoning creature, be so great in fantasies?
The Home Circle.

Conducted by Prof. A. J. Cook, Claremont, Calif.

ORDER.

I doubt if "Order is heaven’s first law;" but I have no doubt that it is so well up to the front that whoever first asserted it got nearer the truth than most of us do. A more homely instance may be cited to understand it to be preached for general practice. Certainly not "t’ween cen.," Interesting to see they could not be jarred lower by any kind of bunting. Cousins to my bees, I reckon—and swarms have been unusually high-minded the present season. Page 364.

Moving Wide-open Hives with Bees.

Glad to see A. D. D. Wood advocate liberty for bees while being hauled from place to place. I have seen a little of this. Possibly it may not be practical for a big two-horse wagon; but for one or two colonies to be taken in a buggy I am quite sure it is much the better to let them have their door wide open. Smoke them just enough before starting, and keep the smoker ready for action on the road. Page 303.

Shooting Shot into Swarms.

Shooting charges of fine shot through a high-minded class‘ ter till the queen is killed and the cluster broken up—well, it is somewhat ingenious, and I do not understand it to be preached for general practice. Certainly not "t’ween cen.," Interesting to see they could not be jarred lower by any kind of bunting. Cousins to my bees, I reckon—and swarms have been unusually high-minded the present season. Page 364.

Mind, we can not afford to neglect it. The very success of our best ones has given us may turn, very likely will, on just this point.

It is often said that the competition in life is constantly becoming more and more severe. That likely is true. But it is even more true that the competition is very slight among the best. The men who really desire to be the best, their best, in all their work. And never neglect to teach them that if order is not success's first law, it is a very close second.

A very able and successful college president once said to me: "I can go into my library in the dark and take down any book I may wish to use." I always wondered if he could. Yet I knew him well, and if he really did not wholly correctly, the assertion marked a characteristic which did much to lift him to the high position which he so successfully maintained for many years.

Pets.

In our busy lives, I wonder if we are as careful as we should be to see to it that our homes are cheered and enlivened by numerous pets. We have two little kittens now in our home. They are so full of their antics that they have won all our hearts. We all are so thoroughly interested in them that they receive very careful consideration. Nothing in the home is too good for "Kitty Clide" or "Kitty Carson." I often wonder as I see people harass to their faithful horses and cattle, what their bringing up was. Did they have pets when little? and were they led to care for them? Do the kittens get affection? I don't know how any one can tell. I see the watch is of much account as a watch-dog. I am as sure that mousing is not the kitten's best use. Then let dog or cat, horse, cow or bird, have its best use in awakening and developing the sym pathetic, in quickening the affections and calling out that love and thoughtful care that is the best establishment in any life. Is it Eliza Cook that says in speaking of our pets of the home?

"And if to us one precious thing
Not their own—be—given,
Kindness to them will be a wing
To bear it up to heaven."

I have a feeling that my horse and cow are happier and feel safer when I am around than when they are away from me, that I am a better man for caring for them. Even the ants have pets in their homes, and they are the wisest among insects. May we not say truly that the wisest people will have numerous pets for their children?

Kind Words in the Home.

I know of one of the most spiritually minded Christian ministers that I have ever known, who believes that if we brought up our children as we should, they would need no change of heart. They would be right-minded and true to the sweetest and purest in life from childhood up. I wonder if harsh, unkind words are ever In place in the home. The parents who have influenced me most sweetly and truly never came at me with harsh look or bitter speech. I have taught school ever since I was fifteen years of age. I never yet used a whip. I have sometimes lashed with my tongue. I have had those thundered if such scouring was not what that child needed. I have a sort of theory that if we have love enough for our dear ones, we may push the harsh word and fault-finding out of the house, to the betterment of all left within. But we must be sweet ourselves always if we would win by this better way.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.
To Our Shippers.

About May 1st last, we removed our business from the buildings 120-122 W. Broadway to larger and more commodious quarters at Nos. 265-267 Greenwich St., and 82, 84, 86 Murray St., and we duly sent to our friends in the trade a notice of our removal. Shortly after we vacated the premises (120-122 W. Broadway,) one Joseph M. McCaul, rented a portion of our old quarters, and hung out a sign, "Hildreth, McCaul Co., Jos. M. McCaul, Prop.," with other large signs to the effect that his business is "headquarters for honey, beeswax, maple sugar and maple syrup."

The mercantile agencies report that Jos. M. McCaul is the sole proprietor of the new business, and that he claims to have paid to one Henry P. Hildreth (who has no connection with our business,) a consideration for the use of his name.

We will not comment upon the act of leasing our old quarters and exposing thereon the sign, "Hildreth, McCaul Co.," further than to state that we have instructed our attorneys to apply for an injunction restraining the said McCaul from using the name of "Hildreth" in connection with his business in any manner whatsoever.

We value highly the good name and business we have established by many years of satisfactory dealing with our friends in the trade, and we therefore send this notice so that you may not possibly confound us in any manner with the so-called "Hildreth, McCaul Co."

Our firm name remains as heretofore, and all our business is carried on at our new quarters—

Nos. 265-267 Greenwich Street,
and Nos. 82, 84, 86 Murray St., New York, N.Y.

Respectfully yours,

HILDBRETH & SEGELKEN.
DO YOU WANT A HIGH GRADE OF ITALIAN Bees and QueenS?

2-frame Nucleus with Undeisted Queen, $2.00, purchaser paying express charges.

Naperville, Ill., May 24, 1913.

Dear Sir:—Bee-keeping is a good business. Transferred them to have and gave them honey. Have reinforced them with hatching brood. Are working like a colt. Have right color, and are satisfactory. D. B. GIVLER.

I like your way of packing bees to express.

150, May 31, 1913.

Mrs. J. 

M. S. BATES, Joliet, III.

Do you have a job, or a job to fill for a Bee-keeper?

METHUEN, Mass., June 10, 1913.

Sir:—I have the pleasure of sending you the following statement of prices for foundation and work wax for foundation. Please note that these prices are for foundation at the present time-

Full Line of Supplies, with prices and samples, free on application.

BEESWAX WANTED.

GUS. DITTMER, Augusta, Wis.

Please mention Bee Journal when writing.

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Please mention Bee Journal when writing.
For sending us One New Subscriber for one year, to the AMERICAN BEE JOURNAL, for $1.00, we will send, by return mail, a fine Untested Italian Queen free as a premium. This offer is made only to our present regular subscribers.

We will mail one of the above queens alone for 75 cents; or 3 for $2.10.

Please do not conflict the above offer with the one on another page which refers to Red Clover Queens. For sending us two new subscribers, and $2.00, we will mail free as a premium an Untested Red Clover Italian Queen.

GEORGE W. YORK & CO.,
144 & 146 Erie St. - CHICAGO, ILL.

If you want the Bee-Book
That covers the whole Agricultural Field more completely than any other published, send $1.25 to Prof. A. J. Cook, Claremont, Cal., for his "Bee-Keeper's Guide."

Liberal Discounts to the Trade.

Please mention Bee Journal when writing.

California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—THE PACIFIC RURAL PRESS. The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

PACIFIC RURAL PRESS.
300 Market St. - SAN FRANCISCO, CAL.
Please mention Bee Journal when writing.

$13.00 to Buffalo and Return $13.00 via the Nickel Plate Road from Chicago, for the Pan-American Exposition. Tickets on sale daily, leaving Buffalo up to midnight of the 10th day from and including date of sale. Also tickets on sale daily Chicago to Buffalo and return at $10.50 for the round trip, with 15-day limit, including date of sale. $21.00 Chicago to Buffalo and return, good for 30 days.

Tickets Chicago to New York and return at special reduced rates. Write John Y. Calahan, General Agent, 111 Adams St., Chicago, for full particulars and folder showing time of trains, etc.

American Bee Journal
July 18, 1905
Winds Cut Honey Crop Short.

Our crop is about 20 or 25 pounds to the colony of extracted honey. Hot, dry winds dried up the basswood and clovers on short notice this year.

Grant Co., Wis., July 6.

A Downpour of Sweets.

Williamson County, in which we did not drown the elephant last spring, is now receiving a large crop of sweets, and believe that the flow now on is the heaviest since 1897 or 1898. We have every prospect that it will continue as Fred. Bee-keepers are snatching a regular "bizz-smile."

O. P. Hyde & Son.


Long-Tongued Queens and Red Clover.

Considerable has been said, row and cow, about long-tongued queens. Why not get some red clover seed from breeden? A man who was born there told me that the bees work on red clover there all the time.

Beehives are pretty well now. There is lots of white clover, and it is full of nectar.

Greene Co., Iowa, June 25.

Outlook Discouraging.

The outlook for a honey crop in this locality is very discouraging. It has been so dry already and the flowers of it are so late that there are scarcely any flowers in bloom, although the bees are bringing in some honey from the clover.

A good many colonies started to death last winter. The spring was cool and wet until such a time that there were some surplus being stored along the creek bottoms, but it was all gone by the uplands.

R. C. Suppe.


Losses Heavy—Large Yields Per Colony.

Our losses were heavy last winter. On account of the mild weather bees flew most of the time, and they became aggressive during the spring fighting. I lost 25 out of 150 colonies in this way, sold 23, and 2 were queenless. In the only case where I kept bees that were queenless I built up as much as to store any surplus.

All colonies that were strong early in the season have done remarkably well, considering the fact that basswood did not yield on account of winds and dry weather; white clover secreted well during the early part of June, but is now yielding very little, if any. Ours have not been as good as our previous year, as we are getting any honey, and it is not yielding as profusely as last season.

All colonies in field of extracted honey from one colony up to July 1, is 400 pounds; another has finished 251 pound-sections.

We are expecting a fall flow, as the extremely hot weather has prevented the growth of the full nectar-secreting plants.

J. L. Gandy.

Richardson Co., Nebr., July 1.

The Bee-Keeper’s Guide;
Or, Manual of the Apiary,

BY PROFESSIONAL A. J. COOK.

480 Pages—1st Edition—1899 Thous.

$1.25 postpaid.

A description of the book here is quite unnecessary; it is simply the most complete scientific and practical bee-book published to date. Fully illustrated, and all written in the most fascinating style. The author is also well-known to the whole bee-world to require easy introduction. No beekeeper is fully equipped, or his library complete, without THE BEE-KEEPERS’ GUIDE.

This 16th and latest edition of Prof. Cook’s magnificent book of 6x9, 416 pages, with and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW SUBSCRIBERS for the American Bee Journal.

Given for TWO NEW Subscribers.

The following offer is made to PRESENT SUBSCRIBERS only, and no premium is also given to the two new subscribers—simply the Bee Journal for one year.

Send us TWO NEW SUBSCRIBERS to the Bee Journal [with $2.00, and we will mail you a copy of Prof. Cook’s Bee Book. Give the subscriber a premium. Prof. Cook’s book alone sent for $1.50, or we club with the Bee Journal for a year—both for only $7.50. But surely anybody can get only TWO NEW SUBSCRIBERS for a year, and thus get the book as a premium. Let everybody try it. Will YOU have one?

GEORGE W. YORK & CO.,

144 & 146 Erie Street.

CHICAGO, ILL.

H. G. QUININ,

Parkertown, Ohio

Parkedtown is a Money-Order Office. By connect ad. will appear twice per month only.

BEE-SUPPLIES!

EVERYTHING used by bee-keepers.

POUDERS, HONEY-JARS, Prompt service.

Low Freight Rates.

WALTER S. POWDER.

121 Mass Ave.

INDIANAPOLIS, Ind.

everything used by bee-keepers.

at our new PRICES.

Please mention Bee Journal when writing.

Foundation Sagging in Brood-Frames

C. Davenport describes in Gleanings in Bee-Culture his plan to prevent this, which does not require wire frames.

This sagging or stretching of the foundation, as those who have had trouble in this respect know, is next to the top-bar, a strip two-thirds inch wide over which the foundation has been fastened in a frame, and while it still remains in position on the board, the pollen of the eggs is being worked down to the foundation, two or three inches above the top-bar; then a small stream of wax is forced out. As the point is lowered to the top-bar, this adheres to the foundation; and if the operation is repeated at intervals the whole length of the top-bar, it will prevent the foundation sagging when the bees first get on it; and by the time they do, these strips of wax off the foundation are usually drawn out enough to hold it from sagging.

Hive-Covers and Bottom-Boards.

W. W. Somerford says in Gleanings in Bee-Culture that he prefers the plain reversible board cover for the climate of Cuba. Because it is cheaper, and because they warp with less force, he uses boards 1/4-inch thick in preference to thicker.

His bottom-boards are somewhat novel. After struggling with difficulties connected with ordinary bottom-boards, he says:

I scratched my head, got on my wheel, and started off with a Spanish-talking American bee-keeper to a new brood of foundation. We soon found the jolly owner, and told him just what we wanted—smooth and straight flat-pressed brick, 16 inches wide by 21 inches long, and 1/4 inch thick, and said he had just the "American machine" to make them with, and made them. And, Gentlemen, I can tell you now, as I place them on nice, flat ridges of earth, it is with a feeling that I shall be grown old and grey before the nectar of the honey bee shall show decay. The man who made them said they would last forever. Just think of a nice bottom-board that will lay forever and costing only 10 cents! If you have no tile factory to apply to, concrete or cement will make them—cheaper than the clothed in summer, and warmer than the warmest in winter.

Some Things About Queen-Rearing.

The following conversation, taken from the Australasian Bee-Culture, will interest beginers:

Fred—"I say, Will, you have introduced 24 queen-cells today—will they be laying in 10 days? I think you said a queen-cellar took 21 days to lay in 10 days."

Will—"Yes, Fred; I suppose I did say so, but those were not queen-cells I distributed, but queen-cells, and most of them will not emerge until to-night, so I will count full 10 days from that."

I believe I will expect to find them laying on the eleventh day, and will look them after that time.

"Will you not look at the nuclei before then?"

"Of course, I will make sure the cell has not been destroyed. I will look into the cell queens in about two days, and if I find them I will not disturb them before the eleventh day."

"Have you any object in not looking through them now?"

"Yes, I have, as if it were not for the frequent loss of queen-cells I would prefer not to touch the hives until the queen was due to lay. My rule is, don’t disturb my bees having a virgin queen—first, it is an unnecessary loss of time, and, secondly, the young queen often gets excited on the opening of
BEE-KEEPERS' SUPPLIES

THE FINEST IN THE WORLD.

Our New 1901 Fifty-Two Page Catalog Ready.

G. B. LEWIS COMPANY, Watertown, Wis., U.S.A.

Branch, G. B. Lewis Co., 19 S. Alabama St., Indianapolis, Ind.

Excellent shipping facilities and very low freight rates for Southern and Eastern territories.

25 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying 25 cents a pound—CASH—for best yellow, upon its receipt, or 27 cents in trade. Impure wax not taken at any price.

Address as follows, very plainly,

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

Tennessee Queens! Five lot of Choice Tested Queens reared last season, daughters of select imported and select golden queens, reared 3 ½ miles apart, and mated to select drones. Each lot contains 5, each 75 cents. No bees owned nearer than 25 miles. None impure within 3, and but few within 5 miles. 20 years’ experience. Discount on large orders. Contracts in writing. JOHN M. DAVIS, Spring Hill, Tenn.

Please mention Bee Journal when writing.

Our Specialty is making SECTIONS, and they are the best in the market. Wisconsin BASSWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free illustrated catalog and price-list.

MARSHFIELD MANUFACTURING COMPANY, Marshfield, Wis.

Red Clover Queens

LONG-TONGUED BEES ARE DEMANDED NOW.

ONE Untested Italian Queen FREE as a Premium for sending us TWO new subscribers to the American Bee Journal for one year (with $2; or, one Tested Queen free as a premium for sending us FOUR new subscribers with $4.00).

We have arranged with one of the oldest and best queen-breeders (having many year’s experience) to rear queens for us the coming season. His bees average quite a good deal the longest tongues of any yet measured. The Breeder will use is direct from Italy, having imported his own bees. Our worker-bees are large, somewhat red. They stored red clover honey last season.

All queens guaranteed to arrive in good condition, and all will be clipped, unless otherwise ordered.

CASH PRICES of these fine queens will be as follows: Untested, $1.00 each; Tested, $2.00 each. Send all orders to

GEORGE W. YORK & CO.
144 & 146 Erie St., CHICAGO, ILL.

Please Mention the Bee Journal when writing Advertisers....
Bee-Books

BEE-BOOKS

SOLD POSTED BY George W. York & Co., Chicago.


Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been thoroughly re-written and illustrated with new treats of everything relating to bees and bee-keeping, and is brought up to date. Contains about this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 529 pages, bound in cloth and illustrated. Price, $1.25.

Beek-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultural College. A clear and practical work, and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 496 pages, bound in cloth and illustrated. Price, $1.25.

Scientific Queen-Rearing, as Practically Applied, by G. M. DoLittle.—A method by which the very best queens are reared in strict accord with Nature's way. Bound in cloth and illustrated. Price, $1.25.

A BC of Bee-Culture, by A. L. Root.—A cyclopedia of 400 pages, describing everything pertaining to the care of the hive, and all about Comb 209 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20.

Advanced Bee-Culture, Its Methods and Management, by A. L. Root.—A new and in many ways a better bee book than the author's work this is a practical and entertaining writer. You should have this bee book. Bound in paper, and illustrated. Price, 50 cents.

Rational Bee-keeping, by Dr. John Dzierzon.—This is a practical bee book for the latest German bee book on culture. It has 350 pages, bound in paper covers, $1.00.

Bien-Kultur, by Thos. G. Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Bound in cloth. Price, 50 cents.

Bienenzucht und Honiggewinnung, nach der neuesten methode German (by J. P. Eigger).—This book gives a practical and scientific method of bee-keeping in an easy, comprehensive style, with illustrations to suit the subject, 50 pages, board cover. Price, 50 cents.

Beek-Keeping for Beginners, by Dr. J. P. H. Brown, of Georgia.—A practical and condensed treatise on the subject of bee-keeping. It is the best manual of management in order to secure the most profit. Price, 75 cents.

Beek-Keeping for Profit, by Dr. G. L. Tinken—Revised and enlarged. It details the author's "new system" of "cheapest yield of honey and comb or extracted honey." 80 pages, illustrated. Price, 25 cents.

Apian Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 20 colonies, $1.00; for 100 colonies, $1.25.

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Please mention Bee Journal when writing.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, July 5.—The new honey is arriving, and some nice lots of white clover comb have sold at $1.00 per pound. We have been supplied which is very light at this season the reported price for the June comb has been firming up to accommodate so that $1.50 would be acceptable if ordered; amber grades are nominal at $1.25. White extracted, half yellow, $1.75; amber, $2.00, dark, $2.35. The price of pure yellow, $3.00.

R. A. BURNETT & CO.

CINCINNATI, May 17.—No demand for comb honey, also stock of it well exhausted. Extracted very salty, sold down to $1 1/2 per pound, lower prices from 9/4 to 1 cent per pound.

C. H. W. WEHR

BOSTON, June 29.—There is practically no comb honey in our market, and owing to warm weather very little call for it. We are expecting some new candy horne next month. Market for extracted dull, at 65c to 67c.

BLAKE, SCOTT & LEB

OMAHA, May 1.—Comb honey, extra white, 25-cents cases, per lb., $1.25; new No. 1 amber, per lb., $3.00.

PHYRE BROS.

NEW YORK, July 6.—Our market is practically bare of comb honey, and demand good for white comb. Fancy stock sells readily at $1.50. White at from $1.25c; amber at 10c. Extracted, half yellow, $1.75; amber $2.00; dark $2.35. Good crop of Clover honey in this vicinity from what bees there are. The price of pure yellow comb has been raised by fout brood exterminators. H. R. WRIGHT.

BEE-BOOKS

REVISED BY DADANT—1900 EDITION

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large bee-keepers and bee-keepers of the district, to whom it is known to all the readers of the American Bee Journal—Chas, Dadant & Son. Each subject is clearly and thoroughly explained by the following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.25, or club it with the American Bee Journal half year—one both for $1.75; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

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And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

| Seed Type        | Price  
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| Japanese Clover  | $2.50  |

Prices subject to market changes.

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Red Clover Queens

We have been telling you through our advertisements of the superior stock of queens we are furnishing this year, and we have abundant testimony from others corroborating our opinion. Look at the following which is only one of the numerous endorsements received.

July 5, 1901.

The bees are working as I never saw them work before, and already there is over 100 pounds of honey in the hive, and all from clover. I am led to believe that long tongues and good working qualities go together.

Yours very truly,

Orel L. Hershiser,
Supt., N. Y. State Apiary Exhibit, Agricultural Building, Pan-American Exposition, Buffalo, N. Y.

This refers to a colony of bees on the Pan-American grounds with one of our Tested Red Clover Queens reared last season.

Our Prices are as follows:

- Gleanings in Bee-Culture one year and one Untested Red Clover Queen, $2.00.
- Gleanings in Bee-Culture one year with Tested Red Clover Queen, $4.00.
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If you want something good you can not do better than to order one of these queens. All orders are filled promptly. No extra postage on these offers to foreign countries.

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ITARISE

To say to the readers of the BEE JOURNAL that the DOOLITTLE... has concluded to sell QUEENS in their season during 1901, at the following prices:

| Queen Type        | Price  
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| Untested Queen   | $1.00  |
| Tested Queen     | $2.25  |
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Extra selected breeding, the very best...

Circular free, giving particulars regarding each class of Queens, conditions, etc. Address,
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Brodino, Onondaga Co., N. Y.

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**Weekly Budget.**

Mr. F. B. Simpson, whose article on inbreeding appeared in last week's number of this journal, desires to make the following correction: I wish here to correct the error I made in my article in last week's issue. On page 422 I wrote, "My idea that the best bee is the best regardless of locality," I had in mind all the honey produced in the 4th paragraph in the 3d column on page 431, but failed to put them on paper, as they should have been if again mentioned, for I am a long way from believing the way the last sentence was printed.  

F. B. SIMPSON.

Editor E. R. Root passed through Chicago on his homeward journey Monday evening, July 15, stopping in the city only between trains. He had traveled about 6,000 miles, making some 15 stops, and was feeling well, having gained several pounds in aroricarpus. The Texas "bee-keepers' paradise," mentioned by him in a recent editorial item in his paper, is already greatly overstocked with bees and bee-keepers, so no one need get ready to move there right away. In Colorado and Utah, however, there are numerous locations that are excellent for bee-keeping.

**Langstroth on... The Honey-Bee**

Revised by Dadan—1900 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 300 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the Ameri-
Editorial.

One of a Thousand.—Are you one of a thousand members that the National Bee-Keepers' Association ought to have before the convention to be held in Buffalo, in September? Last week we reported the names of four persons who had sent us their membership dues. This week we record the following:


New names will have to be sent in more rapidly than during the past two weeks if we are going to secure the necessary 200 among the readers of the American Bee Journal. That was what we thought could easily be done. And it can be—if only 200 among all the thousands who are not yet members of the Association would simply send in the one dollar each.

Of course, it is not necessary to send your dollars to us—send them direct to General Manager Eugene Secor. Forest City, Iowa, if you prefer. But we can publish the names of only those who send to us. We will then forward the money to Mr. Secor.

Now, can't we have a long list of new names next week?

Grading Honey.—Mr. D. W. Working has an article on this very important subject in this number of the American Bee Journal. Every bee-keeper ought to read it, and then heed it. We have handled enough honey to know that most bee-keepers know very little about the grading business. Of course, each knows that no other bee-keeper ever produced as fine honey in every way as his! And no one grades as honestly as does he! It is always the “other fellow” who puts the finest and whitest sections of honey in the front row, next to the glass, and then fills in back of them with “any old thing.”

One needs only to see the pronounced lots of honey that are received by a honey-dealer, to be convinced that on the subject of grading there is much to be learned by most bee-keepers. And uniformity of grading—well, you might almost as well talk of controlling breeding so that all colts or colts will be of the same size and color!

But it will pay to continue to call attention to this subject that really does mean so much to honey-producers.

Read Mr. Working's article, and then see if you can't hereafter do better work along the line of grading honey.

Bees Superseding Queens.—G. M. Doolittle says in the American Bee-keeper that fully three-fourths of his queens superseded by the bees are so superseded during the first 24 hours immediately following the linden flow. So any queen that he wishes to replace at that time is disposed of, and a ripe cell given a day later, unless a cell-protector is used, in which case the cell is given at the time of removing the queen. A plan not generally known he further gives:

Another plan which I have often used since my apiary became very much improved beyond what it formerly was, is to rear a lot of cells from my best queen at the time given above, and 24 to 48 hours before they are booked to mature, give one to each colony having a queen more than one year old, using a cell-protector for each one, and placing this protected cell in one of the sections on the hive, or anywhere I best can where the bees can cluster about it, without hunting out the old queen at all; when, if the bees have any notion to supersede their queen, they will accept of this young one and destroy the old queen. If they destroy the young queen I allow the old one to remain, thinking that the bees know what is right, and in 19 cases out of 20 where the bees decide on keeping the old queen, I find she proves passable well after the honey-flow of the next year is over. This is something which does not cost much labor, and which I practice often to my satisfaction.

In Breeding is generally supposed to be a thing that should in all cases be avoided, and bringing evil and only evil in its train. Those who are well-informed tell us that some of the best results in breeding have been obtained through the very closest breeding, and this has been emphasized so strongly that some might be led to think that no care whatever is needed to avoid in-breeding. A very white color in the honey is supposed by some to be the result of this, and the other side lies the teaching: In-breeding must never be allowed. On the other side lies the teaching: Pains must be taken to practice in-breeding if the best results are to be obtained. The truth in such cases is generally to be found in middle ground. In this case the middle ground would be very welcome to the lazy breeder, who would interpret it as being: take no pains to avoid in-breeding, and take no pains to practice it, but let nature take its own course. In this case certainly the middle ground so interpreted is not a safe ground.

We are told that in-breeding is not a bad thing at all. Perhaps, how can in-breeding be a bad thing when such grand results have been obtained through its practice? But were the results obtained because of in-breeding or is that just the fault? Darwin says there is no mysterious evil in the mere fact of the nearest relatives breeding together, but the evil follows from the circumstances of near relatives generally possessing a closely similar constitution, and that however the fact be explained it seems a fact that for the most vigorous progeny there must be a certain differentiation between sire and dam. That sounds like saying there is no evil in in-breeding per se, but it comes perilously near if it attendant circumstances are so commonly such that evil results. It would be unwise to dogmatize with none too much knowledge on the subject, but there may be no harm in asking a few questions:

Did those breeders who obtained such good results from in-breeding breed from near relatives because they were near relatives, or because they possessed, in common, qualities desired to be perpetuated? Would a father ever have been bred to a daughter as sire and dam if another than the father could have been obtained possessing the same qualities as the father without at the same time being nearly related to the daughter? Is it not the safe thing for those who do not take great and special care, that they shall take all the pains possible to avoid in-breeding? Is it not well that more should be known about the laws of breeding, so that a goodly number of the craft could be engaged in an intelligent attempt to improve our bees?

The Saw Palmetto is an important honey-plant. That same remark about white clover would perhaps elicit a smile of pity, for every one is supposed to know white clover honey, yet saw palmetto is to the Floridian bee-keeper, the editor of the American Bee-keeper says, that the Northern producer of honey. "Hundreds of thousands of acres of Florida sand are covered with a scrub growth of it, while in moist and richer localities it grows in impenetrable jungles, and is one of the most beautiful of our sub-tropical palms," so says Mr. Hill.

In the same journal, W. S. Hart says it is a tree whose trunk may lie under the surface of the ground or upon it, or it may rise 10 or 12 feet high in the air. It is one of the cheapest and best sources of tannic acid for tanning leather. The pinnate leaf is used to make paper, especially of finest quality, and capable of holding oil and other liquids. It also makes a very clean and springy filling for mattresses. The bloom is composed of small, cream-colored flowers on racemes from one to three feet long, and the honey is of a fine light-amber color, heavy in weight, and of good flavor. Another grade of honey is obtained by the bees from the juice which flows down through the skin of the berries, which are from the size of an olive to twice that, and seem to be a wholesome food for hogs, cattle, bears, and people.
Contributed Articles.

Grading Honey—Its Importance, Rules, Etc.

BY D. W. WORKING.

Secretary of the Colorado State Bee-Keepers' Association.

The bee-keeper is a partner in a co-operative business; he furnishes the hive and its accessories and markets the produce with which he works. But he does more. Between the work of preparing the hive for the bees, and marketing the product of their labor, the bee-master has other work to do. He is more than a partner in a co-operative establishment; he is his manager and joint worker, and on the wisdom and skill with which he works and manages depend in a large measure the success of the business venture.

The bee produces the honey. But will it make straight comb, even, white, and well-capped, if hive and sections are not properly prepared for its use, and if they are not properly cared for during that use? And if all the preliminary work is well done, will the product be ready for an easy and even sale, and at a decent price? The fruit-grower picks his berries and his apples when they are in the best condition for the trade; he sorts them carefully and puts them up in attractive packages in order to command the best prices the market of the end. Sell in raising experience in handling, wisdom and foresight in catering to a varying demand—these are the secret of his success.

The bee-keeper must do more than to induce his bees to put their products into clean sections; he must keep the sections clean and unbroken; he must meet the demands of the trade. To do this he must take the honey from the hive at the right time, must make each section as clean and inviting as possible, and then assemble the sections properly into attractive packages. People like what is good, and like it better if it looks good. What is clean suits them better if it looks clean. A stain on the outside of a section does not make the honey less sweet or less wholesome, but makes it less attractive to the buyer. The stain, therefore, must be removed before the section is offered for sale.

Uniformity counts; therefore the bee-keeper must make his packages uniform—in size, in shape, in color, in arrangement. A few leaking sections are too many; a single badly graded case may spoil the sale of a ton of honey. So the individual must be careful in grading, in handling, in packing, and in selling his products. But this is nothing compared to meeting the demands of the trade. Sell in raising experience in handling, wisdom and foresight in catering to a varying demand—these are the secret of his success.

The rules and recommendations of the Colorado State Bee-Keepers' Association are as follows:

COMB-HONEY RULES.

No. 1—Sections to be well filled and capped, honey white or slightly amber, comb white and not projecting beyond the wood, wood to be well cleaned; cases of separated honey to average 21 pounds net per case of 24 sections, with a minimum weight of not less than 20 pounds for any single case; cases of half-separated honey to average not less than 213 pounds net per case of 24 sections, with a minimum weight of 393 pounds for any single case; cases of unseparated honey to average not less than 223 pounds net per case of 24 sections, with a minimum weight of 213 pounds for any single case.

No. 2—Includes all amber honey of a pronounced tinge, and all white and amber honey not included in No. 1; to be fairly well sealed, uncovered cells not to exceed fifty in any section exclusive of the outside row, wood to be well cleaned; cases of separated honey to average not less than 15 pounds net per case of 24 sections.

EXTRACTED-HONEY RULES.

Extracted honey shall be classified as white and amber, shall weigh 12 pounds per gallon, shall be perfectly free from particles of wax, and shall always be marketed in new cans. All rendered honey, whether obtained by solar heat or otherwise, shall be classified as "strained" honey and not as "extracted."

RECOMMENDATIONS.

It is recommended to sell all pure honey around home as much as possible, to grade only in daylight, near a window; to use the standard 14x13/16 inch section and the 24-pound double-tier shipping-case, in order to have uniformity in loading cars; to stamp all cases of No. 1 honey with the owner's name above the handholes; to mark all cases of No. 2 honey with two dashes in the handholes at each end of the case, and with no other marks whatsoever; to use no second-hand cases for No. 1 and No. 2 honey; to pack all sections with paper below and above, and in double-tier cases to put a sheet of paper between the tiers; to store comb honey in a warm, dry place, protected from flies and dust; and to handle carefully, well protected from dust and rain.

Do Bees Spread Pear-Blight?—The California Bee and Fruit Case.

BY E. R. ROOT.

TROUBLE has been brewing for some months between the fruit-men on one side and the bee-men on the other at Hanford, in the San Joaquin Valley, Calif. On the part of the first-named, the contention was that the bees, the property of the other parties, were the principal means of spreading the pear-blight, which had been working such awful havoc among the pear orchards in the vicinity mentioned. The bee-men, on the other hand, took the ground that their stock were not carrying the pear-blight; and, even assuming that they might do so, averred that other insects, and birds, as well as the wind, might and could do all the mischief laid to the door of the bee and that, therefore, the removal of the insects under the direct control of man would not afford the relief sought. The contention waxed warm. Each side called special meetings to discuss the matter. Bitter words as well as threats were used. Some of the more rabid of the fruit-men proposed...
to use poison to exterminate the bees in case they were not speedily removed by their owners. This only tended to aggravate matters. The bee-men retorted that, if any one were foolish enough to resort to such a procedure, not only killing the bees but endangering the lives of human beings.all they would in sight them on the way, half way; that they had, as backing, the National Bee-Keepers’ Association, which had hundreds of dollars to its credit, had fought many cases in court, and had always been successful. Furthermore, it was believed already on the question of poisoning bees, and that the fruit-men “could drive ahead” if they wished to. The latter maintained that they “had looked up the law.” and that they knew what they were about.

It appears that those who indulged the most freely in this war of words were not those who had the largest interests at stake, either in the bees or in the pears; that the large pear-growers as well as the largest bee-keepers were men who indulged in no threats, but who believed that a compromise might be effected between neighbors who were men of fairness as well as men who are willing to listen to reason, and so the sequel proved.

The president of the National Bee-Keepers’ Association was asked by resident members to make a visit to the scene of the impending trouble; investigate, and take such action as might, after a conference, seem most advisable. Accordingly, on the 18th of June, that officer appeared at Hanford, Calif., being received, as it were, into that “nest of hornets” by the redoubtable John H. Martin (Rambler), and J. C. McCubbin, who came with him officially and unofficially to see that no harm was done him; but, be it said, they deemed it advisable to go home that same day, although they did participate in one or two little “skirmishes” on the street. Unfortunately the Rambler had not along his invincible umbrella and stovepipe hat; for with such offensive and defensive weapons he would surely have come off victorious. As it was, it was a “draw” and he departed with John C. under his arm.

It appears that the local members of the Association had made a great handle of the coming of the president of the National; of the strength of our organization, how it had never lost a case in court, and that it had secured valuable decisions from the high courts. But as he did not come at the time expected, and days went by, and still he did not come, the fruit-men began to think that this talk was all “bluff;” and when he did appear, there seemed to be a feeling on their part that he had come, not to bring peace, but war, and that an organization that would send a “walking delegate” clear from Ohio surely meant business. Moreover, it had received both sides, a truce and a compromise began to be talked of. On our side was a special committee appointed by the Central California Bee-Keepers’ Association, at its last meeting, to meet the representative of the National Bee-Keepers’ Association; and on the other was N. W. Motheral, Horticultural Commissioner, of Hanford, Calif., who seemed to represent the fruit-men, but who some jokingly said was the mother of the whole trouble.

When both sides got together it was suggested by one of the fruit-men that, as a compromise, the bees be moved from the vicinity of the pear-trees during the time they were in bloom. This, after they were out of bloom, and when the alfalfa began to yield nectar, they be returned to the heavy or main crop. This, it was thought, would give them, in the meanwhile, a chance for investigation, and if, after investigation, it was shown that the claims of the fruit-men were well-grounded, afford in the meantime the necessary relief. This was finally agreed to, although it would entail a big expense on the bee-men.

It may be wondered why the latter were willing to listen to a compromise at all. In the first place, as they believed, the facts were in their favor. In the second place, the fruit-men had the testimony of Prof. M. B. Waite, Assistant Chief of the Division of Vegetable Physiology and Pathology at Washington, D. C. This official takes the position that bees do carry the spores of pear-blight from flower to flower while the trees are in bloom. In this opinion he appears to be supported by Prof. N. E. Pierce, Pathologist of the Pacific Coast Laboratory, Santa Ana, Cal.

The following letter, directed to N. W. Motheral, Commissioner of Horticulture at Hanford, Calif., from Prof. Pierce, explains the position of the scientists, in a nutshell:

Mr. N. W. Motheral, Horticultural Commissioner, Hanford, Calif.—

Dear Sir,—In fulfilment of your former letter, and in reply to your request, I herewith give the main facts upon which are based the claim that bees take an active part in spreading the disease of trees variously known as pear-blight, twig-blight, fire-blight, and barn-blight, which has killed or has threatened to kill the pear-trees in the locality mentioned.

1. Pear-blight is a bacterial disease which affects pear, apple, crab-apple, quince, and related trees. It is induced through the action of a specific micro-organism belonging to the bacteria, and known as Bacillus amylovorus (Barrell), de Toni.

These facts have been demonstrated by many scientific workers by careful inoculation, and by the recovery of pure cultures of the bacillus. The cause of the disease has therefore been well known for many years.

2. The identity of the blight of pear-trees in the Clow and Taylor orchards near Hanford (these particular orchards are cited only for the sake of accuracy, as there are many others affected) with true eastern pear-blight has been established, for Bacillus amylovorus was isolated in pure culture by the plate process from blighted branches from Mr. Clow’s trees, and a young and thriving pear-tree was inoculated, and died to within a few inches of the ground, with the true pear-blight. A control tree treated the same way as the inoculated tree, except that the bacillus was not introduced, remained perfectly healthy.

3. Mr. M. B. Waite, Assistant Chief of this Division of the Department, has kindly supplied the following additional facts bearing on this matter:

4. The occurrence of the blight on the blossoms in great quantities, and the great rapidity with which the disease spreads from flower to flower, indicates a normal and very effective method of distribution.

5. The germ were found growing freely in the nectar of the blossoms.

6. Bees have been repeatedly visiting the infected flowers, and some were caught taking infected nectar, and, by means of plate cultures, the pear-blight germs were isolated from their mouth parts.

7. By covering parts of the trees with sacks of various kinds of material, and then artificially infesting certain flowers on the tree, the blight was observed to spread very freely over the uninfected and uncoyored blossoms, but was entirely absent in the blossoms covered by mosquito-netting.

8. Pear-blight germs, germinated on the flowers, and lived up, and flourished for only a brief period on exposure to the weather conditions out of doors, hence they can not live in dust; and be blown around to any great extent by the wind.

9. Pear-blight virus, particularly which occurs on blossoms, is a very sticky substance, and is readily carried by insects, birds, or other animals, but can not be blown from flower to flower.

This brief presentation will, I believe, furnish your board with the main facts needed to show the connection existing between the visits of bees to pear-flowers and the spread of pear-blight.

April 23, 1901.  

Pathologist in Charge.

Prof. Pierce happened to be in the city at the time, and in an interview which we had with him he gave utterance to substantially the statements as are given above. If anything, his verbal statement is even stronger. So far as I could judge, he seemed to be a competent scientist, and a fair-minded gentleman; but, unconsciously, he is prejudiced, I think, in favor of the pear-men, with whom he has come much in contact of late.
I asked him if it were not true that wild bees, insects and birds, over which man has no control, could do all the mis-
chief ascribed to the bees. He admitted that this was poss-
ible, but not probable. Did he not think that bees were
valuable as fertilizers of the blossoms, especially of those
of the Bartlett pear? He thought they were. Well, did not
this furnish a reason to breed, year after year, more than
counterbalance the alleged mischief done by them? The
occasional year when pear-blight was so prevalent? He
could not say, although he was of the opinion that, by a
certain alternation of varieties, the services of the bee
might be dispensed with entirely; but of this he was not
sure.

From Prof. Waite's statements it would appear (to
express it in common parlance) that the bees have been
carefully observed and the results of their work noted.
He admitted that this was possible, but not probable.

This is a nice question, as a lawyer would say, and we
need to go at it carefully and candidly to get at the truth,
cut where it may.

There is some evidence that goes to show that Prof.
Waite is mistaken. For instance, there are young pear-
trees, acres and acres of them, that have never been in
bloom; and yet these young trees are blighted to death.
How? How is the reason did the bees carry blight to
these trees when it is apparent that they never went near
them? And then there are little shoots that have pushed up
from the ground since the big trees were in flower, and
yet these shoots are blighted like the rest. Assuming, for
argument's sake, that bees may carry the blight on old
trees, we must admit that there is some agency, possibly
the wind, Prof. Waite to the contrary, that carries the
destructive microbe to the young shoots and the young
trees. That is one of the things that are not explained.

Again, I believe we have the right to insist, for the
present, until we have more corroborative evidence, that
wild bees, other insects, and birds, over which man has no
control, may be able to spread the blight just as much as
the bees under the control of man. For example, this illus-
tration was used: If a barrel full of water has two plugs
in it near the bottom, the larger plug, represented by the
tame bees, and the other plug (the small one) by insects,
birds, and wild bees, will not the small plug exhaust the
barrel just as surely as it did in the case of the bees. If
this large plug only once out of every ten removal of the bees
to be allowed would not bring the relief expected, by a
long way.

In conclusion, let me say that I visited the worst-
affected large pear-orchards in the vicinity of Hanford,
California. The trees were blooming, the flowers were
fair, intelligent men. While they thought the bees were to blame, they also thought the pear-men had some responsibility in the
matter.

I visited one orchard of 120 acres, and every tree was
badly blighted, and no mistake; but in this orchard we
found the badly-blighted little shoots I have referred to.—
Gleanings in Bee-Culture

California for Bees—Motherwort, Etc.

BY PROF. A. J. COOK.

PROF. C. P. GILLETTE, of Colorado, desires me to give
the comparative merits of the different parts of California
for bees. The last list of the St. Louis entomological meeting
I came here there have been but 3 excellent seasons, while
two of the seasons were complete failures. It is possible
that at some time in the future we may be prepared to water
large areas in winter, when there is too much water and
when water can be had cheaply, and so remove this un-
certainty. In such case Southern California would lead the
world.

Central California—the great San Joaquin Valley—is
becoming very noted as a locality for bees. The extensive
fields of alfalfa in Fresno, Tulare and Kings Counties, make the honey crop almost certain; and the quality of the alfalfa honey best.

In Northern California there are always abundant
rains, and in some sections, as along the Sacramento river,
there are extensive areas of alfalfa. If the North had as
fine honey-plants and in as rich profusion as the South,
then Northern California would be at the head for honey-
production.

Prof. Gillette asks especially about Sonoma County. If
one is sure of honey-plants he may have no fear. It would
be better if possible, to locate close by a large acreage of
alfalfa, as then failure would be almost sure of elimination.
There must be generous watering in winter to insure nectar-
secretion. The owners of alfalfa will look to the water-
ing; and so the honey crop will be assured.

MOTHERWORT AS A HONEY-PLANT.

Mr. Arthur A. Houser, of McDonough Co., Ill., sends a
good sample of this plant, of which he writes:

I send you a flower which grows abundantly here. I haven't
been able to find a botanist that can give me its name. I please name it through the American Bee Journal? The bees are on it from early morning till late at night. I feel sure it must be a very
rich honey-plant. Do you not think I would better encourage its
growth here, as it flourishes well with half a chance?

This is one of the best mints of the East. It is the
common motherwort—Leonurus cardiaca. It is illustrated in my
"Bee-keeper's Guide," page 357, where I fully explain its use as a honey-plant. It is one of the best honey-plants, and so
has excellent relatives in the horse-mint and white and
ball sages. It belongs to the family Labiatae, so named from the
two-lipped or bi-labiata form of the flowers. Such irregular flowers have developed, as we are assured, that
they can be identified. The flowers are square, and
other families with irregular flowers are familiar in the
Scrophulariaceae and the Leguminosae. In the first is the
excellent honey-plant—figwort—and in the latter all the
clovers. The irregular flowers of the first develop so
as it reaches in to get the nectar, is sure to become dusted with
the pollen, which, as the bees flies away, will be borne to the
stigma of the next flower visited. The very fact of
irregular flowers tells that we have honey-plants.

CORRECT USE OF NAMES.

I trust if we can be too careful in using names cor-
rectly. I have the impression that to use a name tend to be
to get untruth, and, conversely, to use words precisely
works to make one more truthful. This, and to be
more correct in our language, is surely enough to influence us all.
Languages I would say—butterflies are all
the common faults of expression. I say faults, though the
dictionaries may permit some of them. Our dictionary
makers are conservative, and follow rather than lead in
nice distinctions. The best way to gain the latest and best
language is to work the words of specialists. They must be accurate
and precise.

The entomologist would never call a larva a worm. In-
sects are a branch separate from worms, and are very
different in every way. A worm—an angle-worm is an insect—
is always the same in form and appearance. Thus a worm
just hatched from the egg is like the mature worm,
except it is small. Worms have no feet, nor any specialized
organs for breathing. We may rightly say angle-worm,
sea-worm, tape-worm, round-worm, etc.

The larvae of insects are different. They are very un-
like their matured selves—usually have feet—have respira-
tory organs. If these are to develop into butterflies or
moths, we call them caterpillars. The caterpillars can always have from
10 to 10, legs, usually the latter number. If they are to de-
velop into two-winged flies, like house-flies, we call them
maggots. These are footless. If they are to become bee-
tles, we call them grubs, which usually have 6 legs, though
some, like the grubs of weevils, are also apodous or
footless. Another mistake is to call insects bugs. Only
one order of insects are bugs. We may say chinch-bug cor-
corately to call insects bugs. We may say chinch bug
as to call a rat a hippopotamus. Let us do all we can to
secure more accuracy in the use of such names.

Los Angeles Co., Calif.

Queenie Jeanette is the title of a pretty song in sheet
music size, written by J. C. Wallenmeyer, a musical bee-
keeper. The regular price is 40 cents, but to close out the
copies we have left, we will mail them at 20 cents each, as
long as they last. Better order at once, if you want a copy
of this song.
No. 9.—Practical Lessons for Beginners in Bee-Culture.

BY J. D. GERHING.

I BELIEVE it is safe to assert, Mr. Bond, that in all the
intelligent universe, so far as our knowledge extends,
there is not a creature so low in the scale of intelligence
that it does not in some degree appreciate human kindness,
gentle sympathy—all expressed in the word love. Of
course, it is easy to deny this statement; but it is by no
means easy to prove it false, in theory and manifestation.
Only a moment’s reflection brings before your mind the
fact that when I bid you to do your duty, to look after
your horse, your dog, or even one of your hogs, love—
as far as an animal is capable of manifesting that quality
of intelligence.

But I came to the conclusion a few years ago that we
have no safe guide by which to draw the line of limitation,
in the scale of intelligence downward, beyond which we
find no evidence to support my statement, when I read in a
journal of science of a man in England who had trained
quite a number of fleas—to such an extent that he could
hitch them to a cart purposely made for them, and to draw
it, as horses do a wagon. And several other things he had
taught those little creatures to do—all by the constant
and persistent exercise of tact, patience and kindness toward
them.

“I don’t pretend to know how a flea can appreciate human
kindness—I am only speaking of the fact as reported. I am convinced, however, mainly by personal observation,
that among our bees there is a kind of conscience, a
mysterious way they can and do appreciate kind treatment.
In the same way I have also learned that they have a keen
appreciation or comprehension, of the other kind of treat-
ment they are subjected to, as well as I do how promptly and
effectively they resent it.

“Looking at the matter, therefore, from the point of
view here indicated, Mr. Bond, it is surely not a waste of
time on my part to make the explanation of this principle
a feature of our lessons.

“Several times, on various occasions, visiting friends
have asked me, when they saw me at work among my bees,
how I could do it all without getting stung to death. My
answer nearly always is, Because my bees know me. They
seem to know my touch. Possibly they also know my
voice. Certainly they know me by their keen sense of
smell.

“Mark that last statement well, Mr. Bond,” I continued,
looking sharply into his eyes through the meshes of
his bee-veil as I spoke. “It is of greater importance than
you may think; not because it is a controverted propo-
sition among the most intelligent of bee-keepers, but
because as a test of your attention between you and me, it
implies that I mean it, that I believe it because I have been
convinced of its correctness by evidence that satisfied my
reasoning.

“‘Yes, Mr. Bond,’ I continued, impressively, ‘it is one of
the articles of my bee-keeper’s creed, that, Bees have a
keen sense of smell, and I’m ashamed of it—neither am
I fanatical enough to be ready to fight for it. And—let me
tell you this in strict confidence, Mr. Bond—whenever I
hear of an intelligent, well-educated man who, as a pro-
fessional bee-keeper, denies, point-blank and on foot, that
article of my creed, I intuitively suspect him of all, or at
least some, of such unprofessional habits as the smoking
and churning of tobacco, drinking of whiskey, and eating of
garlic and limburger cheese.

“I know very well that it sounds like a silly paradox to
make a statement of that sort,” I hastily commented, when
I saw through his veil a plainly outlined expression of
insolence. “Surely, since most of these fellows are jovial for
the cause, the thought naturally suggests itself that the best
trained and most loving bees in the world would be sure
to ‘go for’ such a man, hot-end foremost, if he ventured
with his bee-veil on to the honey-flow. The proposition
naturally assumes a paradoxical look of that sort. But the
paradox is at once seen to be a delusion, in a practical
way, when I explain that it is because of that fact of the
bees, ‘that you may be sure, Mr. Bond, that a bee’s sense
of guilt of offending their olfactory nerves persists in deny-
ing that the sense of smell is an inherent part of bee-
nature. They do go for him.”

“I fear I have wasted time in an effort to make you see
the point of my argument, which I can so plainly see and
feel. But, nevertheless, I trust that my effort to handle a
delicate subject through the texture of the proverbial ‘kid
gloves’ is not wholly lost.”

The conciliatory sentiment was offered because I knew
that my friend and pupil was guilty of the tobacco habit:
though not of the other two.

Beg your pardon for this digression, Mr. Bond, and
for keeping you waiting for the main article, which is
headed: ‘How to Get Rid of Little Bee-Smell.’

If you’ll now examine the smoker to see that it is in working
order, we will finish taking off that super. Of course,
you remember my caution not to lift before you are sure
you have a secure hold at both ends, and to be careful not
to drop any bees while you are doing it.

Following my directions, Mr. Bond lifted one end of the
super high enough above the frames so that he could
blow a little smoke underneath it among the bees, to pre-
vent them from making a demonstration when the super
was lifted clean off the hive. As he did, I said:

“This as a precaution,” I explained. “It is better to
do that, though it’s a little more trouble because you must
handle the smoker and one end of the super at the same
instant. If you lift the super suddenly, the bees
underneath are startled, not knowing what is going to hap-
pen, and, as a rule, they make a rush. The result is that
often, before you can properly take care of the heavy
super—supposing it to be full of honey—you get bees
to the thousand and all across the floor and into your
stocking. You want to take your stand to do the work you came there to
do. To say the least, it may cause some unnecessary
annoyance to have it that way. But there are times and circumstances
when—what is the word?—there is something to
which annoyance may be the result. As, for instance: the entire
colony may become alarmed and assume a belligerent atti-
itude, especially when you are handling old bees, and at a
time when there is a light honey-flow. Or, the color
enters the hive you are working at may be aroused by
the alarm-signal given by the flying bees. In that case
they will first mingle with those in the air to investigate
the cause of the commotion; but, almost invariably in
such an instance, these neighbor-meddlers will next pro-
cede to investigate the open hive, with the result, well-
known to all practical bee-keepers, that you have a case of
robbing on your hands when you were least expecting it.

I am telling you all this at this time, Mr. Bond, in
order that you may be prepared to make a safe emergency
whenever in the future you have a job like this to do. An
ounce of prevention is worth a pound of cure,” applies
here, Mr. Bond, in the sense that a little precaution, with
a little smoke judiciously applied, will often prevent—well,
it’s hard telling what not. Every experienced bee-keeper
will endorse that, I think.

“Now for the drones,” I said, after Mr. Bond had
deposited the super, without crushing bees or getting stings
on his fingers, and had made himself as safe as possible.

“Please take this prying instrument”—handing him
my old chisel—“and show me how nicely, carefully and
gently you can loosen the ends of those brood-frames with
it without alarming the bees. They are all glass, more or
less securely, hence you must avoid sudden snaps and
jerks.”

Mr. Bond took the chisel and bravely began the job.
He was getting along very well until he reached the last
frame. The bees had done a little more work on that, seem-
ingly, than elsewhere, and as a consequence my friend had a
little more trouble with it, and was obliged to use a little
more force to loosen it. Quite suddenly—as such mishaps,
especially in the case of the bees, happen so often and so
unexpectedly—his shell slipped and down went the frame with a
bang. Before I had time to use the smoker, or he to realize what had
happened, about a score of bees made a dive at his naked
hands. Fortunately, I had held back the smoke to keep his hands
perfectly still for a moment and not to jerk them back; for if
he did that they were sure to sting. This he now remembered and put
into practice, with the result that, though most of the
attacks were bee-keeper’s wounds, by the mere nuisance of
stinging, none of them made earnest of it.

“Good! good!” I shouted approvingly. “Now you are
initiated, Mr. Bond. That kind of experience is to the
baptism of fire. His first lesson at any rate, and his first
is to an army recruit. I think you can stand fire now, Mr.
Bond, when you and any man’s bees get into a fracas.

“Go ahead now and lift those frames out for inspection.
You can do it as well as I can. Begin with the one
you have just loosened and hand it to me; I want to see
whether there is any drone-brood on it or not.”

To be continued.
Biographical.

Mr. Robert Wilkin.

We present on the first page this week the latest picture of one of the leading pioneer bee-keepers of California—R. Wilkin. His son-in-law, Mr. J. F. McIntyre, has kindly sent us the following biographical sketch:

Robert Wilkin was born near Londonderry, Guernsey Co., Ohio, July 4, 1829, and died at Newhall, Calif., May 30, 1891. He leaves two daughters, Mrs. J. F. McIntyre and Mrs. J. M. Owens, and 8 grandchildren.

He was educated at Westminster College, New Wilmington, Pa. Soon after leaving college he married Eliza Williamson, who had attended the college at the same time. He had one daughter, Harriet, by this marriage, his wife dying when the child was 9 months old. About 4 years later he married Isabella Gordon, by whom he had one daughter, Mary. His second wife died in 1888.

Mr. Wilkin made a specialty of the bee-business for nearly 40 years; he left a journal of the business from 1862 to 1901, in which I find many interesting items. His first investment in this line was to buy the patent-right to make and sell the Langstroth hive in several counties in Ohio. This venture was not a financial success. The next was to buy a lot of black bees, transfer and Italianize them, and commence the business of selling Italian queens, and colonies, at Cadiz, Ohio.

Among the first items that he paid L. L. Langstroth $25 for an imported Italian queen, and sold 20 colonies of Italian bees at $20 each. An item in November, 1871, says: "I have 300 nuclei, and have sold this year over 800 Italian queens at $5. 10 years ago I received this season 2,000 queens; 400 of these were sold at $250 per hundred, and the balance at $8 to $6 each; and bought of A. Grimm 72 colonies of pure Italian bees at $11 each."

This was too good to last; for on May 15, 1873, he writes: "Of the 3,135 hives of bees in the fall, only 61 are alive now."

"June 5, 1873, bought of Dr. J. J. Adair, 52 colonies of bees at $6 each." He continued to lose his bees in winter and buy more in the spring to carry on queen-rearing, until the spring of 1874, when he moved all of his bees and family to Oskaloosa, Iowa, to try producing basswood honey. After two seasons of failure and loss of bees here he moved all of the bees he had left—240 colonies—and his family, to San Buenaventura, Calif., arriving Nov. 6, 1875.

In 1874 he wrote a book of 96 pages, entitled "Hand-Book of Bee-Culture," price, 25 cents. But he gave away more than he sold, to save himself the trouble of answering so many questions while selling queens. The book is now out of print.

After coming to California he turned his attention entirely to the production of extracted honey. California honey had not made its reputation at this time, and it was hard to dispose of large crops, and on Nov. 1, 1878, he left his bees in charge of C. Gallup, while he went to England to sell his crop of 45,000 pounds of extracted honey. Subsequently he made trips to Boston and Texas to sell honey. His largest crop was 100,000 pounds from 1,000 colonies in 3 apiaries in 1882. He retained his interest and enthusiasm in bees to the time of his death, and was actively engaged in hiving swarms when he was taken with cholera morbus, and after 12 days’ sickness died on May 30, at the age of 71 years and 11 months.

Mr. Wilkin was president of the California State Bee-Keepers’ Association during the last two years. His hobby was co-operation. He was always willing to lend a helping hand in a good cause, and served his country during the Civil War in the 42d Ohio Volunteer Infantry.

F. M. McIntyre.

One by one the bee-keeping pioneers are passing away. Soon there will be none left to give personal reminiscences of the days of Langstroth, and Quinby, and Wagner.

California has perhaps led in the line of extensive apiaries. Mr. J. S. Harrison (still living, we believe) leading one at a time with his 6,000 colonies of bees—the largest bee-keeper in all the world. Next to him likely came Mr. Wilkin, at least in the size of his honey crops, as mentioned by Mr. McIntyre.

But what of the future of bee-keeping? Will there arise worthy successors of the noble ones who have lived, labored, and then passed on? Yes, we believe there will be. Already a new interest is being taken in bees and the production of honey in many localities. The bee-keepers of the present are taking advantage of the experiences of the past, and with the progress of the present will undoubtedly surpass even the wonderful results attained by those of the years gone by.

Our pursuit is an honorable one. Indeed, "Our toil doth sweeten others." And as the years come and go, "others" will include more and more of the sweet-loving public that now know not the taste of "nectar fit for the gods"—delicious honey.

Above all things let us strive to emulate the grand examples as shown by the lives of those who have been translated to that Heavenly sphere, such as Langstroth, Quinby, Cary, Wilkin, and many more that might be named did time and space permit.

The Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses.

By E. E. Hasty, Sta. B Rural, Toledo, O.

LIVING ON HONEY ENTIRELY.

I wonder how nearly a man could come to living entirely on honey—a man not a laborer, but one whose work is mainly mental. In other words, I wonder how much of a lie that is on page 365 where it says Pythazoras lived only on honey. I have hung up in my den a funny picture entitled, "George Washington trying to sell a lie." May it not have been that this was the one he was trying to sell?

A QUEEN KIND OF ORNAMENT.

We've seen many sorts of things to ornament apiaries, but never strings of decapitated human heads before. Ask Mr. Huan. if his State has "done gone" and annexed itself to Borneo. Frontispiece No. 24.

COUNTING BEES BEFORE THEY'RE HATCHED.

My parents came to Ohio in 1843. Suppose I should reason on how many Hasty's of the stock there ought to be here, instead of saying how many there are. When a chap starts in to count a colony of bees by saying: "The queen has laid so many eggs per day," or "The bees are in their second fall," or "The bees not hatching," and then to hustle him toward the door—just a little, you know. Counting bees before they are hatched is not better mathematics than counting chickens before they are hatched, but decidedly the reverse. Amount of inside surface in the hive, and generation of bees to the square inch, will yield a better approximation than egg-counting can do. Yes, we'd like to know who's got the most numerous straight colony; and it's sadly awkward that weighing bees is so much trouble except at swarm-hive-time. Page 371.

A HOMELESS QUEEN.

I would say to Mr. Crafton, page 881, that it isn't very common for queens to be lighting down upon us at our work. As for one way it might have happened, per chance a colony had been superseding its queen, and as usual reared several of them. Two chanced to emerge about the same time. One was accepted; and then when the bees not wishing to wear a queen was driven out of the hive. Finding herself homeless she presumably the open hive you were at work at to see what it might offer in the way of a home.

BEES AND GROCERIES.

Dr. Mary McCoy writes up an exceptional location in an entertaining way on page 385. Abundant pasturage on two first-class honey-plants, and scarcely anything else. One could well afford to do some feeding in spring if tolerably sure of a midsummer and fall with fair honey-flow of white honey. It looks as if grocers as well as other men are reasoning creatures. Unusual quantities of bees shipped with the fruit, when a masked apiary close by comes to need shipping. In a small city, where the number of dealers having exposed
The Home Circle.

Conducted by Prof. A. J. Cook, Claremont, Calif.

NATURE STUDY.

"Flower in the crenniled wall,
I pluck you out of the creamy
I hold you here in my hand,
Little flower; and if I could but understand
What you are, root and all, and all in all,
I would know what God and man is."

Those beautiful lines from the great author, Tennyson, are rich in suggestion, and show the heart of the great poet-laurate of England. It is beautiful for us all to know the flowers, to know the birds, to be intimate with butterfly, moth and beetle. These gems of God's handwork are intrinsically beautiful. To be on speaking terms with them, to look deeply into their beauty and mysteries, day by day, is to enrich and refine the life. Poring into their wondrous secrets is ever full of sweetest and best entertainment, is ever startling us with surprises, is ever bringing us to know more of God's wondrous ways.

And how we constantly learn to see more and more as we study these wonderful tri-colorings right from God's own hands. Did the great poet oversate the truth when he said that to know the flower thoroughly was to know God and man? I am sure, to know the flower and insect will bring us as near God as will anything we may study, and will make us more alive with the best peace-makers, or stir up in the country folk more and true than others, may it not be that the influence of plant and flower has worked to sweeten and ennoble life?

New York, through a beautifully wholesome work of Cornell University, is bringing nature study into all the country schools, and so into all the homes. God be praised for this splendid undertaking. We may well bring it into all our home circles. Can we not get all our Nature Study to follow New York's text? Writable example, and all have the leadlet, the lesson helps, and every bid to foster this glorious nature study? Let us all urge it upon our colleges and legislatures. A little seed here will bear if in the soil of one mind the first ones away and don't let them get begun. Tell them also that screening often is only needed for two or three days, until a mysterious change in weather conditions makes the flowers “give down”—after which the flowers have the preference.

QUEEN ACCEPTING THE COLONY.

I think Editor Pender is on the right track in juggling our minds concerning the fact that the queen must accept the colony as well as the colony accept the queen. Curiously hungry is the person (or the people) on her side, and the opposite of hunger a very necessary peace-maker on their side. Page 388.

PARTLY FILLED SECTIONS FOR HAI.

Let's sing some more about taking partly filled sections, bees and all, to start laggards at storing honey. No experience myself (so I can sing more freely). I have wondered just a little if the wise old chaps who recommend this have figured high enough that the good old fellows. You see, if we let a good hand spend half his days making a tramp work, and said tramp does $1 of a day's work, we have scored a loss of 25 percent. My practice is, and my advice is strongly in the same direction, to keep bees for comb honey that don't need any such fussing. Page 397.

HINTS ON SELLING EXTRACTED HONEY.

On page 388, G. H. Pond strikes the heart of an important mistake. The queen can be depracates too large sales at one time. A lot of old candied honey well punctured with dead flies and ants—well, if an adversary wanted to keep a honey-loving family from buying any honey 800 years he couldn't contrive any better way. "Got a great lot of it on hand and can't buy till we eat it up." And it looks so repulsive they never eat it up. His experience with grocers is also interesting. Told many of them just how to reloliquify—they said they would—no one ever did. "Spots that would be pretty much the same everywhere. If an old fellow is done and prevent them at all, the man who furnishes the honey must see to it that it is kept in liquid condition.

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by addressing to us the addressers who actually do not send copies, so that they may be acquainted with the paper, and subscribe for it, thus putting themselves in the line of knowledge with the bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

The Premiums offered this week are well worth working for. Look at them.
To Our Shippers.

About May 1st last, we removed our business from the buildings 120-122 W. Broadway to larger and more commodious quarters at Nos. 265-267 Greenwich St., and 82, 84, 86 Murray St., and we duly sent to our friends in the trade a notice of our removal. Shortly after we vacated the premises (120-122 W. Broadway,) one Joseph M. McCaul, rented a portion of our old quarters, and hung out a sign, "Hildreth, McCaul Co., Jos. M. McCaul, Prop.," with other large signs to the effect that his business is "headquarters for honey, beeswax, maple sugar and maple syrup."

The mercantile agencies report that Jos. M. McCaul is the sole proprietor of the new business, and that he claims to have paid to one Henry P. Hildreth (who has no connection with our business,) a consideration for the use of his name.

We will not comment upon the act of leasing our old quarters and exposing thereon the sign, "Hildreth, McCaul Co.," further than to state that we have instructed our attorneys to apply for an injunction restraining the said McCaul from using the name of "Hildreth" in connection with his business in any manner whatsoever.

We value highly the good name and business we have established by many years of satisfactory dealing with our friends in the trade, and we therefore send this notice so that you may not possibly confound us in any manner with the so-called "Hildreth, McCaul Co."

Our firm name remains as heretofore, and all our business is carried on at our new quarters—

Nos. 265-267 Greenwich Street,
and Nos. 82, 84, 86 Murray St., New York, N.Y.

Respectfully yours,

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Northern Italian Queens!

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Our stock is so carefully bred and selected, as to secure car-loadings of honey. Locality (free from soil and other diseases), and the climate and past annual results, are considered.

PRICES:
1 untested Queen, $1.00, & for $5.00; 1 tested Queen, $1.50, & for $7.50; best Imported Queens, $6.00; fair imported, $5.00.

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The Non-Verte Queen-Clipping Device is the finest, and the most in catching and clipping Queens that we have ever seen. It will catch and clip Queens with the greatest ease; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will send you a new and improved one year and the Clipping Device. Address,

GEORGE W. YORK & COMPANY,

CHICAGO, ILL.

Please mention Bee Journal when writing advertisers.
Sweet Clover—White-Eyed Drones.

A few months ago I had the pleasure of visiting a bee-keeping friend, one of the veterans in our State, whose painstaking and noticeable bee-keeping might be thoroughly appreciated by all that pertains to the craft may well be an inspiration to those of more slipshod ways. He is modest and unassuming, and one can listen to him talk. He remarked that he had seen nothing from me in the bee-papers for a long time, and I had to own it and admit that the creatures keep me so busy that I have not much inclination to write. They are doing better this time of year than they have done in mountains and valleys. I am growing a little field of it, and also having a few bees in woods and gardens.

It blooms here early in June—just about a month ahead of the white variety, which I have already noticed. It promises to be a boon to my locality, coming as it does when ordinarily there is little for the bees to gather from. I have had to feed bees in May for the past two years, but this year I must either divide colonies or take care of swarms.

I had been thinking that my enthusiasm was waning somewhat under the pressure of crowding duties, but it all comes back to me when I get after a swarm.

It is not unusual to find one or more drones that seem to be normal, except that they have white eyes. I don’t remember noticing any of that kind in 1913, and don’t know what to think of them.

Mrs. A. L. Amos.


FRIEND YORK—I notice on page 441 that “Afterthought” thinks it important to comment on an item contained in a private letter to the Journal. I thought proper to publish it in May 36th issue. Now, there was no theory advanced respecting bee-keeping, nor anything else, but in the statement of what point he seeks to make I am too dull for comprehension to discover. If he intends to cast discredit on the statement of fact, he simply advertises himself as anything but a gentleman.

May it not be that the “winged” him—as specimens would say—as he may be a dealer in second-hand cans—old Standard Oil Co. cans—any old rust that he can palm off on the public, or perhaps space to fill, or anything with which to fill it, the idea may be kept applied to the column over which he presides, in numbers of instances which might be referred to.

For instance, take the item headed, “Mr. Doolittle and C. C. York.” This Bee Journal could be filled with arguments, facts and figures, to show the falsity, or fallacy, of the charge made. It must be a lie, if it be gathered from what he says. If foreigners come over here and invest their money, somebody ought to make a profit, and it is always the better for every one concerned in the business, from the highest to the lowest laborer, if they finally sell out and take their money back to a foreign land, some one has made enough to buy them out, and has the business, but we invest, in most of our cases, their money goes into large business enterprises, like railroads, or manufacturing industries; if their bonds are finally paid with the accrued interest, it only shows success of great enterprises.

No one need worry, nor have any sleepless nights over our bees, and we stand all such drafts upon our life-blood—the old ox in the pasture—doesn’t realize that it’s even to talk. But why bring the subject up?

Again, referring to the “daughter thrown in,” in the manner in which he does it. There are many wealthy Americans, as well as many who are not so wealthy, whose daughters, worthy of every mark of consideration and respect, and ourselves as parents—such as myself, and I presume "Afterthought" would claim for himself—to select a partner for life from among those they think proper, as many of them marry husbands of foreign birth.

But to return to the cans. Those cans were bought of George W. York & Co. How does it happen that, or what does he say, that, in order to take care of “many oxes” were paid for, or lost on them? Of what interest is it to him, or the public, whether much or little was lost on them, unless, as suggested, he may be in the second-hand business?

WM. M. WHITNEY.
Kankakee Co., Ill., July 15.

Good Season for Bees.

This has been a very good season here, and the bees are doing nicely.

J. W. R. SHERMAN.
Suffolk Co., N. Y., July 12.

Dry and Hot.

I have 43 colonies of bees, all in fine condition, and things are very dry and hot, the temperature being 104 degrees in the shade. Yet my bees are gathering some honey from sweet clover and almond.

J. D. HITT.
Jo Davies Co., Ill., July 16.

Selecting a Home Before Swarming.

Two years ago I had an empty hive under a shed not more than 10 feet from the working colonies. One day my wife said that I saw bees coming out of that hive, and wanted to know if I had put a swarm into it. I replied that I had not. That afternoon a swarm issued from one of the old colonies, and we put it into that hive. The next day a swarm came to us from the north, and settled on a small cherry-tree not more than 20 feet from where the empty hive had been. It looked very much as though that stray swarm had intended to take possession of that empty hive, but finding it gone they settled on the cherry-tree. I got out.

On June 15 these swarms went together, and in 17 days the brood-chamber was filled, and I took off 24 fine sections of clover honey.

YOUNG BEE-KEEPER.
Logan Co., Ill., July 8.

Heavy Losses—Ahead of Dr. Miller.

I find that some bee-keepers in this locality have had bad luck, having lost all they had. A great many colonies died in the fall, or over wintered, as they were, about here at that time. I saved 10 out of 22, and this is the first time I ever lost any in wintering.

One day my wife said to me that she saw them to this season. I have one colony that has not swarmed in five years, and they have only returned more than twice. They seem to be very weak now, and I think the queen must be worn out.

I have worked with bees off and on, ever since I was a boy. I am longing for a cold, and never have to wear glasses. I can take dog and gun and hunt from morning till midnight, and I have a fine coat, and my wife is 74, and quite strong. We have been married 56 years, and have had 15 children.

I keep bees because I like them. Sometimes they are somewhat ugly, but if 500 were to sting me it would not hurt.

HENRY WHITE.
Humboldt Co., Iowa, July 1.

The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but of cents; or we will send it with the Bee Journal for one year—for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

GEORGE W. YORK & CO.,
144 & 146 Erie Street,
CHICAGO, ILL.
An Overgrown Putty-Knife.

This is a tool used with great satisfaction by E. S. Miller in the apiary. He tells of it in the Progressive Bee-keeper:

Made of about one-sixteenth inch steel, 2½" inches broad at the sharp end, tapering to about 1½" inches 6 inches in length, for where the handle commences. The handle is made of two half-round pieces of wood riveted on each side, the same in color as the tool. The tool is useful as a butcher-knives or table-knives. It is ground alike on both sides, so that it does not matter which side is up when it goes out of the case.

When I get this blade between two bodies, or a body and cover, and begin to pry, it has to come, no matter how much bees. The tool being large and strong (nearly a foot long) gives a great leverage, and so great effort is required in using it. I can take it slow and steady and bring two bodies apart without a snap. It will take the bare-comb from two top-bars at once. It has to clean bottom-boards, queen-excluders, and, in fact, almost anything where scraping is needed. I frequently use it to dig with when leveling up hives.

Improving Our Stock.

Here are some words well spoken by "The Worker," in the Australian Review:

We're forming rules for judging Italian bees, I would place the winners that way:

Honey-gathering, 80; prolifecity, 10; gentleness, 5; color, 5; total, 100.

It is much easier to breed for color than for honey-production, that it will be some time before all of the bee-keepers in our land get into line. Some will say, "Oh, the Italian bees are good enough as they are, so long as we keep them of the threedbanded strain." Others will say, "We want our bees to look beautiful; they will get the honey they are good for in the flowers." This is a mistake a great many make. I have had a lot of people say to me:

"What is the use of all your fussing and breeding this and that? If there is no honey in the flowers the bees can't get it, no matter where they are." I admit that, but when there is honey in the flowers the good strains will gather much more than the poor ones will. It is not so noticeable in a good season as a rather poor one. Before I commenced breeding for honey-gathering my colony would vary much in the quantity of honey stored. I remember one year one colony gave me over 100 pounds of honey, while others gave only 50 pounds, and the average of the yard was under 20 pounds per colony. How I wish I had that queen now.

By careful breeding I now have my bees as nearly alike as regards honey-gathering as one could desire. Last year there was scarcely a point of difference in the whole yard, and it was only a fair season for honey. Brethren, let us be ever on the watch for the bee-keepers who breed bees entirely for honey, and then breed from her, thus ever improving our stock.

Stimulative Feeding in Spring.

This has sometimes been spoken of as a two-edged sword, cutting both ways. Practised at a time when bees are tempted to fly out in bad weather only to be lost, it may tend to diminish rather than increase the number of bees in the hive. G. M. Dollite gives in the Progressive Bee-keeper another phase of the matter, as follows:

During all the past we have heard much of stimulative feeding, with no hints that such might be a failure at certain times, but from past experiences, I find there are times when feeding, or other stimulative

**FREE as a....**

A Foster Styling Pen....

This pen consists of a hard rubber holder, tapering to a round point, and writes as smoothly as a lead pencil. The point and needle of the pen are made of platinum, alloyed with WENNY-JACKS, an entirely different metal of great durability which are not affected by the action of any kind of ink.

They hold sufficient ink to write 10,000 words, and do not leak or blot.

As they make a line of uniform width at all times they are unequalled for ruling purposes.

Pens are furnished in neat paper boxes. Each pen is accompanied with full directions, pen and cleaner.

**Best MANUFACTURING PEN ON THE MARKET.**

19,000 Postmasters use this kind of a pen. The Editor of the American Bee Journal uses the "Foster." You should have one also.

How to Get a "Foster" FREE.

Send two new subscribers to the American Bee Journal for one year, with $2.00; or send $1.00 for the pen and your own subscription to the American Bee Journal for one year; or, for $1.00 we will mail the pen and you.

Please mention Bee Journal when writing.

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POULDER'S LOW Freight Rates. Prompt service. New CATALOG FREE.

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$1.50 to Buffalo and Return $1.50 via the Nickel Plate Road from Chicago, for the Pan-American Exposition. Tickets on sale daily, good leaving Buffalo up to midnight of the 10th day from and including date of sale. Also tickets on sale daily Chicago to Buffalo and return at $4.50 for the round trip, with 15-day limit, including date of sale. $25.00 Chicago to Buffalo and return, good until August 31st.

Tickets Chicago to New York and return at special reduced rates. Write John Y. Calahan, General Agent, 11 Adams St., Chicago, for full particulars and folder showing time of trains, etc.

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G. B. LEWIS COMPANY, Watertown, Wis., U.S.A.
Branch, G. B. LEWIS Co., 19 S. Alabama St., Indianapolis, Ind.
Excellent shipping facilities and very low freight rates for Southern and Eastern territories.

25 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying 25 cents a pound—CASH—for best yellow, low, upon its receipt, or 27 cents in trade. Impure wax not taken at any price.

Address as follows, very plainly,

GEORGE W. YORK & Co., 144 & 146 Erie St., Chicago, Ill.

Tennessee Queens!

Fine lot of Choice Tested Queens reared last season, daughters of select imported and select golden queens, reared 23/4 miles apart, mated to select drones, $1.25 each; untested, warranted Queens, from same breeders, other strain, 75c each. No bees owned nearer than 23/4 miles. None impure within 3, and but few within 8 miles. 28 years' experience. Discount on large orders. Contracts with dealers a specialty. JOHN M. DAVIES.
Spring Hill, Tenn.

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Standard Bred Queens.

Acme of Perfection.

Not a Hybrid Among Them.

IMPROVED STRAIN GOLDEN ITALIANS.

World-wide reputation. 25 cts. each; for 6 or $4.00.

Long-Tongued 3-Banded Italians

bred there from stock whose tongues measured 25-100 inch. These are the red clover busters of America.

75c each, or for $4.00. Safe arrival guaranteed.

FRED W. MUTH & Co.
Headquarters for bee keepers' supplies, S.W. Cor. Front and Walnut Sts.
Catalog on application.

CINCINNATI, O.

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Marshfield Manufacturing Company.

Our Specialty is making SECTIONS, and they are the best in the market.
Wisconsin RASWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free illustrated catalog and price-list.

Marshfield Manufacturing Co., Marshfield, Wis.

Red Clover Queens

LONG-TONGUED BEES ARE DEMANDED NOW.

ONE Untested Italian Queen FREE as a Premium for sending us TWO new subscribers to the American Bee Journal for one year (with $2; or, one TESTED Queen free as a premium for sending us FOUR new subscribers with $4.00).

We have arranged with one of the oldest and best queen-breeders (having many years' experience) to rear queens for us the coming season. His bees average quite a good deal the longest tongues of any yet measured. The Breeder he will use is direct from Italy, having imported her himself. Her worker-bees are large, somewhat leather-colored, very gentle, and scarcely requiring veiling or smoke. They stored red clover honey last season.

All queens guaranteed to arrive in good condition, and all will be clipped, unless otherwise ordered.

CASH PRICES of these fine queens will be as follows: Untested, $1.00 each; Tested, $2.00 each. Send all orders to

GEORGE W. YORK & Co., 144 & 146 Erie St., CHICAGO, ILL.

Please mention the Bee Journal when writing Advertisers.

work, brings no adequate returns. The queen lays as if she is led into a field by the workers, and the workers will feed her only this stimulative food when there is some reason to expect fresh food to be available. And while feeding will bridge over three or four days of bad weather, or even a week, yet there are a time when they seem to be in hopeless and certain to be in a condition that they will make no further efforts at "expansion," till they see some sign that there is to be propitious weather in the future. And during such long-continued, cold, spell the queen is the press, and I have found that the colony which was fed every day had very little. If, any, more eggs or larvae in the hive, the end of two weeks than did those having a reasonable allowance of stores, which had not been feed at all. But when we have fairly comfortable weather, but a dearth of nectar from no flowers being in bloom, or those in bloom not yielding any nectar, then good results can be obtained in feeding, or other ways of stimulating.

Close Imitation of Natural Swarming.

This is given as follows by G. M. Doolittle, in Gleanings in Bee-Culture, in a conversation with a neighbor, the first question being asked by Mr. Doolittle:

"Have you any queen-cells on hand?"

"I suppose there are plenty in any of those hives which have swarmed during the last week."

"Can you tell why I asked about the queen-cells before we get through. Now, to the plan: Take a box holding from three to six hives, and place in each box a side board a few feet from the hive you wish to make the swarm from, raising the front edge on a little block, enough so the bees can run under. Now make up the hive you wish to make the swarm from, and find the queen, earring her on one of the combs, when all the frames are put back in the hive again, the bees will make a plenty of unsealed honey, upon some along the top-bars of the frames and close the hive. Now we will quite a minute at the entrance of the hive, and rap on the sides of it, as you would in driving bees, rapping at intervals, and leaving the entrance open so that the bees returning from the fields may enter the hive. In from five to eight minutes open the hive and take out the frames and shake the bees in front of the box, and thus continue till you get at least three-fourths of the bees in the box. When you come to the frame which has the queen on it, place her at the entrance of the box, and let her run in with the bees. When you get the desired amount of bees in the box, put the frames back in the hive and close it.

Why do you run the bees into such a box instead of into a hive all prepared for them?"

"If you will not be impatient I will tell you so you will see the reason. Now, we will suppose that you have three-fourths of the bees and the queen in your box. You are next to take the box of bees to the shade of some tree and lean the box against the tree in an inclined position, with the open side of the box outward, leaving it there three-quarters of an hour, at which time you will find them clustered in the upper part of the box as they would be on the limb of a tree, if they had swarmed. Then you take out the three-quarters of an hour, if you have more to make, keep on making from other hives in the same way. At the end of the time place the bees that are in the box, the same as you would hive any natural swarm. Put the hive on the ground until you want to move them and see that all of them go into the hive, and they will stay and work the same as a natural swarm would."

"Then this leaving them the three-quarters of an hour with the open side of the box out is to make them think they have left home, so they will mark their location as does a swarm?"

"Exactly."

"I see now why mine would not stay when I shook them into a hive. But what about what is left in the old hive?"

"The next day, after making such a swarm, give the old colony a queen-cell from one of.
the lives you say have much, giving cells from the colonies which have those the nearest ripe, and the work is done. If you have stopped to think as we went along you will see that you have been of ages in your 'made swarm,' just as there would be in a natural swarm, and that each bee has its sac full of honey the same as they do when they come out themselves, the drumming casting them to fill themselves full more completely than they do when swarming. By being left three-quarters of an hour to cluster in the box they mark their location anew, the same as a natural swarm, as you expressed a few moments ago.

"But is the old colony in as good condition as if it had swarmed naturally?"

"I think so, fully, and more so; for in natural swarming the first young are not brought out-apiary, this is entirely a false view. It treats of everything relating to bees and beekeeping. No aparian library can complete with this book, for it is a complete work. L. A. L. Langstroth—The Father of American Bee-Culture. It has 200 pages, bound in cloth, Price, $1.25.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultur- al College. This book is instructive and helpful as a guide in beekeeping, but is interesting and thorough practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 400 pages, bound in cloth, and illustrated, Price, $1.00.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doellinger—A method by which the very young queens are cut out in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00.


Advanced Bee-Culture, Its Methods and Management, by A. L. Root. A work for the beekeeper who is interested in the science of beekeeping. The book has over 400 pages, and is one of the best bee books ever written. Price, $2.00.

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M. H. Hunt & Co., 500 E. 100 S., Salt Lake City, Utah.
We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR

Hives, Extractors
OR ANYTHING YOU WANT THE BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of the American Bee-Keeper free. Address, THE W. T. FALCONER MFG. CO., JAMESTOWN, N. Y. * & W. M. GERREY, East Nottingham, N. H., carries a full line of our goods at catalog prices. Order of him and save freight.

Please mention Bee Journal when writing.

River Forest Apiaries! FILL ALL ORDERS By Return Mail.

Italian Queens Warranted

Untested, 75 cts.; Tested, $1.00; Select Tested, $1.50. Half dozen or larger lots as may be agreed on. Address.

RIVER FOREST APIARIES, RIVER FOREST, Oak Park Post-Office. Please mention Bee Journal when writing.

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, as with the following prices, cash with the order:

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<td>Sweet Clover</td>
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Prices subject to market changes. Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for carriage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO. 144 & 146 Erie Street, CHICAGO, ILL.

I ARISE To say to the readers of the Bee Journal that

DOOLITTLE... has concluded to sell QUEENS in their season during 1901, at the following prices:

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<tr>
<td>Untested Queen</td>
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<td>Selected Queen</td>
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<td>Queen</td>
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Extra-selected breeding, the very best. 500 Circular, giving particulars regarding each class of Queens, conditions, etc. Address, G. M. DOOLITTLE, 11A24, 18th Street, New York City. Please mention Bee Journal when writing.

Red Clover Queens

We have been telling you through our advertisements of the superior stock of queens we are furnishing this year, and we have abundant testimony from others corroborating our opinion. Look at the following which is only one of the numerous endorsements received.

July 5, 1901.

The bees are working as I never saw them work before, and already there is over 100 pounds of honey in the hive, and all from clover. I am led to believe that long tongues and good working qualities go together.

Yours very truly,

OREL L. HERSHISEK, Sept. N. Y. State Apiarian, Agricultural Building, Pan-American Exposition, Buffalo, N. Y.

This refers to a colony of bees on the Pan-American grounds with one of our Tested Red Clover Queens reared last season.

Our Prices are as follows:

Gleamings in Bee-Culture one year and one Untested Red Clover Queen, $2.00.

Gleamings in Bee-Culture one year with Tested Red Clover Queen, $4.00.

Gleamings in Bee-Culture one year with Select Tested Red Clover Queen, $6.00.

If you want something good you cannot do better than to order one of these queens. All orders are filled promptly. No extra postage on these offers to foreign countries.

THE A. C. ROOT CO., Medina, Ohio. U. S. A.

GEORGE W. YORK & CO. 144 & 146 Erie Street, CHICAGO, ILL. are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO. Send them to them for their free Catalog.
APIARY OF E. M. HAYES, SAUK CO., WIS. — (See next page.)
Weekly Budget.

The THOUSAND Members for the National Bee-Keepers' Association are coming.

Since our last report we have received the membership dues from following:

B. H. TRIPP, H. A. DOTT

REV. M. MARIN, of Henry Co., Ind., wrote us July 28, as follows:

"My bees have hived this summer. When I get time I will tell you more about it. In a month I will complete the 60th year of my ministry, and I can easily preach four or five times a week.

Mr. Mahin desires to be congratulated on his good health and ability to continue in his work. May richest blessings be his.

The OFFICIAL EMBLEM of the Pan-American Exhibition was designed by Raphael Beck, of Buffalo. It was accepted as the most artistic and suitable from several hundred designs submitted, and has the special merit of effectively symbolizing one of the chief purposes of the Exposition, which is to bring in closer social and trade relationship the Republics, States and Territories of North and South America. The emblem shows a fair maiden typifying the North, extending a kindly hand to clasp that of her brunette sister of the South, thus forming a bond of continental sisterhood, and establishing a unity of sentiment and interest among the countries of the Western Hemisphere.

Mr. E. M. HAYES, of Sank Co., Wis., began to keep bees ten years ago, with one colony in a dry-goods box, somewhat larger than the hive he is now using, and the bees wintered well in it without protection. He now uses the 15-frame Langstroth hive, principally, and has adopted the tiering-up plan.

While he does not consider his an ideal location for bee-keeping, he never gets less than 50 pounds of honey per colony, and he has secured as high as 100 pounds per colony, and some increase. He sometimes gets light honey from clover and bergamot; there is no asparagus in reach.

Mr. Hayes says that buckwheat is a much more valuable honey-plant than many give it credit for being. It comes late in the season, thus giving all colonies that were weak in the spring a chance to build up strong. While some think it is too little for manufactur-
Honey in Cans vs. Barrels.—Although we fear having our motive misjudged, we feel that we ought to say another word on this important subject. We certainly would refrain from referring to it now were it not for the fact that additional experience simply confirms us in the belief that extracted honey ought to be put into 60-pound tin cans rather than in wooden barrels.

We received two 400-pound barrels of very fine honey from Florida recently, and after we had almost positively declared that we would not purchase any more honey in barrels. One of the barrels leaked, as usual! Both absorbed a number of pounds of the honey, also.

True, a tin can will occasionally burst, and thus cause leaking. But when it does, you can't lose more than 40 pounds out of one 60-pound can. But a barrel—well, we have more than once seen over a half-barrel of honey lost through leaking, or from the head bursting out.

Yes, tin cans do cost more than barrels, but they are worth more, and for several reasons. The honey in them can be re-liquefied without digging it out and putting it into something else, as must be done with honey in a barrel. Honey in 60-pound cans is in better shape for the cash honey-dealer to handle. It is a quantity that many a family feels it can afford to buy at one time. Other excellent reasons might be given.

It may do to put dark or cheap honeys into barrels, but the fine white extracted honeys we think ought always to be put into 60-pound tin cans. We believe the day will soon be here when such honeys will be required in tin cans, and perhaps at a slight advance in price over that of the same grade in barrels.

Another Victory for the National.—The National Bee-Keepers' Association has won another notable victory in the courts. General Manager Secor sends us the following condensed account:

EDITOR AMERICAN BEE JOURNAL.

In December, 1900, the city of Rochester, N. Y., had under consideration the passage of an ordinance prohibiting the keeping of bees within the city limits. W. R. Taunton, a member of the National Association, living in the city, and whose business and liberties would be interfered with by such an ordinance, appealed to the general manager for advice and assistance. Such printed matter as it was thought would be of service to him was forwarded, and, with the assistance ofable legal counsel, Mr. Taunton succeeded in having the proposed ordinance withdrawn.

But in April, 1901, the matter was revived, and through the persistent efforts of one of the aldermen, and in spite of all objections and remonstrances, the ordinance passed.

Mr. Taunton was advised not to remove his bees, and assured that if he got into trouble the Association would defend him.

Mr. Marks—a director of the National Association—was requested to go to Rochester and make a complete investigation. He did so, and reported that in his opinion Mr. Taunton was handling his bees in a manner not to annoy neighbors, and thought the ordinance ought to be repealed.

In corresponding with our attorney, Mr. Buckler, the latter stated that the police judge, before whom the case was likely to come, was an able man, and thought the Association would better risk it there.

The case was tried upon a warrant of arrest for refusing to comply with the ordinance, and the Judge of the Police Court rendered his decision, setting aside the ordinance, and discharged the defendant.

The Judge gave his written opinion.

General Manager Secor, Head Bee-Keeper N.Y. & B. K. Association.

The above case was referred to editorially on page 323. Surely, another victory is won by the "Old Guard." But such victories can not be won without expense to the Association. And the only source of revenue is from membership dues. So each bee-keeper who cares for his own rights, or that the rights of others shall be protected, should be a member of the National Bee-Keepers' Association. You may not have to call on it to aid in defending you—and then you may. No bee-keeper can tell what he may be unjustly prosecuted or threatened. Better "get in the dry!" before it rains, and thus take no chances of being caught unprotected.

See the first column of the second page of every issue of the American Bee Journal for information concerning the Association.

Forcing Honey into the Super.—The Australian Bee-Bulletin says:

Putting frames with eggs and unsealed larvae at the outside of the cluster the bees don't want to store right in the middle of the brood-nest, so put all surplus in the super.

That will work all right some of the time, but when a heavy flow is on, bees will often allow solid combs of honey right in the middle of the brood-nest.

Bottling Honey.—J. R. Schmidt tells in gleanings in Bee-Culture about the practice of H. W. Weber, the successor of C. F. Muth, who succeeded in building up a good trade in granulated honey. Instead of following that up, Mr. Weber goes to the other extreme, and sends out honey that will not granulate. That he succeeds in doing so may be really seen from the fact that some honey put up and sealed last summer had been kept on ice since bottling, and after passing through the present winter, is just as clear as it was the day it was put up, and not a case of granulated honey had to be replaced this winter.

The secret lies in putting the honey in much the same way that fruits are put up—having everything hot at time of sealing. The apparatus used by Mr. Weber is good, but it is probable that apparatus for putting up on a smaller scale might cost very much less. There is for heating the honey a tank within a tank, with a three-inch space between the two for water. When the granules are all melted out of the honey, and when for five or ten minutes the honey has been kept at 180 degrees, it is drawn off into the bottles, the cork is hammered in with a nailot of solid rubber, and then dipped into a melted preparation of rosin and beeswax, making it perfectly air-tight. If honey thus put up will keep indefinitely without granulating, it will much simplify matters for those who now go about taking up from grocers' bottles of honey for re-liquefying.

An Artificial Swarm is thus directed to be made, in Bienewasser:

Take from the hive all the combs with adhering bees, except the comb on which the queen is found and a comb of honey. Fill up the hive with frames containing starters, and close the hive. The combs taken from the hive, with their adhering bees, are to be put in a new hive and placed on a new stand, having water furnished to them for four or five days. The field-bees will all join the old queen on the old stand, and the colony on the new stand will rear a new queen.

In this country it would be considered a gain to give the new colony a laying queen or a mature queen-cell.

Steam Wax-Presses vs. Hot Water.—Rambler lands steam wax-presses in Gleanings in Bee-Culture. They may be excelled by those in which the material while in press is all the time kept under hot water. These are in use in Germany, where steam presses have been in use a number of years, and it is said that those who have tried both, prefer the hot water.

A Cheap Bee-Stand certainly is the one recommended by Loyalstone in the Australian Bee-Keers' Review. He says "Nothing better, and cheaper, to my mind, than making mounds of earth, well buttered down, rising about four inches above the lowest level of the ground." In some localities—perhaps rather in some soils—this may work all right.
Contributed Articles.

Moving Bees Into the Buckwheat Fields.

By F. Greiner.

Perhaps the reader may think that there isn't anything to be said on the subject of moving bees into new places, and this may be so, but I think there is a lot that may be said on what applies to moving out-apisaries in the spring also applies to moving into buckwheat sections. I admit, in a measure, this is true, but when we take into consideration that our bees toward August 1 are in altogether different conditions, and we may be asked by the reader to bring them out of place to offer some suggestions in regard to how we may manage this matter.

If there has been a honey-flow previous to buckwheat time, our hives will be found quite heavy, and the handling of these frames may be done in a leisurely manner, but when moving the bees into buckwheat fields, the frames should be removed and the combs may be taken out of the frames, nailing wire-screen over each. These ventilators answer a double purpose when fastened to the top of the hive. In the first place, they give plenty of air while moving; secondly, they allow the smoke to escape and give ventilation while driving the bees out of their old home into a new one, which is our first step in the preparation for moving our bees into the buckwheat sections, for we prefer to leave all these heavy brood-combs at home, and take only the naked bees. So, accordingly, we proceed.

The "driving" requires but little time, but some skill. The colony is raised up from its bottom-board and so placed as to give us easy access to the underside of the frames. Then with hive-combs, the section-case and the ventilating screen, all fastened together, are placed on top, and by the judicious use of smoke from the bottom, and pounding on the brood-chamber, the bees are forced up into the empty hive, etc., in a very few minutes. When this is accomplished we lift off the new hive with fixtures and bees, and place it upon the same bottom-board and stand the colony previously occupied. We put on the cover and let it remain thus until we are ready to move three or four days later. We wish to let the bees become acquainted with, and adjust themselves, to the new state of things before moving them, or else some might swarm out as soon as opened up in the new location. Occasion for swarming will swarm out the next day after "driving," and must be hived back with a queen secured by an entrance-guard.

The old hive full of brood and honey is placed right back of the hive containing the bees, for a little while, perhaps an hour, not more, or till we have evidence by the behavior of the bees of the forced swarm that their queen is with them. When we feel sure a queen is left in the old hive, we are obliged to make a search for her, and when found place her where she belongs.

The hives with their brood comb may now be placed around the new home, left at home, two or even three upon a single colony. Excluders are used to keep the queen from below to enter the brood-chambers above. We manage these sets of brood-combs for increase, as explained later.

The question might be asked, Why not furnish these forced swarms only with foundation starters? Indeed this might answer as well, or even better, as far as the securing of comb-honey is concerned. However, it is not safe to move newly-hived swarms long distances—the combs give the bees a chance to cling to during the journey; and then we wish some honey stored in these small brood-chambers for wintering. We are quite sure to accomplish this end by furnishing the combs instead of starters.

When selecting the colonies to be moved we pick out such as have old queens. We may have to double up in order to get them all collected, but when we get them we have old queens we avoid the possible sacrifice of young queens. When the season is getting near its end, this doubling-up may commence. It can better be done at this time after the heat when moving into new fields. Instead of this doubling-up we may reunite them with the parent colonies, providing we do not wait too long before we take them back to the home yard.

It has not been fully explained just what was done with the sets of hives that we left brood, except that they had been placed upon other colonies over queens excluding honey-boards. Our practice is to leave them alone for five or six days. Quite a good many young bees will have hatched out in apisaries, and are well sealed. We then take them off, bees and all, place each one on a bottom-board and move to a new location. If we have any queens on hand, we supply them with such; if not, we have taken the precaution 10 days, previously and started queen-cells from our breeding queens. These are then just ready, or ripe, and each new-formed colony receives one. In due time these will hatch, and the young queens will fill the hive with brood sufficiently to insure a good bee and add to the population. If these should not be as strong as desirable, then those colonies brought back from the buckwheat pasture may be united with them as mentioned. We kill the old queens, of course; thus we have economically removed all our colonies that were moved into the buckwheat.

I can recommend the above plan as one giving us better results in comb honey than any other, and an increase in bees, if we desire the increase. Ontario Co., N. Y.

Advertising High Values for Queen-Bees.

By Frederick F. Simpson.

Having been much interested in the recent discussions regarding the value of queen-bees, I have given some of my ideas on the subject, and if I am mistaken I trust some one will show me wherein the errors exist.

Naturally, most criticisms have been directed against the A. L. Root Co., and personally it is of course no one else's business how they advertise: but from another viewpoint their extensive business interests place them in a position in which they are expected to represent all that is good, practical and progressive. If they were not so, their acts become a proper subject for public discussion, especially as by imitation these acts become much more far-reaching than would seem possible at a first glance.

Custom has made $5.00 the standard selling price for a "Queen Breeder," and this is regarded as a very high value, greatly with the seller. For instance, I last spring purchased one from a man who gave me a pedigree for two generations, and the honey-yield of herself, her mother, and her grandmother, and also indicated where the strain originated. On the other hand, a New York breeder sold me one before fruit-bloom this season, and said she emerged last August (last year being the worst in 33 in this State). I therefore greatly restricting the opportunity for determining her value as a worker-mother, let alone a queen-mother. I am merely pointing out the variation, as I have no fault to find, for I think the buyer of such queens will average fully as much satisfaction and return for his money as buyers of other breeds and that breeders would do well to consider these points.

I have always thought bee-keeping quite a sad, conservative and dignified calling, far removed from those expensive avocations which are indulged in solely as recreations. I have felt that the bee-keeper usually applies the same amount of business-like common sense to his work as he does to his regular calling, whereas the ha'penny, or he who is in search of recreation only, tries to get away from his business and commonly fails to make a financial success of his bee-keeping. The future of bee-keeping may depend on what is now being done, and if we are to continue to advance, perhaps slowly but steadily, it is well for all to look to it that they do nothing that will have a tendency to make bee-keeping an any branch of it a matter of sad, or to allow our bee-papers to make any approach towards yellow journalism.

By their $200 valuation the Roots have obtained a great deal of free advertising, but as this has been largely by
adverse comment it is doubtful if it has paid well, and I hardly believe they knowingly used this valuation for the purposes of the business, and American Bee Journal for June 20, Mr. Doolittle gave us some figures, but as he failed to notice that the mother of the drone with which a queen mate is entitled to probably the same share in the results as the queen's mother, and also that the mother or mother's mate of the drones, the daughters mate, are also entitled to some share, his figures are of little value. Some years ago I tried to estimate the profit and loss in the case of horses, by the returns and expenses, but I gave up the attempt as a bad job, and I think the same fate will follow such estimates regarding bees. Possibly some one who is capable of compiling insurance statistics could help us out.

In regard to this matter, I believe the Roots are primarily guided by the best interests of the queen, and if the assumption is made that the best queen is valued as high as $50, I am not entirely convinced that the worst to be "best breeders." Now, I believe that a "best breeder" values the average queen, but it seems to me that if Mr. Doolittle's contention that only one queen in four is equal to her mother (and I see no good reason to doubt such a statement), and it is evident that where a queen is inferior it shows a lack of progression, and that the offspring are likely to keep on retrograding, it would seem that there is a great tendency towards a lottery in the scale of prices. In the case of prices he has guaranteed on all queens sold for higher prices than best-breeder rates, so that by returning a queen the purchaser could get his money back, for, if Mr. Doolittle's experience is real, only one man in four will get thorough satisfaction.

As to the scale of prices, I have puzzled over it without any satisfactory results at all. Will not some one please tell me how you work it out? This is all I can get.

A queen giving bees of .19 tongue length is worth...10

(a $5 increase)............................................ 15

A queen giving bees of .21 tongue length is worth...10 (an increase double the last or $10)................ 25

Therefore, a queen giving bees of .22 tongue length should be worth...10............................... 45 and it follows that a queen giving bees of .23 tongue length is worth...10............................... 85

That is to say, that the $200 queen is only worth $85, and her bees would have to have a tongue length between .22 and .23. How does that square with $250, which is $10 only? From which naturally follows the query, How can they afford to let them go at the advertised prices?

Allegeny Co., N. Y.

[Since the above was written, Editor Root has announced that his firm will hereafter place no values on breeders which they propose to keep and will not sell; therefore a portion of the above becomes inapplicable, but as "there are others" it is deemed best to publish the article in full as written. -- Editor.]

Brood in Sections—How to Avoid It.  

BY G. M. DOOLITTLE.

W hat is the cause of bees filling the sections with brood, and drone brood at that? What is the remedy for it? I put on one side the cases of arrangements or mistakes. I believe that the bees were crowded for room, and perhaps would be forced to swarm if the colony was split. I believe that the bees will fill the brood sections with drone brood. If you find any but drone-brood in the sections I should be surprised perhaps more than be, for I have yet to find worker-bee brood in sections, unless the colony was a new one and commenced their building "upstairs," when the term is sometimes the case where sections filled with foundation are placed on the hive when the swarm is first run in, with nothing but starters or empty frames below. When swarms are hived on empty frames, the sections should not be put on till the bees get...
well started at comb-building below—say in three or four days after the swarm is hived, unless a queen-excluder is used between the frames and the surplus arrangement. But where frames of comb are filled and foundation used are placed, the comb-building is the same. The questioner has the advantage of the present time, the questioner has restricted the drone-comb to the worker-comb, the natural consequence would be drone-comb in the sections. If the bees were allowed to build combs in the drone-comb before the honey is gathered, especially so with a light flow of honey and plenty of pollen; for at such times the bees rear large quantities of brood, and prepare for swarming by starting as much drone-comb as possible, the same being limited only by the amount of brood a queen in the small queens can produce. But there had little below the bees were all the more incentive for them to occupy that being built in the sections.

Having spoken of the cause we will now proceed to the remedy. There are two ways to remedy this matter. One is the one which I use most is the filling of the sections with very thin section foundation. This keeps all drone-comb out of the sections, and where there is no drone-comb there will be no drone-combrood, providing we have a good prolific queen; consequently this trouble with brood in the sections is remedied by thus using sections full of foundation having the worker-size of cells. Then, by thus using sections filled with worker foundation, we have very much more information, and I have no doubt that the sections are finished by the bees, for the capped combs having the worker-size of cells are much more beautiful to look at than those of the drone size, as all have compared the two and by putting up to an advantage.

The other plan of keeping the queen from the sections is by the use of the queen-excluding honey-board between the sections and the brood-chamber. This will effectively prevent brood in the sections at any time, and all times, as such honey-boards are quite expensive, both in time of putting on and taking from the hive; room for storage when not on the hive, as well as in the money used in the purchase, or of the material from which to make: for they do not do away with the bee-leaves, and if requisite the unsewed product, unless the sections are filled with foundation; besides, many claims that they should not be used in any event, on account of the believed lessened amount of our honey crowns in the amount of bees being lost to pass freely through the perforated metal. Regarding this latter claim I have my doubts as to its correctness, but consider all of the others as important.

If I have given the remedy, shall be done where we find brood in the sections before we know of, or have applied, the remedy or preventative? This all depends upon what stage the brood is in when we find it. If it is found before any of the brood is sealed over, we have little waste except in the time in taking the foundation from the section and putting them back on the hive again, for it is well known, that, if this unsealed brood is taken from the bees and kept in a cold place for a week, the same is dead, and such dead brood will be removed by the bees as soon as they have access to it. My plan used to be, before I learned of the prevention as given above, to take sections, found with eggs and unsealed larvae in them, to the cellar, and there leave them four or five days, when they were returned to the hive again, and if the queen disnot deposit more eggs in them, they were filled with honey, and when finished were as good as if no brood had been in them.

If the brood in the sections has been sealed long enough, before we knew of, or have applied the remedy, then the best thing to do is to cut the comb, or that portion having brood in it, from the sections, for honey stored in combs having cocoons in the cells is not just the thing for table use, nor to put on the market, unless this honey is separated from the combs by the use of the extractor, even though the same be sold as a second or third grade of comb honey, which would have to be if sold at all, on account of the market, it is a waste of labor to put honey on the market that will tend to injure the same, as is always the case by putting on honey of very inferior quality.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.

No. 4. Some Reminiscences of an Old Bee-Keeper.

By THADDEUS SMITH.
Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names, and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of savings. We have by our premiums and sales to our subscribers, a large surplus, which we are going to send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

Our Wood Binder (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of $1.00 for Wood Binder, we will mail you a Wood Binder free—if you will mention it.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.)

Uniting Colonies in the Fall.

I have more colonies of bees than I care to winter, and there is no very ready sale for them here. What is the best way to dispose of the bees and secure the honey? When is the proper time in the season for doing it?

NEW BRUNSWICK.

ANSWER.—Perhaps as good a way as any is to unite colonies from time to time, and in the margin of colonies standing close together. A day or two before uniting kill the poorer queen of the two, and unite on the stand of the living queen. As the preserving is now being done, it may be done at once, unless you are likely to have a good fall crop, in which case unite about the beginning of the fall flow.

Bees that Fought and Killed Each Other.

Yesterday (July 7) one of my colonies cast a swarm. I was at church at the time (it being Sunday), and one of the boys hived it, and left the hive where they clustered. When I came home, an hour or so later, I put the hive on the stand where it was to be preserved. A little while afterwards I noticed quite a few bees flying where the swarm had clustered. I took an empty hive and comb and set it where the bees were flying, and in a short time I had them all on that comb—a quarrel of bees. I left it, and the bees were, in front of the entrance of the swarm, and all went in nicely. Shortly after this they commenced killing each other until there were about a quart of dead bees in front of the hive. I gave them a good smoking, and they seemed to quiet down. At this writing all seems to be pacificable. What was this fighting and killing each other?

S. DAKOTA.

ANSWER.—I don’t know. It is possible that the quart or so of bees were a small second swarm, and having a virgin queen were not kindly received. Of course, all would be pacificable under that presumption after all the bees of the second swarm were killed.

Diseased Bees.

1. I put about 20 colonies of bees into winter quarters last fall, and all but one were apparently in a healthy condition, and about half of these died during the winter and spring. A large percent of the bees died in this section, some losing every one of the extent of colonies in uniting, other things being equal uniting two colonies standing close together. A day or two before uniting kill the poorer queen of the two, and unite on the stand of the living queen. As the preserving is now being done, it may be done at once, unless you are likely to have a good fall crop, in which case unite about the beginning of the fall flow.

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Yesterday (July 7) one of my colonies cast a swarm. I was at church at the time (it being Sunday), and one of the boys hived it, and left the hive where they clustered. When I came home, an hour or so later, I put the hive on the stand where it was to be preserved. A little while afterwards I noticed quite a few bees flying where the swarm had clustered. I took an empty hive and comb and set it where the bees were flying, and in a short time I had them all on that comb—a quarrel of bees. I left it, and the bees were, in front of the entrance of the swarm, and all went in nicely. Shortly after this they commenced killing each other until there were about a quart of dead bees in front of the hive. I gave them a good smoking, and they seemed to quiet down. At this writing all seems to be pacificable. What was this fighting and killing each other?

S. DAKOTA.

ANSWER.—I don’t know. It is possible that the quart or so of bees were a small second swarm, and having a virgin queen were not kindly received. Of course, all would be pacificable under that presumption after all the bees of the second swarm were killed.

Diseased Bees.

1. I put about 20 colonies of bees into winter quarters last fall, and all but one were apparently in a healthy condition, and about half of these died during the winter and spring. A large percent of the bees died in this section, some losing every one of the extent of colonies in uniting, other things being equal uniting two colonies standing close together. A day or two before uniting kill the poorer queen of the two, and unite on the stand of the living queen. As the preserving is now being done, it may be done at once, unless you are likely to have a good fall crop, in which case unite about the beginning of the fall flow.
through these hives, that dead larvae are scattered throughout other frames, and one colony is bad enough to interfere with the increase of the colony. From one of my hives that was so bad that scarcely a bee was hatching, while all the frames were filled with brood and eggs. I removed the frames, giving empty combs, and in two days introduced a new queen, and now (about three weeks) there are no signs of disease.

How would you treat the strong colonies? Some are very strong, covering 20 Langstroth frames, and have two 20-pound supers nearly full. I have plenty of empty combs, as I run two or three extra hives.

What can I do with the frames of brood and honey taken from the diseased colonies? They are all wired and built on foundation, except the five new ones, and only three of these are affected.

What do you think this disease is, that would make its appearance in every colony at once.

Do you think the weather started it, and then it became contagious? I have never known such brood in this locality.

I have not been able to get any odor from the cases. When first noticed, the larva is about one-third grown, some looking a soft, greasy white, and some a yellowish white, and later turns brown. Dry up in the cell—some before, some after the lengthwise.

2. Do you think these colonies can be used another year by placing them under water in a current?

MASSACHUSETTS.

Answers.—I am afraid there is disease among your bees, which, although now apparently overcome while the honey-flow is on, may occur in the future. In the meantime it will be advisable for you to get all the literature you can on the subject, especially the leaflet on pickled brood, and back numbers of this journal relating to diseases of bees, and being thus informed upon the subject you can form a better judgment of the case than can one at a distance.

2. Placing diseased combs under running water would not be likely to do any good.

Storing in the Brood-Nest—Swarming Out.

1. In the months of November and December here the queen greatly diminishes her egg-laying, and the bees filled up nearly every comb with honey. If extracted, the bees store in honey all the same, and very little brood would be kept up. This greatly reduces the force of the colony. What must I do to prevent the storing honey in the brood-nest in such season of the year?

2. When my colonies swarm I destroy all queen-cells and turn back the swarm (with the exception of the queen, which I give to some queenless colony). A few days after I destroy the remaining colonies, such colonies now being without queen or cells. About two weeks after I give them a cell each: every one of the colonies swarmed out with the virgin queen. What must I do to prevent such swarming?

JAMAICA.

Answers.—1. It is not easy to prevent the bees from filling the combs with honey. Ha. Ha. If we could get some young queens will help. If you give empty frames or foundation it will give the queen a better chance to get in her work.

2. Instead of destroying all cells and then giving another cell two weeks later, if you leave one cell—or if you want to get the bees to come from chocolate give it at the same time you kill the cells—you will not be likely to have so much trouble with the bees swarming out. With your present plan there is no brood, or at the most a very little sealed brood, in the hive, and when the queen goes out on her wedding-trip the bees are along.

Bait-Sections—Extracting, Etc.

1. I have the ideal super and sections; some have been on my five hives over two months, but the bees have not yet worked in them at all. The frames are irregularly filled, average two-thirds; 8-frame hives. The books say bait with old or used section-boxes, but I am a beginner, and they are no fit, if that makes any difference to bees.

2. How can I extract honey from comb without an extractor? It could not always have been done with those machines. I scrape out the honey and comb together with a tablespoon, on each side of the foundation, cut it into a dish or pan, and separate it as we eat it. I want to put it into jars.

3. In the way, the foundation goes to pieces in scraping, though I use great care; some breaks in carrying to the house, about 20 steps. I use what is called in catalogs "medium brood foundation." I am told it ought to remain good in the frame at least eight years. CALIFORNIA.

Answers.—1. So long as the brood-frames do not average being more than two-thirds filled, you hardly ought to expect bees to do much in sections. Indeed, without any bait in supers you ought not to expect them to make any start at all until the brood-chamber is filled, and even with bait, you will find great difference in the super to the bait alone until they have more honey than they can get into the brood-chamber. You need not be thwarted in the matter of bait because you have no partly filled sections of the right size on hand. If you can get sections of another size, cut out the comb and fasten it into one of your sections. You may even cut a piece of comb with brood in it out of a brood-frame and fasten it in a section for bait. It will not make a desirable section when completed, but nothing can be more seductive to the bees in the way of bait.

2. I don't know of any way by which you can get honey out of a comb without an extractor that will leave the comb intact, unless it be to let the bees empty it.

If I understand you rightly, when you are scraping the honey away from the septum the latter gives way. Foundation may become dry and brittle through age, but after such foundation is put in use by the bees I doubt its being specially different from other. It is probably not so much brittleness as tenderness of which you complain, and the freshest foundation would have the same fault, the natural comb being still worse.

Honey-Plant Questions.

1. Is yellow sweet clover better than white for bees?

2. Is crimson clover good for bees? Does it bloom the first year?

3. When is the best time to sow either?

4. Does clover bloom the first year? If so, about what time of the year does it bloom?

SUBSCRIBER.

Answer.—1. I don't know. Although I have sowed some years it can not blossom before next year, and there is such a terrible drought that none of it may be alive. It would be of interest if the readers of this journal, who have had both white and yellow sweet clover, would give us some idea of their relative merits.

2. It is a fine honey-plant. It is usually sown late in summer, blooming the next season before white or red clover. If sown early in spring, some of it may blossom the same season.

3. The sweet clover about the time of sowing oats in spring : crimson clover in August. Sweet clover may also be sown in the early fall.

4. Cleome Integrifolia, or Rocky Mountain bee-plant. If I am not mistaken, blooms the first year toward the latter part of summer.

Cleaning a Mice-Infested Hive.

Can a hive be cleaned that has been infested with mice? If so, how?

WISCONSIN.

Answer.—If you mean the combs, the bees will clean them up. If the hive is infested with mice, use some medicine.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hammer." We can furnish a single copy postpaid for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at $1.00.

Please send us Names of Bee-Keeper's who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.
We have seen that influences towards truth-telling, self-control, selflessness—the blessed trio of human virtues—must work for a hearing at the very cradle. So the end of the few days of heat and summer weather, in thousands of our American homes—experiences which force their unwelcome presence—to darken the lives and hearts of bereaved parents over and over with the years, shows that the slender, delicate little bodies, even from the mind and soul, need a first thought in these early, fragilie months. So many of the little souls that fleck the sea of infancy flounder and are lost to all influence and usefulness in the world.

The baby is full of most sensitive nerves. Every one of these seems to reach to the surface, earth seems to touch it. If one is pinched, all cringe. So ready and active is this sympathy, that a toothpick or a lunch which the digested machinery fails to reach, brings the spasm, or the fatal bowel complaint. Almost before we know it the little craft has been washed beneath the waters, and we are left hopeless to mourn our terrible loss.

The very functional sympathy just referred to makes it all the critical stage of life, and explains the mortality which is so startling at this period. Paul’s words are so emphatically and peculiarly true. If one member suffers, all the members suffer with it. A fall from a chair, which one older would scarce notice, brings the spasm, and, mayhaps, death. The cutting of the cord by those who have proved a pinprick, now blocks the stomach and brings the fatal bowel complaint. A change of food that later will come with refreshment, now smotheres digestion and limits the life.

The excitement of too much talk may make the children’s eyes cringe. Their admiring friends, which with more of age would be all invigorating and life-giving, now weary the energies flag, and the bodily functions, tired out, cease their action.

We must ever remember that infancy is the critical age; that the very sympathy between the organs is a menace to life itself. Teething, which comes at its first year-mark, is ever to be dreaded. The heat of summer is full of menace. Change of place and companions at this susceptible age is too stimulating, and fraught with danger. Change of food is often the very last straw, and the back severs. Combine all these, and what wonder that the fragile little craft goes to the bottom?

It may be wise to leave home in summer. This is vacation time. But if a baby adorns our home and gladdens our arteries, better think twice, especially if at about the year-date when the great molar is trying to push through. Then if we must go, we must seek a cooler place, a quiet nook, and plan that there be no change in the food. Often the change is from country to city, to the dear old home friends, who rightly appreciate the little walf as a very treasure, and the nerves are waked and going till excitement and exhaustion have done their work. Usually the food is changed perforce, and with the heat, excitement, change, enforced by the offending molar, the latter is too numinous and strong, and the story is brief. The wise, thoughtful parents will see that the little jewel which gives charm to the home and life is too rare and precious to permit even vacation pleasure and change to bring threatening dangers. They will forego even the old home for baby’s sake. They will plan with all the astuteness of love to minimize the dangers that menace infancy, and will gladly forego the change or visit—even the rare, gracious pleasure of reviving the gladsmess of life of the old home, for the sake of the life and health of the blessed baby.

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THE BABY.
What is the little one thinking about?
Very wonderful things—no doubt.
Yet he laughs and cries, and cats and drinks,
And chuckles androws, and nods and winks.
As if his head were so full of curiosities
And curious riddles as any sphinx!
Warped by colic and wet by tears.
Mutilated, bruised and tortured by tears;
Our little nephews will lose two years;
And he'll never know
Where the sombre groves.
He needn't laugh for he'll find it so!

This is from the genial pen of that wholesome writer, Dr. J. G. Holland. I would have his books grace the table of all our home circles. "Boy Path" and his other stories are always inspiring, and inspire our young people to pure thought and purpose. The poem from which the above is taken is so full of humor, of unflagging interest, of real philosophy, that all our children and young people may well read—_the children portions of it, and the older ones all of it_. Like Job, it discloses the problem of evil, and will help to get a philosophy of life and thought that can not come too early into the heart and life.

I hope all our mothers will see that "Bliter Sweety" is among the volumes that the children prize as among their best belongings. The author of this poem is "Kathrina," and "Timothy Ticitom's Letters to Young People"—all by the same author. All are good to read with the children; all will develop in pure wholesome lines; all will invigorate, and give a start-off from a right, true foundation.

But we have almost forgotten the baby. Luther said he loved and felt awed before the baby. For in early baby is the promise of so much of good or evil. Every infant is potentially so pure, true and noble, or so base, depraved, and ignoble, that we wonder we are allowed to start the very cradle to start the little craft in best courses, that baby, mind and soul, may all trend towards the fairest port. The poem further traces the little craft—

_Out from the shore of the great unknown,
Blind and wailing, and alone._

Into the light of day,
Out from the shore of the unknown sea.

Tossing in pitable agony.

Of the unknown sea that reeks and roils,
Speckled with the marks of little souls,

Barebacks benumbed on the other side,
And slipped from heaven on an ebbing tide.

And how beautiful this reference to the mother:

_What does he think when her quick embrace
Presses his hand and buries his face,
Deep where the heart-throbs sink and swell,
With a tenderness she can never tell,_

Though she murmurs the words
Of all the birds—

Words she has learned to murmur well.
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To Our Shippers:

We were obliged to notify you a few weeks ago that one Joseph M. McCaul had leased our old quarters at Nos. 120-122 West Broadway, New York City, and had there started up business under the name "Hildreth, McCaul Co.," and had distributed a multitude of circulars so worded as to create the impression that his business was a successor to or a branch of the business of Hildreth & Segelken.

For the protection of our shippers and ourselves, we at once instructed our attorney to commence action to enjoin the said McCaul from using the name Hildreth in any manner whatsoever in connection with his business. On the 10th day of July, 1901, Hon. David McAdam, Justice of the Supreme Court of the State of New York, after a full argument upon the merits, issued a peremptory injunction, of which the following is an extract:

"And it appearing that the plaintiffs have for a long time been and now are carrying on business under the style of 'Hildreth & Segelken,' and that the defendant has recently opened a business at 120-122 West Broadway, in the Borough of Manhattan, City of New York, and is carrying on the same under the style of 'Hildreth, McCaul Co.,' and that such act is in violation of the plaintiffs' rights, and that the commission or continuance thereof, during the pendency of this action will produce irreparable injury to the plaintiffs; it is

ORDERED that the defendant (Joseph M. McCaul) and each of his agents, servants and employees and all other persons acting under his authority and direction be, and he and they are hereby restrained and enjoined from showing, displaying or otherwise using during the pendency of this action in or upon any papers, devices, sign or signs, or otherwise, in the business conducted by the defendant at No. 120-122 West Broadway, in the Borough of Manhattan, City of New York, or elsewhere the name of "Hildreth" separately or conjunctively with any other name, designation or description."

Outside of our desire in our own interests to protect the name which we have built by years of satisfactory dealings with our customers, we hastened to procure this injunction as soon as possible, to prevent our shippers from being misled into sending their goods to one who would make an attempt to gain their trade by such a trick and device.

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Breed from the Best.

A Stray Straw in Gleninnes in Bee-Culture says:
The antique queen-rearing requires careful selection of sire and dam, adapting one to the other. Little can be done at that till foundation, but in the meantime, if every bee-keeper persistently breeds from queens whose colonies store biggest crops, I’m sure we shall have something to talk about — Yes, that is true, J. F. McGuire of California has a row of hives in his apiary, each of which has a queen of his very best breed. He says it is easy to see that this row of hives gives a larger yield than any other row of an equal number or strength.—EDITOR.

Bees as Fertilizers.

Some testimony has been given to show that bees may be dispensed with as fertilizers of fruit-bloom. J. W. Rose gives in the Progressive Bee-Keeper some testimony on the other side, as follows:

We made some experiments during fruit-bloom with our bees by covering the limbs that would bloom of pear, plum and damson trees, and had intended also to experiment on apple-bloom, but I was away from home when they began blooming, so didn’t get to work on them. Contrary to expectation, on peach-bloom there were some peaches that set, but not quite so many per plant as on limbs with bloom uncovered. We also noticed more dwarfed fruit on the covered limbs than on those not covered, that course not mature. We made a new trial—setting, on the pear, plum and damson limbs covered, there was not a single fruit set, so we conclude that bees help the peach same, any way, and that they, or some other insect, are necessary for pears and plums.

Brood in Sections.

Some producers of comb honey find no need of queen-excluders, while others find them necessary. Referring to a Stray Straw in Gleninnes in Bee-Culture says:

Complaint is made by some that, when no queen-excluder is used the queen goes up and lays in the sections. The curious part is, that A says he has no trouble at all, while B has brood in a fourth of his beehives. Possibly this explains it: There is no drone-comb in the brood-chamber in either case. If bees have only started to the sections, and will build drone-comb there, and the queen will come up to lay where the drone-comb is. A’s sections are filled with worker foundation, and there will be no drone-comb there to bat the queen up.—In California, so far as I have been able to find, the bee-keeper uses the queen to help the comb. The little bees seem to be generally used, even for comb honey.—EDITOR.

Prevention of Swarming.

H. D. Burrell uses the Heddron hive, and gives in the Bee-Keeper’s Review this method of preventing swarming, which, with some modifications, he thinks would work with other hives. He says:

Eight frames are fastened in a case, and any desired number of cases may be used for a brood-chamber. I usually use two, which gives a horizontal field entirely through the middle of the brood-chamber. This bee-space is a fine place to build queen-cells in, and if the bees are preparing to swarm, quee
AMERICAN BEE JOURNAL

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Divide the surplus cases between the two hives, and give more surplus room if it seems necessary. A small yard that is likely to swarm in the same way.

If convenient to look at the hives just before dark, it is easy to tell where the queen sits. The queenless bees will be uneasy, and crawling about the front of the hive, apparently hunting for their queen. If it should appear that she is in the comb, move it to the old stand, exchange places with the removed part. By moving the queenlessness will not be at all noticeable, unless the queen removed from the former stand, as most of the field-bees will return to the old home, although this is not always essential.

The weakening of the colonies, and the additional room given, will almost always cure them of the swarming fever.

At the end of the season, each hive can be used as the parent of four or five other colonies, and at the end of the season two or three hives in one side. This small colony may be used for strengthening a weak colony, as a nucleus for queen-rearing, for increase of colonies, or for a surplus case on any hive in the yard.

Bait-Sections:

I was glad to see Mr. Doolittle standing up so staunchly for these. Several eminent beekeepers some time ago contended that they were of little use, and would not stand into way. I would have every single unfinished section carefully preserved, and a number placed to every frame. But I would have them all nicely cleaned up by the bees before storing them away, as I fear any gummed-up or folded-up section. They might well be assimilated to a sort of "infection," and granulate the new crop stored in them. This seems to be a most pernicious fault, and I would consider all cases of construction or backup. -British Bee Journal.

Prolong Lives of Best Queens.

Says a Stray Swarmer in Gleanings in Bee-Culture:

Lounging in bees is coming to the front. Assuming that in harvest time a worker lives six weeks, and goes abroad if 16 days old, if its life were extended it could store 27 percent more. If one queen lives twice as long as another, will not her workers live at least a little longer? If it is possible, by proper selection continuously exercised, we might add to that work to the life of the worker. I then think that the queen's life, long the summer life, that ought to add sixth to its winter life. In that case, a bee born May 1, which now lives till December 31, might get quite a help in the wintering problem.

Another thing: We can tell better what a queen is by two tests. One is made with work bees we can by a single season's work. The one that shows herself best for three seasons is a safe one to breed from, and I have found that in doing the work that a queen born in 1897 that are among the best—one of them, I think, the very best I have. While this is true, the average, even, I think, would be better displaced in two years by a young one. —Editor.

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The NONETTE QUEEN CLIPPING DEVICE is a fine thing for use in catching and clipping Queens required to be saved at times. It will be sent to YOU, or will send it FREE as a premium with ONE copy of my best selling book, which will be a great help to you, and a great help to me. You will have it for nothing.

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Mulberries and Bees.

It may not have occurred to some of your readers what a remarkable honey-plant they may have, right at their doors, irrespective of locality.

In the coldest habitable region the white or Russian mulberry may be depended on to thrive. In the heat of the South it flourishes and supplies abundant shade. In the more temperate climates, especially its native home, the Mulberry has adapted itself to the growth of the bee in its various forms, both as a food and a home.

It is a fact well known to beekeepers that no one need fear failure. It is easily propagated from seed, and cuttings take root in moist soil as readily as willows, attaining a height of 60 to 100 feet, and girth of trunk from one to two feet in diameter. Planted a foot or two apart it affords an attractive hedge-fence, as effective as the osage orange.

The availability of the mulberry for shade, post-clubs, and firewood is also a temptation to sensible farmers. Though a comparatively soft wood, it is of tough fiber, successfully resisting the force of the winds when left to yield trees break off. Its far-reaching roots are great foragers for this tree’s sustenance and anchorage. The fruit is a creamy-white, and so sweet (77 percent sugar) that one must acquire a taste for its enjoyment. Not least of its virtues is the ease of its harvest. Simplicity a sheet under the tree and shake well to bring its luscious fruit. No sugar is required for their preparation for the table. Milk, cream, or jam, will greatly improve their delicacy. Made into jam, no fruit is healthier, more cheaply prepared, nutritious, or more relished by young or old who are fond of natural sweets. I can only liken the berry to a vegetable honey, so pure its flavor and agreeable its sweetness.

To touch upon the economic value of mulberry leaves in fostering the culture of silk industries is ancient history. The Egyptians, the old Greeks, the Romans and their descendents have profited through careful attention to this vegetable boon of Nature.

I intend simply to suggest as a result of my personal experience, that its ripe berries are many times pulped upon by the bee as they would a broken comb of honey. The manner of feeding is exceedingly simple. I crush the ripe white mulberry and convenient dish and with a piece of shingle, large spoon or any light carrier readily at hand, I place a quantity of the berry quantity upon their alighting-board. The bees will naturally investigate for some minutes, but when they have tasted the sweet juice, the bee carrier seems to possess them to completely cover the mass, and extract every vestige of its sweetness.

It is possible that here we may glean a hint that will in future generations forestall the almost complete honey failure of the last few years, and bring our industry back into the channels of success and profit.

Cook Co., Ill.

Dr. Perio.

[The Doctor brought to us a sample of the mulberries, and we fed it to our bees after the crushing. Well, they just carried it in sick and clean from the alighting-board in double quick time. We should like, to taste the flavor of the honey produced from mulberries.]

An Swarming Experience.

I do not know that I can give the explanation asked by Dr. F. C. Hooper, of page 290, concerning the use of sugar in any better way than to give you a part of my swarming record for this year.

Swarms issued: No. 23, May 30, hired in No. 15; No. 16, May 30; No. 25, July 7.

You will see by this that my new or prime swarm cast a swarm, as most of my new or prime swarms do, and that the parent colony...
25 cents Cash paid for Beeswax. * * This is a good time to send in your Beeswax. We are paying 25 cents a pound—CASH—for best yellow, upon its receipt, or 27 cents in trade. Impure wax not taken at any price.
Address as follows, very plainly,
GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

Tennessee Queens! Fine lot of Choice Tested Queens reared last season, daughters of select improved and select golden queens, reared 1/2 mile apart, and mated to select drones, $1.50 each; standard or Queens, from same breeders, either strain, 75c each. No bees owned nearer than 3 miles. None impure within 3, and free within 5 miles. 2 years' experience. Discount on large orders. Contracts with dealers a specialty. JOHN M. DAVIS, Spring Hill, Tenn.

Bees Doing Fine—Alalfa. Bees are doing fine. I send a sample of honey. Please let me know what it was gathered from, as we are unable to find out the exact results of the bees. I think they must have gone a long distance. I rather think it is alalfa honey, as the farmers are beginning to sow it here. The honey for this season, which was gathered early morning until late, and seems to be the only ones that are not complaining of the heat and drought. The honey for the last two weeks has been from 29 to 102, the last two weeks.

Woodbury Co., Iowa, July 20.

The sample of honey has the color and flavor of alfalfa honey. Of course all you can like it, as such honey never need wait long for a buyer.—EDITOR.

Good White Clover Flow. The white clover honey-flow has been unusually good, but is probably at an end. From 35 colonies, spring count, and an increase of 20, I have harvested six sections, and there are on the hives some 2000 sections, most of which are full, besides some half dozen extra-honey supers. I have a few colonies that have produced upward of 150 sections, and three or four have done still better than that.
F. W. HALL.

SIOUX CO., IOWA, JULY 22.

TOO HOT AND TOO DRY. We are suffering with heat and drought here. I had 21 colonies of bees, spring count, and have 30 at present in fine condition. My crop of white honey will not exceed 400 pounds, and there is no sign of rain, consequently we cannot expect a full crop; but I must have my American Bee Journal.

MRS. PAUL BARRETT.
Crawford Co., Wis., July 19.

Another Honey Crop Failure. I am sorry to have to report another failure of the honey crop. It seems as if there would be nothing this fall, either, in the way of honey, for our fields are parched. The corn is tasseling out without any prospect of ears, and the crop of weevils, which are generally luxuriant at this season, only serve to make bad off as the more valuable plants. This is probably one of the worst drouths ever seen in this section.

C. F. DIJANT.
Hamilton Co., Ill., July 19.

Hot, Dry Weather. We had a good start of white clover honey, but the hot, dry weather has nearly finished it. The Basswood view is but little changed; it is so very dry but little can be expected from heartsease and buckwheat.

Linn Co., Iowa, July 13.

Don't Report Glowingly or Too Soon. There is a report from this county (Marshall), in a recent number of the American Bee Journal, from J. W. Sanders. He says that we are having the honey crop that we would have had in the State. Now, I have not found it so. We had a few days that were extra good, but the dry weather hindering compliance with the order. The wind killed the clover, and made what little basswood bloom there was barren of nectar. I consider that my crop was cut one-half from...
BEE-BOOKS
SOLD Postpaid by
George W. York & Co., Chicago

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. New-
All the illustrations are from life. Price, in cloth, 15 cents; in paper, 50 cents.

Langstroth on the Honey-Bee, revised by Daniel M. Yost. This invaluable book has been
entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-
care, and is equipped with over 600 pages. Price, in cloth, 75 cents; in paper, 25 cents.

American College. This book is not only instructive and a guide in bee-keeping, but is interest-
ing and thorough practical and scientific. It contains a full delineation of the anatomy
and physiology of bees, 400 pages, bound in cloth and fully illustrated. Price, $1.25.

Scientific Queen-Rearing, as Practically Applied
by G. C. Knab. This is a very choice work, and the very best of queen-bees are reared in per-

A B C of Bee-Culture, by A. J. Root. A cyclo-
pedia of 400 pages, describing everything par-
tial to bee-keeping, with 300 illustrations and 300 engravings. It was especially written for
beginners, based on scientific facts. Price, $1.90.

Advanced Bee-Culture, Its Methods and Man-
gement, by W. Z. Hutchinson. The author of this book is a practical and experienced

Rational Bee-Keeping, by Dr. John Drrien.
This is a translation of the latest German
book on bee-culture. It has 250 pages, bound in paper, and prices, $1.40.

Bien-Kultur, by Thos. G. Newman. This
is a German translation of the principal portion
of the book called "Bee and Honey." 110-page
pamphlet. Price, 20 cents.

Bienzucht und Honiggewinnung, nach der neuen
methode von Dr. G. Eggers. Anyone who is interested in bee-keeping will find
this book gives the latest and most approved methods of bee-keeping in an easy, comprehen-
sive style, with illustrations to suit the subject. 50 pages, bound cover. Price, 50 cents.

Bee-Keeping for Beginners, by Dr. J. P. H.
Bracken. A book designed for the use of the casual reader and the amateur bee-keeper.
Price, 50 cents.

Bee-Keeping for Profit, by Dr. G. L. Tinker. Re-
vised and enlarged. It details the author's "system of bee-keeping," by which huge yields of
honey and comb are obtained. Price, 80 pages, illustrated. Price, $1.25.

Apairy Register, by Thomas G. Newman. Devotes
two pages to a colony. Leather binding.
Price, 25 cents for 50 colonies; 25¢ for 100
colonies, $1.25.

Dr. Howard's Book on Foul Brood.—Gives the
McGee Treatment and reviews the experi-
ments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R.
Pfeiffer. Result of 25 years experience. 20 pages.

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Foul Brood, by A. R. Kohnecke. Origin, De-
velopment and Cure. Price, 10 cents.

Cappings and Packets, by Dr. Sawyer, Fanny Field,
and others. Illustrated. All about cap-
ing honey. How to make the most money in
comb. Price, 50 cents.

Our Poultry Doctor, or Health in the Poultry
Yard and How to Cure Sick Fowls, by Fanny Field. Every farmer should have this

Poultry for Market and Market Poultry for
Fanny Field. Published by the Fanny Field Poultry Business. 64 pages. Price, 20 cents.

1901—Bee-Keepers Supplies! We can furnish you with The A. L. Root Co's goods as wholesale or retail at their prices. We can save you freight, and also promptly. Market price M. H. HUNT & SON, Belch Bros, Waynec Co., Mich. Please mention Bee Journal when writing.

CHICAGO, July 18.—Choice white comb honey is arriving rather slowly from all quarters. There is no accumulation at this writing, as re-
sellers will sell within a week and get quite a number of them on the same day. Amber grades bring about 12c. Extracted dull and slow of sale at anything over 50 cents. No. 1 white at 3c good with demand. R. A. BURRETT & Co.

CINCINNATI, May 17.—No demand for comb honey, also stock of it well exhausted. Ex-
tracted dull,—10 to 12c, with no demand at all. Lower prices from 5c to 1c per pound.

BOSTON, June 23.—There is practically no com-
mercial comb honey, and demand for good white comb. Fancy stock sells readily at 1c; No. 1 white at 1.00c, and amber at 1.62c. Extracted not in much demand, with plenty of 60c extract. Price, in comb at 3.50c; in amber, 40c.

OMAHA, May 1.—Comb honey, extra white, 25c; 1000-lb. cases, per cwt., 1.40 cent.

PEYCEY BROS.

NEW YORK, July 8.—Our market is practically
bare of comb honey, and demand good for white comb. Fancy stock sells readily at 1c; No. 1 white at from 1.00c, and amber at 1.62c. Extracted not in much demand, with plenty of 60c extract. Price, in comb at 3.50c; in amber, 40c.

HILDEBRAND & SCHOBER.

ALABANY, N. Y., June 13.—Honey market is
dull with no receipts or stocks and little de-
mand. It is between seasons now. Prospect of some crop in this vicinity from what bees have
just left the nectar and honey very little call for it. There are no signs of farmer-keepers and plenty of large quantities of honey made by hive brood exterminators. H. R. WIGHT.

DETROIT, July 15.—Fancy white, 15c; No. 1, 1.00c; no dark to quote. Extracted, white, 60c; dark and amber, 50c to 60c.

M. H. HUNT & SON.

BUFFALO, July 16.—No demand for honey yet
undoubtedly because of our early season, or
perhaps 10c. Some old lots still about, un-
salable, almost, at 6c, and 8c. Bees wax, 22c.

BATTEN & CO.

KANSAS CITY, June 29.—Very little honey on the market at this time, while our 100-lb. comb-
granulated. Sales are light at 15 cents for best comb. C. C. B. Beeswax firm at 25630th.

W. H. CROWELL PRODUCE CO.
Successors to C. C. Clemens & Co.

SAN FRANCISCO, June 19.—White comb, 1.15c
12c; amber, 96c; dark, 68c. Extracted, white, 40c; amber, 33c; cocoa, 25c.

BEESWAX, 25c.

BEESWAX, 26c.

Market shows no quantulo improvement, but there are no large quantities obtainable at the prices generally named by dealers. In a small market, for instance, some of the city buyers, at higher prices than are quoted are being realized.

WANTED

Fancy White Comb Honey in co-op cases; also Ex-

Reference—German National Bank, Cincinnati.

THOS. C. STANLEY & SON.
FAIRFIELD, ILL.

Please mention Bee Journal when writing.

American Bee Journal

Use this sample text to answer questions about the content of the image.
River Forest Apiaries!  
FILL ALL ORDERS  
By Return Mail.  

Italian Queens Warranted  
Untested, 75 cts.; Tested, H50: Select Tested, $1.50. Half dozen or larger lots as may be agreed on. Address,  
RIVER FOREST APIARIES,  
River Forest, Oak Park Post-Office,  
Cook Co., Ill.  
Please mention Bee Journal when writing.

SWEET CLOVER  
And Several Other Clover Seeds.  

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:  

<table>
<thead>
<tr>
<th>Seed Type</th>
<th>Price per Pound</th>
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<tr>
<td>Sweet Clover (white)</td>
<td>$1.20</td>
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<tr>
<td>Sweet Clover (yellow)</td>
<td>$1.00</td>
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<tr>
<td>Alfalfa Clover</td>
<td>$1.80</td>
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<td>Prices subject to market changes.</td>
<td></td>
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Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.  
Add 25 cents to your order, for carriage. If wanted by freight, or 10 cents per pound if wanted by mail.  

GEORGE W. YORK & CO.  
144 & 146 Erle Street, CHICAGO, ILL.

I ARISE  
To say to the readers of the Bee Journal that  
DOOLITTLE...  
has concluded to sell QUEENS in their season  
during 1901, at the following prices:  

<table>
<thead>
<tr>
<th>Queen Type</th>
<th>Price</th>
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<tr>
<td>Untested Queen</td>
<td>$1.00</td>
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<tr>
<td>Test Queen</td>
<td>$1.25</td>
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</table>

Circular free, giving particulars regarding each class of Queens, conditions, etc. Address,  
G. M. DOOLITTLE,  
11A2t  
Borodino, Onondaga Co., N. Y.  
Please mention Bee Journal when writing.

24th Year  
Dadant's Foundation.  
24th Year

We guarantee satisfaction.  
Why does it sell so well?  

What more can anybody do? BEAUTY, PURITY, FIRMNESS, NO SAGGING, NO PATENT WEED-PROCESS SHEETING.  

Send name for our Catalog, Samples of Foundation and Veil Material.  
We sell the best Veils, cotton or silk.  

BEE-KEEPERS' SUPPLIES OF ALL KINDS.  

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.  

Langstroth on the Honey-Bee—Revised,  
The classic in Bee-Culture—Price, $1.25, by mail.  

Beeswax wanted at all times.  
CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

More Bee-Keepers' Paradises...  

E. R. Root has just returned from a 6,000-mile trip through some of the best bee-locations in the world, and has already begun his series of write-ups, accompanied with fine photos, in Gleanings in Bee-Culture. The following editorial appears Aug. 1, and will give something of an idea of what he will describe:  

Some little time ago I promised to tell about the bee-keepers' paradise in Texas. I have this on the docket, and it will appear as I take up the line of my travels. But since running across that paradise I have run into two or three others. There is one west of the Rockies, in Colorado, that is not yet overstocked with bees or bee-keepers; another one in Central Idaho—in fact, I do not know but the whole State. These will be described in turn. The fact is, millions of capital are being invested in irrigation; irrigation means alfalfa; alfalfa means a paradise for bees. But I found all along my trip that alfalfa-growing preceded bee-keeping by two or three years, for it seems to take about that length of time before bee-keepers find these gold-mines that have been hitherto unoccupied.  

If you are dissatisfied with your present location, and for financial reasons, or on account of health, will be compelled to leave, subscribe for Gleanings in Bee-Culture, and learn something about the great South and the great West. There are many locations in the West that are not yet occupied—splendid bee-locations. If you wish to learn about them, send 25 cents for a six-months' trial subscription, or $1.00 for one year and one untested Italian queen. Or, send $2.00 and we will send Gleanings one year and one of our celebrated Red Clover Queens.  

THE A. I. ROOT CO., Medina, Ohio.  
(U.S.A.)  

GEORGE W. YORK & CO.  
144 & 146 Erle Street, CHICAGO, ILL.  
are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO.  
Send to them for their free catalog.
A Superior Red Clover Queen

For sending us One New Subscriber and 25 cents ($1.25 in all)

We arranged with one of the oldest and best queen-breeders (having many years' experience) to rear queens for us this season. His bees average quite a good deal the longest tongues of any yet measured. The Breeder he uses is direct from Italy, having imported himself. Her worker-bees are large, some what leather-colored, very gentle, and scarcely requiring veil or smoke. They stored red clover honey last season.

All queens guaranteed to arrive in good condition, and all will be clipped, unless otherwise ordered.

We would like each of our present readers to have one or more of these fine Queens. Simply send us the name and address of a new subscriber for the American Bee Journal for one year, and 25 cents extra, and the queen will be mailed to you. Our queen-rearer is now caught up with orders, and expects to be able to mail them hereafter within 48 hours after we receive the order. He is in another State, and we will send him the Queen orders as fast as we get them at this office.

He is prepared to rear and mail a large number.

The cash price of these Queens are $1.00 each: 3 for $2.70; or 6 for $5.00.

Send all orders to

GEORGE W. YORK & CO.,
144 & 146 Erie Street, CHICAGO, ILL.

The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to present your own copy of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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The Novelty Pocket-Knife.

Your Name on the Knife—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your Pocket-Knife will serve as an identificant; and in case of death, your relatives will at once be notified of the accident.

How to obtain the Novelty Knife? We send it postpaid for $1.25, or give it as a Premium to the one sending in 25 cents. It is a Premium to every subscriber to the Bee Journal (with $5.00) and to the one sending in 25 cents.

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

For sending us One New Subscriber and 25 cents ($1.25 in all)

Queen-Clipping Device Free....

The Monette Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will add it as a Premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00, or for $10. We will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & CO.,
144 & 146 Erie Street, CHICAGO, ILL.
Editorial.

General vs. Special Knowledge.—The tendency nowadays is toward specialization. Even in bee-keeping there are special lines, and a man is likely to do his best when he confines himself within certain limits. But it is a serious mistake to think that one should strive longer, rather than better, within his line. It is not likely that any bee-keeper became so proficient in any one line without being pretty well informed in all other lines pertaining to bee-keeping. A good, all-around bee-keeper makes the best basis for a good specialist. Dr. Miller’s advice in another column is good. Inform yourself in advance, even upon subjects that you think may never have any interest for you. Study all of your text-book until it is familiar. Don’t omit a knowledge of the Dzierzon theory. Lay a solid foundation, and then when the time comes that knowledge upon any point is needed, it will be ready.

Northern vs. Southern Queens.—A wordy discussion upon this subject occurs in the Southland Queen between S. E. Miller and E. J. Atchley, which, if it proves nothing else, proves that men may have very different views. What one claims for the North the other claims for the South. Mr. Miller claims that people of a temperate climate are superior to those of a tropical climate in strength, hardness, industry, and otherwise, and that where a Northern and a Southern army meet on equal terms the Northern army is victorious. Mr. Atchley says late history proves that it takes ten Northern men to conquer one Southern man; that the men and women of the South, as a rule, are strong and robust, capable of enduring great hardships, and less subject to disease than those of the North; that Southern queens lay more and live longer, and the bees live longer, are more hardy, and gather more honey.

Feeding Back—Dr. Hutchinson in the Bee-Keepers’ Review gives some excellent hints. If the feeding is begun just as the flow from basswood is beginning to slack up, the work will go on apace, whereas every day’s delay after that time will make it necessary for the bees to fill up again in the brood-chamber. Contract to live Langstroth combs at the most. Three are better, but in that case there will be a weakened colony unless it is strengthened by adding to it cases of sections, bees and all, from other colonies. Add boiling water to the honey to be fed until it is thin as nectar. With 100 pounds of unfinished sections and 100 pounds of extracted honey, Mr. Hutchinson gets 100 pounds of finished sections. He says further:

Black bees do the best work; hybrids next; then comes the dark Italians. Light Italians do very poor work in feeding back.

There are two grades of them as regards their completion. Contract the brood-nests of the colonies that are to be employed. Not the cases of sections around, one on a hive, but not on the hives containing the colonies that are to be employed in feeding back. The bees will go up and occupy the sections. Now gather up the cases, bees and all, and put two cases on each hive. This is done to secure populous colonies, as they do the best work in feeding back. I have never had trouble from the bees quarreling. Put a case of nearly finished sections next to the brood-nest, and those that are not so nearly finished on top, and then the feeder.

Note the peculiarities of the different colonies. One will take down the feed and draw out the combs much better than will some of the others. Another colony will be a poor feeder, but will cap the honey much better than some other colonies will cap their honey. As the work progresses, and fewer colonies are needed, throw out those that do the poorest work.

A Putty-Knife as a Hive-Tool, to scrape propolis off the hives, pry frames apart with, and for scraping off burr-combs, is recommended in the Progressive Bee-keeper. “Somnambulist” suggests that a small trowel with the edges sharpened is hard to beat.

Moving Bees for Fall Flow.—An interesting discussion upon this topic at the Ontario convention is reported in the Canadian Bee Journal. Among the points brought out was one that even if no surplus is gained there may be pay for the trouble in the better supply of winter stores, and still further there may be a great advantage in the greater number of young bees to go into winter quarters.

It was urged that, although for spring and fall moving a large-sized entrance covered with wire-cloth may give sufficient ventilation, this will not do when moving to the backwet fields in hot weather. There should be a space of two inches over the brood-nest and four inches of wire-cloth over. Some preferred a hay-rack with a layer of hay without springs; others preferred heavy springs. A board platform may be used with common carpet tacks sprinkled over it. The tacks will sink into the platform and into the hive-bottoms, preventing the hives from sliding about.

To prevent trouble with a nervous driver in case any hives should spring a leak, mosquito net may cover the entire load. On a close, warm day, if bees begin to stick their tongues up through the wire-cloth, they should be well sprinkled with water. The bees will suffer less if hauled at night, or if the start be made in the middle of the night. Frames should run crosswise on the wagon. Some hauled the hives home late in the fall, putting them immediately in the cellar without opportunity for a flight, and found no bad results.

Alfalfa Honey,—although always of good flavor, says Editor Root, varies in color, in some seasons being light amber, and in others almost water-white.

Measuring Bees’ Tongues.—It has more than once been suggested that it is no safe criterion to judge the value of a working bee by mere length of tongue alone, because there may be a difference in the energy of two bees having tongues of the same length. This difference can be measured by the difference in the amount of stores gathered by two colonies. A. W. Wright, in gleanings in Bee-culture, proposes a more expeditious method of measuring this energy without taking all the bees of a colony. He has constructed an ingenious glossometer, which gives measurements to the thousandth of an inch, and says:

“The energy of the bees is clearly shown in their efforts to reach the candy. While some are easily discouraged, and give up without much effort, others will persevere, and work and stretch their tongues to the utmost limit; and when the candy is clearly beyond their reach they seem loath to yield.”

Mr. Wright perhaps is the first to suggest the advisability of measuring the capacity of the honey-sacs of different bees, in doing which only one bee must be taken at a time and allowed to fill its sac from a receptacle so small that the amount taken can be accurately determined. While in general larger honey-sacs go with longer tongues, two bees having tongues of the same length may have honey-sacs of different capacities. It is not hard to believe that a bee with a small honey-sac must make more journeys, hence consume more time, in storing a given amount, than one with a larger sac. He says that the living bee, when reaching for nectar, can protrude its tongue farther than the tongue of the dead bee can be stretched without rupture, and that the bees of a queen, if pure, differ but little from each other in tongue measure, capacity of the honey-sac, and working energy. Objection is made to using wire-cloth in a glossometer, as the apertures are by no means uniform in size or shape.
Contributed Articles.

Width of Top-Bars of Extracting-Frames, Etc.
BY C. P. DADANT.

MR. DADANT:—I would be very much obliged to hear from you as to what width of top-bars you would advise to use when only 9 frames are in the ten-frame hive. Then another question: Which do you consider the best way to have combs in extracting frames cleaned by the bees when they are not to be used again the same season? Some shoveling back on the colonies, but frequently a good many bees remained in them, and again at the end of the season, within a few days. I was brought to this conclusion; but did not take it down in the broad-channel.—JACOB WAGNER.

In replying to these questions, I will refer the reader to an article previously written by me on page 452, on the spacing of extracting-frames, and the number of them to be used in a super.

The thickness and width of top-bars has influence, in only one particular, as far as I know, that is, it helps control the amount of barry or brace combs built by the bees. With a light top-bar, of narrow width, the bees will often build a great number of brace-combs, joining one comb with the other and filling every available space with honey. This makes the handling of the combs more or less inconvenient. When with a wide top-bar, the bees are giving up only the narrow space between the combs, and especially when the top-bar is also thick perpendicularly, there is much less brace-comb built.

But, in extracting, the wide top-bars have the great inconvenience of making it necessary to cut or take off the wax on the under side of the top-bar, until the combs are built out far enough to remedy this. Many of our friends prefer the ordinary narrow triangular top-bar for this very reason. In our own practice, we have used both the 1/2 top-bar and the 3/4, and we find very little difference in practical results. But, if the frames are kept as far apart as is necessary to secure thick combs, the bees will build brace-combs anyhow, even if we use wide and thick top-bars. But we do not find much inconvenience resulting from it, because we keep our bees sufficiently supplied with space to prevent them from building brace-combs. The latter are usually built when space is getting short in the super and seem to be the finishing touch which the bees give to their supers. If we forestall their aim, by adding more combs or by extracting, no brace-combs will be built. So, in our estimation, the width and thickness of the top-bar of extracting-combs is not of any particular importance.

CLEANING EXTRACTING-COMBS.

Concerning the giving back of the extracted combs to the bees to be cleaned at the end of the season, I am decidedly in favor of the affirmative. The question was discussed at length last spring in the International Review of Bee-Culture, of Switzerland. My readers well know that, over there, they produce extracted honey almost exclusively, and many different methods of accomplish. There seems to be about an equal division on the matter of returning the combs to the hives. But the advantages of the method, in my mind, very greatly overbalance the disadvantages.

It is held by those who are in favor of not returning the combs to the hives, that they are just as easily kept when sticky with honey; that it saves a great deal of trouble, and that when the supers are given to the bees in the spring, they work in them much more readily if these combs are rendered attractive by the honey sticking to them.

In the other hand, the combs which are left smeared with honey when put away for winter attract mice much more readily than if they have been thoroughly cleansed by the bees. Mice will make very little effort to enter a surplus case, if there is no smell but that of the wax; but if they can perceive the odor of honey they will take the pains to work their way in, for they are very fond of it. Whenever I have had combs damaged by the mice, I have almost invariably found them to be combs that contained honey, especially honey that was thick in flavor and odor.

Another objection is, that when you put the supers on the hives, in spring, you run the risk of exciting the bees for rob, it is very often before the opening of the crop that the supers are put on the hives. It is true, the same precaution might be taken in the spring to put the supers on the hives as is taken to return them from the fall, by doing it at the end of the day's work, just before night, so that any excitement caused by the running honey will soon be quenched by the shadows of night. But it is much more difficult to do this, because then you have a force of four or five people on the spot, than to do it in the spring, when the apiculturist is usually alone to do the work.

There is also another objection to leaving all the combs daubed with honey for four or five months—it is the danger of causing a fermentation in this honey. We all know that honey has a strong tendency to the absorption of moisture—it then becomes watery, and ferments easily. When the bees are started, and over the winter, it is very easy for them, while extracting, there is a very great danger of this fermentation, and though the quantity is very insignificant, it produces numerous germs on the combs which are to contain the crop, and it is difficult to remove them in the spring.

It is true that it takes a little more labor to put the supers back on the hive, when we know that they must be again taken off before winter, but it is thus with every pursuit—we can have nothing without labor, and those who take the most pains are usually those who succeed best.

Hamilton Co., Ill.

Long-Tongued Bees—A General Rejoinder.
BY G. M. DOOLITTLE.

MY article on long-tongued bees, on page 293, seems to have stirred them up quite generally, if what has appeared in print on this subject since that time gives a true representation of the matter. And I have waited a little, till "the storm had passed away," so that I might send in a general reply to all, for I see that I did not make myself fully understood in my former article. Some seem to get the impression that I was accusing advertisers of making "false statements" regarding long-tongued bees, for the sake of gain. I did not intend so to do. What I did intend was this:

Gleanings in Bee-Culture, through "Stenog.," said, "The movement for longer tongues is simply to get the red clover crop of the North, which now is practically all wasted. The bees, no one claims, would be any better except on that account;" while in the same number of Gleanings the advertisement was stating that long-tongued bees were better for all parts of the country, red clover or no red clover, or at least with no qualifications regarding the red clover matter. And as these statements were directly opposite, I wished to show that one or the other was, and must of necessity be, "actually false." If this showing or conclusion was wrong, or if I wrote in a manner tending to convey any other impression, I am sorry, and ask pardon. I certainly had no desire to do any.

Next, to offer prizes, and so put things by editors or otherwise, as to draw out only one side, without putting the other side on an equal footing, is what I call misleading, and especially so where this is done in the reading columns of a paper in a way tending to point toward some financial interest of the promoter. If so calling was wrong, or if I wrote in a manner giving a different impression, I regret it more than any one else. Not till the "fad" for long tongues had nearly run its course, then I desired for tongues to measure from colonies which had proved themselves inferior for honey-gathering. To have been fair this should have been done at the outset.

Next, when a person writes from an opposing side, and a foot-note is used so as to turn what the opponent says that it may point toward the fad—this is what I call twisting, and something our bee-papers of to-day should not stoop to doing it. If I am wrong, I am sorry. I do not wish to look at things through a distorting vision.

Again, in closing my article I said, "There are times when it is necessary that a 'halt should be called' by some one, and as no one had seen fit to do this, I felt it my duty." Replying to this, Mr. R. Root point me to a certain editorial on pages 295-296 of April 1st Gleanings, to show that a halt was there called, which I had made no mention of, and if I would be fair I would have noticed it. Well, if I had considered that this editorial a calling of a halt I should have noticed it. Allow me to quote from it, similarly to the way Dr. Miller and Mr. Root did:
AMERICAN BEE JOURNAL

No. 10. Practical Lessons for Beginners in Bee-Culture.

BY J. B. GEHRING.

O drone-brood was found on any but the third and the fourth frames in a hive. I will not speak of any brood on none of the frames between these two, nor on the frames on the outside of the brood-nest, I reminded him of what I had previously told him about giving a new swarm a few frames without full sheets of foundation, for reasons also stated.

"This frame to which you direct my special attention," I explained, "serves, better than any other in the hive could, as an illustration of the way my theory works, as applied to the drone-comb."

"You see, here," I continued, as I took the frame in my hand, "how bees will sometimes take advantage of opportunities in their efforts to outwit the intermeddler, and to carry out their intuitive perception of the fitness of things in their household management. Had I given them a frame containing a full sheet of comb foundation, in place of this with a starter only two inches in width, they couldn't have made any drone-comb in it. They can not convert comb foundation into drone-comb—at any rate they have never been known to do so.

"Well, here is the explanation, Mr. Bond: When I hived that swarm I put only these two frames having starters in them into the hive—near the center. Four of the other frames had foundation, and were not freshly finished comb—not a drone-cell in any of these—taken from another hive, all nearly solid with ripe brood. So, you see, this colony had no chance to build drone-comb on any of the frames except these two; and here they had to make up for it by using nearly the whole space of the frames, below the starters, for that purpose."

"But I don't understand," remarked Mr. Bond, quizzi- cally, "why you allowed them to rear drones on these two frames when you could have prevented it, just as well as not. Didn't you say that you didn't want any drones here?"

"Perhaps I did say that," I replied, "and I confess that the whole matter has a queer look—must have to be seen. But the contradictions all disappear when I say: I forgot about those two frames, otherwise I would have exchanged them for drone-proof frames before the bees had time to build the drone-comb. It is true that I don't want these drones; neither do I want any more to hatch out in my apiary this summer. There are plenty on hand now to answer the only practical purpose that a sensible bee-keeper rears drones for."

"Let me tell you, Mr. Bond, the regulating or controlling of the drone-business in an apiary of even 20 or 30 colonies is, in my belief, the most difficult task a bee-keeper can put upon his business program. It demands eternal vigilance to make this effort successful, in the teeth of nature, against nature, and therefore against many obstacles; some of them unknown until learned by experience, and nearly all of them hard to overcome.

"One of the most serious of the obstacles has just been pointed out by intimation when I said I forgot about these two frames. If every bee-keeper who tries to climb to the top of the business had a good, reliable memory, instead of a first-class forgettery, that alone would go half way, at least, toward success in the matter of regulating the production of drones by the bees."

"But I don't understand," remarked Mr. Bond, "why you should go to so much trouble to prevent drone-increase if, as you say, all harm drones do is, that they eat honey and don't work.""

"Mr. Bond," I replied, impressively, "it is honey I keep bees for. As far as drones are a help to me in getting the largest possible yield each year, I tolerate them, and don't interfere with them unless it harms me, or anyone else. But when I know that my bees are rearing more drones than are needed for the only legitimate purpose, I am disposed to interfere, because I know that the honey bees are just as helpless as the drones, though the drones in a hive that are not really needed are a nuisance, because they are in the way of the workers during busy times."

"In the meantime, I'm not to say that I am not opposed to long-tongued bees, long-winged bees, or bees having large honey-sacs, etc., but I am opposed to the pushing of any of these in a sort of one-sided way, without at the same time trying to draw out the truth in the matter by giving the contrary side an equal chance. His time enough to push things after they are known to be right, and, to my mind, a thing should never be pushed by the editor or publisher of a paper until it is so known."
Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail—Editor.)

Advice to Beginners.

If you want to be in the front rank as a bee-keeper, you will do well to inform yourself upon all phases of bee-keeping. Some of you make the mistake of thinking, "Oh, that subject, or the other subject connected with bee-keeping, may be well enough for those particularly interested in that direction, but it doesn't come in my line, and I'll not waste reading it." And so you miss reading some of the very things you most need.

"How do I know you don't read everything?" I'll tell you how I know. Nearly every week—well, say once in two weeks—I get a question from some one when that question was answered not two months before. This summer the question that has come oftener than any other is the one referring to swarms absconding after being hived; and many has been the swarmer lost because the loser didn't think he needed to know anything about absconding swarms until he had one of his own abscond.

Now, I don't want to choke you off from asking questions in the least; some of you don't do as much of it as you ought; but I want to suggest that you would be the gainers if you would read up in advance what is written for others.

Not so very long ago I was told, "I suppose you don't read a large portion of what you find in the American Bee Journal." That supposition could not have been wider of the mark. Except what was written by myself, I dare not omit the reading of any word. The short letter from some beginner may say, "I can't afford to pay for the trouble of reading it, and then again one time out of a hundred it may; and I don't know which one out of the hundred may give some hint of value; so the only safe plan is to read the whole hundred." C. C. MILLER.

Swarms Absconding from the Hives.

Can you give any information about bees leaving the hive after hiving them? I have lost about half the swarms this year in that way.

WISCONSIN.

ANSWER.—The absconding of swarms this year seems to be unusual. Doubtless it is on account of the unusual heat. Do all you can to keep your swarmer cool by shading and plenty of ventilation. Raise the hive cover, and for a few days let the hive-cover be partly off.

Painting Barrels for Holding Honey.

Will it do any good to paint alcohol barrels that I intend to use for holding extracted honey?

MINNESOTA.

ANSWER.—I don't know. I doubt if it will pay, and will be glad to be corrected if I am wrong.

She Has Troubles of Her Own.

I winter my bees in a shed, long and narrow with a door in the west end. I pack them in as warm as possible, and open the door on pleasant days. Last winter I put in 10 colonies, part Italians and part blacks. I gave the Italians the warmest places, and near the door where it was almost to the cold I placed a strong black colony. Last spring, on taking them out, the colonies near the door were just overcrowling with bees, both blacks and Italians, while some of the other colonies seemed to have scarcely enough. I kept this up for the winter. One, especially, had a queen and a mere handful of bees. As soon as the weather was favorable I divided the large colony, intending to give the queeness half to the small Italian

The Premiums offered this week are well worth working for. Look at them.
colony, but before I could do it the Italians were all dead. I immediately sent South and got two queens, thinking that, as I had the colony divided, and there were such a lot of bees, it would be a good time to Italianize them. I successfully introduced both queens, but those two colonies have just deserted their hives and do not seem able to hatch out and I would find them crawling around outside of the hives. One queen turned up missing. The other deserted her hive with a handful of bees. Now, where did I make a mistake? and will those combs do to give to the other colonies? Do bees make a practice of going into different hives in winter?

ILLINOIS.

ANSWER.—To be entirely candid, I don’t know enough to say just what mistake you made, or whether indeed you made any. Possibly a fuller knowledge of particulars might help in the diagnosis; possibly not. It is quite likely that the season had something to do with it, especially if you operated somewhat early, for the spring was unusually bad. It happens only too frequently that bees desert their hive and enter another, especially in a bad spring when there is more or less spring dwindling. It will be all right to give the combs to other colonies.

Swarming—Wintering Bees.

1. I started last spring with three colonies of bees, one of which has sent off two nice swarms, another cast one, and the bees issued from the third hive, and returned to the hive without clustering. In how many days thereafter may I expect these swarms to issue again?

2. I have a room in the southeast corner of my house, with one window on the east side, and a door opening into a small, warm hall. Would it make a suitable place in which to winter my bees? If so, ought the window to be darkened, screened in or blinded, and the door closed at the door, as it does not fit very tight? There is no way of warming the room, except by opening the door into the hall, but nothing ever freezes in it unless in the very coldest weather.

New York.

ANSWERS.—1. Hard to tell. It depends altogether on conditions. If the old queen was in the hive, they may come out the next day or so, or they may not issue again till a young queen is matured eight or ten days later. It is possible that the old queen was gone, and the swarm issued with a young queen, returning because the young queen could not fly, or for some other reason, in which case they may come out any time within two or more days, when another young queen is matured. It is also possible that a young queen was present and that the swarm was merely something like an escort for the young queen when she look benefitting-trip, and no further swarming will take place. So the full answer is that there may be no further issue, and that there may be one on any of the following sixteen days.

Building Up Colonies for Winter—Buying Bees.

1. I have an apiary of six colonies. I purchased three large swarms two weeks ago, for $3.00, and hived them in Hubbard hives, and I think they have stored 50 pounds of honey each. I have three others that are not doing so well; they are weak in numbers. How can I build them up for winter? I take the American Bee Journal and think it is a great help; I also have Prof. Cook’s “Bee-Keepers’ Guide.” I am very new in the business, and need all the help I can get.

2. I can purchase colonies of black bees at $1.00 each, or can purchase this year’s swarms in good, standard hives at $3.00 each. Which would be better to purchase, the early swarms at $3.00, or wait till next season and get them at $1.00? I want to go into the business heavy next season.

Virginia.

ANSWERS.—So many things are to be taken into account, that it would almost take a book to tell all the different things it is possible might be done in order that your weak colonies have the very best chance to build up strong for winter. As the most valuable piece of advice in the case, I should say the very first thing is to study carefully your text-book. Then you will be competent to judge what is the best thing to do much better than one who has no opportunity to see the bees. It is quite possible that nothing need be done but to let the bees alone; and that they will of themselves build up strong for winter. See that each has a good laying queen. If you find four to six of the brood-combs mostly filled with worker-comb, it is likely no interference is needed. If you find everything not all right in this respect, it may be that something is wrong with the queen, and that she should be replaced.

The common good combs will tell you that you rightly, you can get colonies in hives now for $3.00, and next year you can get the swarms when they issue, without any hives, for $1.00 each. It is hard to tell which would be best. Possibly a compromise might be good here, and I hope you will number out, and fill out the quota with next year’s swarms.

Pays to Get Fresh Blood—Bee Veils and Gloves.

1. I have a few swarms of bees, the most of which I gave Italian queens, which I purchased from an Iowa breeder last year. They have hived, but I understand you rightly, you can get colonies in hives now for $3.00, and next year you can get the swarms when they issue, without any hives, for $1.00 each. It is hard to tell which would be best. Possibly a compromise might be good here, and I hope you will number out, and fill out the quota with next year’s swarms.

2. I have a veil I made myself that I like the best of any I have seen. I first take a straw hat with medium rim, then I get a piece of common window-screen about eight inches wide and long enough to go around the rim of the hat, and sew the ends together; then sew a piece of cloth over the top a little loose, so the crown of the hat will set up in the cloth; then sew a piece of mosquito net or cheesecloth to the bottom, so that the bees can’t get into the hat, and cut it on and button the coat or vest over the bottom, and it is bee-proof, and will not blow against the face nor tear easily. I find I can see better through it than almost anything else. For gloves I will use my own gloves, and other gloves, and other gloves, and other gloves, and other gloves. Some very long wraps made of thick cloth that will come nearly to the elbows. With this and my bicycle guards on my pants’ legs, I can handle bees with as little fear as if they were chickens.

MINNESOTA.

ANSWERS.—1. Other things being equal, there will be some advantage in getting in fresh blood.

2. If you make much use of a veil you may injure your eyesight by looking through wire-cloth. If I remember correctly, one of the veterans had a very bad time with his eyes ago in that very way. It is better to have a veil that does not require either coat or vest, for bee-keeping is too hot work a good part of the time to wear either.

Biographical.

MR. FRIEDMANN GREINER.

On the first page of this number appears the portrait of Friedmann Greiner, one of the American Bee Journal’s best contributors. His love for insects and insect life manifested itself early in his younger days. As a boy of six or seven he well remembers spending hours and hours at the old bee-kills, his grandfather’s private bee-kills and how he would comb the frames, and later on, the bees, and get them out of the straw-skeps; and what pleasure it afforded him! The school-lessons, and he regrets to say hours, were clean forgotten many a time. Too often did he have to hear the older brothers and sisters and cousins fair hunting for the honey and the bees, and the old bee-kills had been neglected: “Well, Greiner had to take his grandfather’s bees out to pasture; couldn’t attend to his study.”

Mr. Greiner was not all concentrated in bees, but other insects shared likewise. His collections of butterflies, beetles and other animals are the envy of his schoolmates. Many days did he spend in the search of rare caterpillars, which, when captured, were fed daily with such food—leaves, plants, etc.—as comprised their accustomed food. When finally the caterpillar had gotten its growth, spun its cocoon, it was with much anxiety that the forthcoming of the butterfly or moth was awaited. When this happy moment did come, the specimen was treated to ether, thus killed, and then prepared for the collection. He always knew where to find rare specimens of water-beetles, etc.

When his grandfather died, the bees went into other hands, and for years not much thought was given them.
But soon after he arrived on the shores of America, at the age of 20 years, his interest in the little busy worker was rekindled, and developed into a disease known otherwise as "bee-sickness." 

With great enthusiasm he took up the bee-business as his life occupation. Not being sufficiently conversant with the English language, the German bee-literature was studied by him who used it to think as he never thought before, and who never understood the bees. 

He finally decided to stay in New York, where he owns a small farm devoted principally to fruit-growing.

Mr. Greiner's anticipations to become rich through bee-keeping did not materialize, but, loving them, he sticks to them, always having some experiment going, sometimes on a wild-goose chase, sometimes after realities, but the pleasures he secures, he says, are many times greater than the profits.

**The Afterthought.**

The "Old Reliable" seen through New and Unreliable Glasses.

By E. B. HASTY, Sta. B Rural, Toledo, O.

**BEE-KEEPERS' EXCHANGES.**

Sometimes an argument is a sword which cuts both ways whenever it cuts only one way. Mr. C. A. Hatch, in arguing for exchanges, says: "It is only when the soldier ceases to be an individual that the army becomes a power. That sounds conclusive—perhaps is conclusive—but those of us who value our individuality too much to give it up may, as a little thing: The British soldier is more than an individual than the Russian soldier; the American soldier is more an individual than the British soldier; and the Boer soldier is more an individual than the American. We do not consider the mere succession a diminuendo, but the opposite. And is it not true that the individuality of the Boer is the very thing that makes him terrible? Now if the Russian and German armies overdo the business of taking away individual initiative, may it not happen that our bee-keepers' exchange will do the same thing?

**REPUTATION AS A HUMORIST.**

I shall get a reputation as a humorist if the proof-reader keeps on helping me. On page 473, in the place of "500 years" during which the family was to abstain from honey read—something else—probably simply for years. Also inserted of punctured with dead flies read punctuated with dead flies.

**SWEET CLOVER.**

The Wisconsin Farmers' reply about sweet clover, on page 397, seems to me to be, in the main, a calm and reasonable article. Believing it did not detail the good points as much as the bad, I have done. I fear that rejoinders like Mr. A. H. Hatch's were too well calculated to make the great big outside world of mankind think that we are a small group of cranks—cranks incapable of recognizing beans, when the literature of the bag has been done loosened before our eyes. Many years ago I introduced sweet clover into our garden. For most of the time it did practically no harm—that is to say, made me little if any more work than the other plants would, which, in the absence of the sweet clover, would have been claiming the same space. Quite recently it has made itself a big nuisance in the ground occupied by asparagus and winter onions and strawberries. Too tough to hoe out, or chisel out, too strong to pull, and with multiplying powers like the potato bug's. This power gradually to fit itself into new situations is a dangerous one. In my early enthusiasm for sweet clover I sowed some by the roadside (not beyond my father's estate, however) and to the best of my knowledge not one plant from that sowing ever came to bloom. But after a dozen years it began itself to travel out from the garden along the road, and is now abundant for quite a distance.

Dr. Miller and His 70 Years.

And so our beloved Dr. Miller, senior member of the staff, is seventy years old. The burden of declining years is but poorly got rid of by pretty speeches, but we will hope that the labor and Moscow War speak so pathetically much more light on his case than that Power which overshadows and holds all our lives. It turned out so in Moses' own case. Moses probably wrote that Psalm when he was only seven years old, expecting the next ten years to be spent in the desert, with death somewhere near. It turned out that he didn't begin to live on a grand scale until he was eighty, and that he finally died at a hundred and twenty without his eyes being dim. Courage and cheer, O conrade! When on earth shall we be open, and the servants of God ascend and descend upon the Son of Man, you and I shall come from one of the planets of Alpha Centauri, where we have been telling good news (and introducing bees?), and our eyes shall not be dim, and our hands shall not tremble. Pages 401 and 402.

**BREEDING BEES.**

It looks possible, dear "boss," that a cross between poor-looking hybrids and five-banders might result in three-banded bees—to the confusion of the purity rule. Let's not be too sure of it, however, or we might have seen it. From what we know of crossing, and its relations to sporting, we would be much more likely to get a colony of all stripes and colors from five bands to none—no evenness in anything. Page 403.

**HOW TO "SPOT" DRONE-COMBS.**

Red spot painted on the bar right over a patch of drone-comb. Thanks, Mr. Doolittle. Those who wish to do the utmost in the line of controlling drones will do well to take heed. Page 403.

**The Home Circle.**

Conducted by Prof. A. J. Cook, Claremont, Calif.

**RECREATION.**

If the various home circles could now (July 17), look in upon me and mine at this delightful vacation time, no one would wonder at my theme which I bring into the homes to-day. Where are you? Away up in the mountains. If we could only recognize, let us from time to time, that we read daily of the terrible heat in all the Eastern cities, I am writing this early morning with my heavy winter overcoat about me, and half wishing it were warmer. While our friends in California are moving around as the rain comes not, our tent is pitched close by a rapid mountain stream, whose waters, fed by the snows hard by, are as cold as they are pure and refreshing. As we lie in our beds, the rippling waters, as they dance over the rocks, sing to us all the night long. This glorious scene soothes our inflammable souls. Here we have fixed our vacation sojourn, so that they hem us in, and we are really on an island. The little valley in which our rest-days are flying so rapidly by, that we sigh that the end will come so soon, are so heavily wooded that both shade and seclusion are ever awaiting those who wish to enjoy them. The great mountains, which shut us in on all sides, are also heavily wooded, and we rejoice constantly in the soft, green landscapes which holds us in its embrace. Northwest of us is "Old Baldy," which reaches nearly 11,000 feet skyward. Its snowy summit is only sixteen miles away, and tomorrow our party of eighteen are to scale its heights. It is a cool, delightful, restful place. I think I have before mentioned our Southern California blessings in these home papers. The marvelous scenery everywhere; high mountains, grand as beautiful; lovely valleys verdant with alfalfa fields, and ripe-leafed with beautifully kept orchards; delightful fields, with no sunstroke, but which hands forth warmth and sunshine every week the year through; delicious water that comes pure and sparkling right from the mountain rocks. If typhoid germs use it, it is not so clear that we fail to look bright on our Southern California homes, it will speak of gross neglect or carelessness in the homes that are shadowed; most luscious fruits, our party right from our own orchards and gardens bring for our refreshing—strawberries, lemons, pomelos, plums, apricots, apples, peaches, and I might have added strawberries, blackberries, raspberries and nectarines. And all these
so sweet and delicious that they nearly melt in the mouth: and, as I usually say, best of all, a grand, true, splendid citizen-ship. Doubtless God might have made a better people than sojourners in our beloved sun-kissed California, but doubtless God never did.

This usually completes my summary, but I desire to add another. Almost all our Southern California homes are so close by sea and mountain that either are within a day's journey by horse, or a few hours by cars. Thus, if heat does come, we can flee its presence, and bathe in the clear, pure delightful mountain air, or the warm, refreshing water of the ever restless Pacific. This is no mean advantage. How many hundreds of homes and hearts have been recently seduced in the East, as drought, hurried on by the crushing heat, has snatched the loved ones, forever away. Here such crises never come to menace, for at the seashore, or in the mountains, we are safe—always safe—from their evil work. I hardly know which I enjoy most, the wondrous air of the mountains, or the hushing breeze and bracing waters of the ocean. When here, I think the mountains hold forth superior charm; when there, the sea seems to offer most that enamors, and invigorates. Either is delightful, and we rejoice with fervent thanksgiving that we can taste so easily and often of both.

Do we in all our home circles think enough of recreation? We are a very earnest people. So intense are we in our business that I fear we often lose sight of the good that may come from the picnic, the camping out, the mountain sojourn, or the weeks by the seashore. We are so fashioned, that the wheels of our human machinery run more smoothly, and will of a surety run longer, if we tend them ever and anon in different grooves. Just as the stomach wakes to greater strength and added energy when given a variety to work upon, so the whole body craves new scenery, new activities, a halt in the everyday round, and a push into work or play that recreates, because new and fresh.

Let us all, in every home circle, plan as best we may to find time to break from the usual routine of work and duty, and in some forest, or by some lakeside, alone, or better, with other families, seek out a different life, and thus make the young younger, and carry youth into old age. And more than this, we will find that we will come back to the usual duties with so much of added strength and vigor that oftentimes we shall soon more than make up for the days of absence, as we will easily do more and better work.

In planning our outing, let us not only arrange for pleasant friends, and wholesome fellowship, but plan for games, music, and reading. Last night we met with many other campers, and had a splendid concert. A piano had in some way reached this retreat, and we did sing with genuine spirit. I heard more than one say as we said our adieux, "It has been the pleasantest time since we came." For the children, Captain Jack, and all the work and no play, and endeavor to make the too just criticism of our English friends—that we think too little of rest, recreation and a good time—less true.

**THOUGHTFULNESS.**

There are few things that will reveal character like a few weeks' camping. We soon find that some of our party are so thoughtful, so helpful, that we could not have spared them. They are always just where needed; they are ever planning, and successfully, to make all more happy. They are so handy in fashioning the conveniences about the camp, so fertile in preparing meals, so handy in keeping all neat and tidy, that they really are like "a thing of beauty." Were I a young man or woman, and in pursuit of information regarding the character and temperament of some special person of the opposite sex, I should arrange to be for a month in a camping party with them.

**"The Hum of the Bees" in the Apple-Tree Bloom** is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at $1.00.

Please send us Names of Bee-keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

**Our Wood Binder** (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of $1.00 for your Bee Journal subscription a full year in advance, we will mail you a Wood Binder free—if you will mention it.

---

**DESKS FOR GENTLEMEN AND LADIES!**

**THESE DESKS** are made of quarter-sawn oak, first-class finish, well put together, and will please every purchaser. They are an ornament to any home, as well as being a useful necessity. Would make a FINE GIFT for father, mother or sister.

**The Combination Desk**

**and Book-Case**

is just the thing for a farmer or business man of any kind, to keep his private papers in, and for his books, etc. The drawers have locks, and there are a number of pigeon-holes inside each of the desks shown herewith.

The low prices quoted are f.o.b. Chicago. Send for free catalog. Address,

**The Royal Star Combination Game-Board Co.**

773 to 779 Carroll Ave., CHICAGO, ILL.

**Ladies' Desk.**

Size, 40 in. high, 25 in. wide, 15% in. deep.

**Combined Desk and Book-Case**

Size, 66 in. high, 36 in. wide.

**Price,** $13.75.

(The above firm is entirely reliable.—EDITOR.)

**Please mention the Bee Journal.**

Aug. 8, 1901.
ADVERTISEMENT.

To Our Shippers:

We were obliged to notify you a few weeks ago that one Joseph M. McCaul had leased our old quarters at Nos. 120-122 West Broadway, New York City, and had there started up business under the name "Hildreth, McCaul Co.," and had distributed a multitude of circulars so worded as to create the impression that his business was a successor to or a branch of the business of Hildreth & Segelken.

For the protection of our shippers and ourselves, we at once instructed our attorney to commence action to enjoin the said McCaul from using the name HILDRETH in any manner whatsoever in connection with his business. On the 10th day of July, 1901, Hon. David McAdam, Justice of the Supreme Court of the State of New York, after a full argument upon the merits, issued a peremptory injunction, of which the following is an extract:

"And it appearing that the plaintiffs have for a long time been and now are carrying on business under the style of 'Hildreth & Segelken,' and that the defendant has recently opened a business at 120-122 West Broadway, in the Borough of Manhattan, City of New York, and is carrying on the same under the style of 'Hildreth, McCaul Co.,' and that such act is in violation of the plaintiffs' rights, and that the commission or continuance thereof, during the pendency of this action will produce irreparable injury to the plaintiffs; it is

ORDERED that the defendant (Joseph M. McCaul) and each of his agents, servants and employees and all other persons acting under his authority and direction be, and he and they are hereby restrained and enjoined from showing, displaying or otherwise using during the pendency of this action in or upon any papers, devices, sign or signs, or otherwise, in the business conducted by the defendant at No. 120-122 West Broadway, in the Borough of Manhattan, City of New York, or elsewhere the name of "Hildreth" separately or conjunctively with any other name, designation or description."

Outside of our desire in our own interests to protect the name which we have built by years of satisfactory dealings with our customers, we hastened to procure this injunction as soon as possible, to prevent our shippers from being misled into sending their goods to one who would make an attempt to gain their trade by such a trick and device.

With thanks for the many expressions of good-will we have received from our shippers concerning this attempt to trade under our name, we are,

Sincerely yours,

HILDRETH & SEGELKEN,
265-267 Greenwich Street, NEW YORK, N. Y.
DO YOU WANT A HIGH GRADE OF
Italian Bees and Queens?

2-frame Nucleus with Untested Queen, $2.00, purchaser paying express charges.

Naperville, Ill., May 28, 1911.

DEAR SIR:—Bees and queens in good condition. Transferred them to hive and gave them honey, which they are doing. Are working when not too cold. Have right color, and are satisfactory.

E. B. GIVENS.

I like your way of packing bees to express.

E. K. MEREDITH, Batavia, Ill.

Dear Sir:—I have 1000 sections from this flow, and at this date about one-half has been sold right at home.

B. R. MCDANIEL.

Tt

Best Honey-Year—Swarming.

This is the best honey-year we have bad in northern New York for three years. There is lots of white clover and basswood. It has been necessary to go out and stop swarms several times. When I returned them, the second night, they would come out again, so I lift up the back part of the hive and run them in that way, and they almost always stay. I have not had a swarm come out when put back in that way.


R. V. Goss.

A Fine Honey-Flow.

My bees were just able to make a living up to June 28; since then we have had a fine honey- year, with raspberries and saucin. I will have 1000 sections from this flow, and at this date about one-half has been sold right at home.

B. R. MCDANIEL.

Athens Co., Ohio, July 22.

Bees Carrying Eggs Down.

Is this anything new? Two weeks ago I noticed a colony of my bees, which had swarmed in the spring, had failed to provide themselves a queen, so, as they had a super on, I experimented by catching a comb of brood from a square inch containing eggs from another colony, and grafting it in one of the sections in the hive. The bees never seemed to care. The following day I looked at the job, and the eggs were gone. To-day I looked among the brood-floors and found not a single egg of brood about an inch square, and a queen-cell nearly ready to hatch. Clear ease of carrying brood (or eggs) down, isn’t it?


R. V. Goss.

Very Dry in Indian Territory.

The bees here in Cherokee Nation are doing nothing on account of dry weather. Out of ten colonies in spring, I only got one swarm. The bees loaf and cover the hives. I have raised the hives an inch from the bottom-board. If cotton-bloom has any honey there ought to be great quantities of surplus, as no swarming has made them very strong. So far this season we have had little rain and nothing to gather. If the cotton proves a failure, not half the bees will have enough to winter on.

The hives are in their natural condition. The fruit barns or takes on the trees; corn and grass look as if a heavy frost had struck them. We have had three periods of rain, and none since, like in October. The oldest people living never knew the rivers and streams so low, and many of the rivers dry up, and then burning great bonfires and burning the grass and big drifts on the rivers, for rain. All over the Indian country there is almost a total failure of crops, and unless it rains in a very short time corn and grass will burn up.

C. B. SLAUGHTER.

Cherokee Nation, Ind., Ter., July 13.

A Report from Arizona.

On page 435 we read what Editor Root says about the heat of Arizona, which probably is true, but we have found in our experience that there is still 50 degrees difference in the effect of the heat between a damp and a dry atmosphere. All our figures are the result of our observation of the weather conditions in various parts of the country and northern States, if you wrap a thermometer with a damp cloth it will show the same temperature, but if you drop 50 degrees. I am now making butter by keeping the milk in a cupboard out, with a tank full of water in the next room and wire a fan to run on all sides; the air passing through the damp cloth lowers the temperature.

I have been running the extractor con-
Harvest Rich, But Short.

The honey harvest has been rich, but rather short. At the beginning of the wildflower bloom the weather was cool and wet, and the flowers did not yield much nectar, but after a while it turned warm, and the bees made up for lost time. With the yield of honey the bees commenced to swarm. I have not had many which swarmed a long time, but have several large colonies, where two prime swarms went together. I put two of them on scales, and kept a record for several days. One was hived June 18 on empty combs in a 10-frame Langstroth hive, with two upper stories filled with nine combs each. The morning of June 19 they weighed 91 pounds; June 20, 86, the day being cloudy and showery; June 27, 92, and were 91 pounds; June 22, 12%, pounds; June 23, 15% pounds.

The other was hived on empty frames with two surplus cases of 32-pound sections each, filled with comb foundation; weight on the morning of June 22, 111 pounds; was not 28 colonies to start with, but there was enough honey in the fields for 200 colonies to have done equally well. Last year I had 15 colonies, and it was all they could do to produce a half of the amount we get now. Since the close of the white clover harvest the bees have been working some on red clover, but not the long legged, but also the short-tangle, the banded and striped, hybrids, and other bees. In fact, bees will work on any sweet, red clover in this part of the country for a few days in the year, if they have the right kind of weather.

Ref. Editor, If we stretch the bees tongues is there, no danger that we may shorten their stings. I have a swarm of extremely hot and dry bees present, the thermometer ranging here from 100 to 108 degrees in the shade. My bees are exposed to all the rays of the sun; there are no buildings or trees near them. If the weather is dry and the swarm weather they usually hang out, but this is too much for them, and during the heat of the day they will go into the hive to cool; the bees come out again as the day draws to a close. How they keep the combs from melting down is more than I can understand, for honey is packed white, are set on posts about 4 inches high, and the grass and weeds are kept down with a lawn-mower. The flowers of my hives are the old style 7½-inch, telescoped caps, resting on elets like the Dahlart hive.

We will mail one of the above queens alone for 75 cents or 3 for $2.00.

Please do not conflict the above offer

We will mail you one of the above queens for $1.00, and

25 cents, we will mail you free an Untested Red Clover Italian Queen. For sending us one new subscriber at $1.00, and

25 cents, we will mail you free an Untested Red Clover Italian Queen.

GEORGE W. YORK & CO.
144 & 146 Erie St. CHICAGO, ILL.

Steel Wheels
Staggered Oval Spokes.
BUY A SET TO FIT YOUR NEW OR OLD WAGON
CHEAPEST AND BEST
way to get a low wagon. Any size wheel, any finish, tone, color, FREE.
Electric Wheel Co., box 16 Quincy, Ill.

Please mention Bee Journal when writing.

Northern Italian Queens !

Our stock is so carefully bee selected, as to secure car loads of honey. Locality free from all turfs or of any other kind. We have the following new years selection of the above:

1 untested Queen, $10.00, $5.00; 2 untasted Queen, $15.00, $7.50, best imported Queens, $8.00.

AD. A. PICKARD,
RICHLAND CENTER, WIS.
Please mention Bee Journal when writing.
FREE FOR A MONTH...

If you are interested in Bees in any way you cannot afford to be without the best Sheep Paper published in the United States.

WOOL MARKETS and SHEEP, CHICAGO, ILL.

FREE for a month.

If you are interested in sheep in any way you cannot afford to be without the best Sheep Paper published in the United States.

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THE FINEST IN THE WORLD.
Our New 1901 Fifty-Two Page Catalog Ready.
Send for a copy. It is free.
G. B. LEWIS COMPANY, Watertown, Wis., U.S.A.
Branch, G. B. Lewis Co., 19 S. Alabama St., Indianapolis, Ind.
Excellent shipping facilities and very low freight rates for Southern and Eastern territories.
Please mention Bee Journal when writing.

25 cents Cash paid for Beeswax.
This is a good time to send in your Beeswax. We are paying 25 cents a pound—CASH—for best yellow, upon its receipt, or 27 cents in trade. Impure wax not taken at any price.
Address as follows, very plainly,

GEORGE W. YORK & CO., 144 & 146 Eric St., Chicago, Ill.

California! If you care to know of its Fruits, Flowers, Climate or Resources, send for sample copy of California's Favorite Paper—
The Pacific Rural Press,
The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

PACIFIC RURAL PRESS,
320 Market Street, - SAN FRANCISCO, CAL.

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Marshfield Manufacturing Company.
Our Specialty is making SECTIONS, and they are the best in the market.
Wisconsin BASSWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free illustrated catalog and price-list.

820 Marshfield Manufacturing Co., Marshfield, Wis.
Please mention Bee Journal when writing.

A HANDY TOOL-HOLDER!
Sent by Express, for $1.50; or with the Bee Journal one year—both for $2.00.

Every Manufacturer, Miller, Carpenter, Cabinet Maker, Machinist, Wheelwright and Quarrystone Farmer, or any one using a grind-stone, should have one of these Tool-Holders.

One boy can do the work of two persons, and grind much faster, easier, and with perfect accuracy. Will hold any kind of tool, from the smallest chisel to a draw shave or ax. Extra attachment for sharpening seylo blades included in the above price. The work is done without wetting the hands or soiling the clothes, as the water flows from the operator. It can be attached to any grind stone, or place of power, is always ready for use, nothing to get out of order, and is absolutely worth 100 times its cost.

No farm is well-equipped unless it has a Tool-Holder. Pays for itself in a short time. 

How to Use the Holder.

DIRECTIONS.—The Tool is fastened securely in the Holder by a screw, which can be ground to any desired level by inserting the arm of the Holder into a higher or lower notch of the standard. While turning the crank with the right hand, the left hand on a steady the Holder; the Tool is moved to the right or left across the stone, or examined while grinding, as readily and in the same way as if held in the hands.

For grinding Round - Edge Tools, the holes in the standard are used instead of the sockets.

Why not get out a few of these splints, and give it a trial? We are convinced that they will meet with your approval.

Artificial Swarms.
The editor of the Rocky Mountain Bee Journal says:
The method we use and prefer is to place a new hive filled with foundation starters on the old stand; shake off about seven-eighths of the bees, including the queen; put on a super of sections filled with full sheets of foundation. If honey combs are put in the super, they will at once enter the super and work there clear through to the end of the flow. A queen-excluder should be put between the super and the brood-chamber. The old hive containing the brood and remaining bees should be placed in a new stand and given a nucelle or laying queen. By this plan we get a hiving colony composed of all the field-bees and a large force of nurse-bees and comb-builders. If the division is made at the beginning of the flow, the old colony will hatch out bees to be supplied to bees in the hive in time to keep the hives crowded with bees in order to secure a good yield of section honey.

"You are not the first one to ask such a question, Mr. Brown, for this is something bee-keepers have been doing during the past quarter of a century. If the aphislas has done what he could to get his hives full of brood at the proper time, then it is likely that bees available in time for the honey harvest—hives over-flowing with bees, as you say yours are now—and are in condition to be swarmed, the bees should be done before the height of the season arrives."

"But I suppose you did not allow your bees to swarm, for I am told, no large amount of section honey can be obtained if we let our bees swarm."

"In this you err, for the swarm and parent colony, if rightly managed, will do fully as much with the average bee-keeper, when only one is allowed, as could not have been done were not allowed to swarm; and, besides, if we tried to keep them together by cutting out queen-cells, the swarms are probably in the room, etc., we would, as a rule, only delay swarming; so it would come during the last half of the honey harvest, when it would be the most detrimental to our interests."
section-boxes being put from one of the old colonies containing the alter-swarms. Then this old colony is put on a new stand, and the hive containing the two swarms. The bees, thus given the field-keeps from this colony, in addition to the two swarms, which makes a colony which will have been brought out of its normal harvest, a colony from which I take 100, 150, and even 200 one-pound sections of the choice of honey, according as the season will prove.

" But what about the queens? Do you let both swarms make new queens?" "No. The queens, having their wings clipped, give me the power of disposing of them as I think best, and so I let the queen go back with both swarms. I put on a new stand, and allow the one from the colony not moved to go with the united swarms. But this is not an old colony, for 80 percent of the bee-hive, but also all of its field-keeps, so that poor that the queen-cells are torn down, and we get the field-keeps of this colony soon picks up from the multitudinous emerging brood, so that it often will go on after the queen is killed.

"But will there not be alter-swarms from the other parent colony?" "Yes. The tendency is that the queen for the doubting swarms is not disturbed in eight days, at which time the first young queen will have emerged, which will be, of course, should be opened and all queen-cells destroyed, which will entirely prevent any attempt at a queen from this colony."

"But if all have not swarmed up to within a day or two of the opening of the harvest, what do you do with them—keep on using two queens?"

"No. All that have not swarmed at the commencement of the honey harvest, I consider as of no account. A hive is filled with frames of empty combs, or those partially or wholly full of honey, and up to this period of the year, the combs which have not swarmed, and all the sections are taken off and placed thereon; then all the bees are smothered off and put into a room of brood and honey in front of this prepared hive. Thus we have the bees, partly filled, and make them ready for business at once. Previous to this a few nuclei should have been started, so that we may have the need into the sections in a very few days. The removed colony has simply taken the old or field bees, so as to stop the swarming."

Winter Problem in Bee-keeping—Dr. R. P. Pierce—Result of 25 years' experience. 30 cts.

Foul Brood Treatment, By Prof. F. R. Chevalier—The germ and prevention. Price, 10 cts.


Our Poultry Doctor, or Health in the Poultry Yard and How to Cure Sick Fowls, by Fanny Fuller—The description of the most common diseases and their Cure. 64 pages. Price, 20 cents.


HONEY AND BEESWAX

MARKET QUOTATIONS.

Chicago, July 18.—Choice white comb honey is $1.00 per lb., light amber, $1.25; dark, $1.75; with good demand. R. A. Burnett & Co.

CINCINNATI, May 17.—No demand for comb honey, also stock of it well exhausted. Extracted, 25 cents. B. H. Wetter.

BOSTON, June 29.—There is practically no comb honey available and owing to warm weather very little call for same new comb early next month. Market for extracted, at 60 cents.

BLAKE, SCOTT & LHR.

OMAHA, May 1.—Comb honey, extra white, 24-frame cases, per c., $3.00; No. 1, $3.25; amber, 250 gr. per c., $2.25.

NEW YORK, July 8.—Our market is practically bare of comb honey, and demand good for white comb. Stocky sells readily at 15c.; No. 1 white at 16c. Dark. Sold out. Extracted not in much demand, with plenty of stock on hand. White, 60c.; dark, 75c.; amber, 55c.; dark, 45c.; beeswax at 25c.

HILDEBR. & SCHR.EL.

ALABAMA, June 17.—Honey market is dry. Market for comb honey, 15c. to 20c. per lb. M. H. Hunt & Son.

BUFFALO, July 10.—No demand for honey yet unless a very small amount of fancy white at perhaps 151/2c. Some old 10c. Artf. expect salable, almost, at 6, and 10 cents. Bee~wax, 22c. & c.

BATTNER & CO.

KANSAS CITY, June 14.—Very little old honey on the market by reason of the heavy new granulated. Sales are light at 15c cents for best grades. Missouri, 10c. Bee~wax firm at 28c. & c.

W. K. CROMWELL PRODUC Co.

SAN FRANCISCO, June 14—White comb, 111 12 cents; amber, 90 15 cents; dark, 66 15 cents. Extracted, white, 5c.; dark, 10c.; amber, 40-45c.; beeswax, 35-40c. Bee~wax market shows no material improvement, but there are two large lots of catgut to be sold and prices generally named by dealers. In a small way, especially, it is desirable quantities, and higher prices than are quoted are being realized.

1901—Bee-Keepers' Supplies!

We can furnish you with The A. R. Root Co.'s goods at wholesale or retail at their prices. We can save you freight, and ship promptly. Market price paid for beeswax. Send for our latest catalog.
AMERICAN BEE JOURNAL
Aug. 8, 1901.

We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR
Hives, Extractors
OR ANYTHING YOU WANT IN THE BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything and cost no more than other makes. New Catalog and copy of THE AMERICAN BEE-KEEPER free. Address,
The W. T. Falconer Mfg. Co., Jamestown, N. Y.

River Forest Apiaries! FILL ALL ORDERS
By Return Mail.
Italian Queens Warranted
Untested, 75 cents; Tested, $1.00; Select Tested, $1.50. Half dozen or larger lots as may be agreed on. Address,
River Forest Apiaries,
River Forest, Oak Park Post-Office, Cook Co., Ill.

Please mention Bee Journal when writing.

SWEET CLOVER
And Several Other Clover Seeds.
We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

<table>
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<th>Seed Type</th>
<th>Price</th>
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<tr>
<td>Sweet Clover (white)</td>
<td>$2.50</td>
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<tr>
<td>Sweet Clover (yellow)</td>
<td>$3.00</td>
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<td>Alsike Clover</td>
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<tr>
<td>Alfalfa Clover</td>
<td>$3.00</td>
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Prices subject to market changes.

To say to the readers of the Bee Journal, that
DOOLITTLE... has concluded to sell QUEENS in their season during 1901, at the following prices:

<table>
<thead>
<tr>
<th>Queen Type</th>
<th>Price</th>
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<tr>
<td>1 Untested Queen</td>
<td>$0.00</td>
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<tr>
<td>3 Untested Queens</td>
<td>2.25</td>
</tr>
<tr>
<td>1 Tested Queen</td>
<td>1.25</td>
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<tr>
<td>3 Tested Queens</td>
<td>5.00</td>
</tr>
<tr>
<td>1 selected tested queen</td>
<td>1.50</td>
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<tr>
<td>3 &quot; Queens</td>
<td>4.00</td>
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Extra selected breeding, the very best...$5.00

Circular free, giving particulars regarding each class of Queens, conditions, etc. Address,
G. M. DOOLITTLE,
Bordino, Onondaga Co., N. Y.

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24th Year Dadant's Foundation. 24th Year

We guarantee satisfaction. ** Why does it sell so well? **
What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAVING, No LOSS.
PATENT WEED-PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.
Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.25, by mail.

Beeswax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

Please mention Bee Journal when writing.

More Bee-Keepers' Paradies....

E. R. Root has just returned from a 6,000-mile trip through some of the best bee-locations in the world, and has already begun his series of write-ups, accompanied with fine photos, in Gleanings in Bee-Culture. The following editorial appears Aug. 1, and will give something of an idea of what he will describe:

Some little time ago I promised to tell about the bee-keepers' paradise in Texas. I have this on the docket, and it will appear as I take up the line of my travels. But since running across that paradise I have run into two or three others. There is one west of the Rockies, in Colorado, that is not yet overstocked with bees or bee-keepers; another one in Central Idaho—in fact, I do not know but the whole State. These will be described in turn. The fact is, millions of capital is being invested in irrigation; irrigation means alfalfa; alfalfa means a paradise for bees. But I found all along my trip that alfalfa-growing preceded beekeeping by two or three years, for it seems to take about that length of time before beekeepers find these gold-mines that have been hitherto unoccupied.

If you are dissatisfied with your present location, and for financial reasons, or on account of health, will be compelled to leave, subscribe for Gleanings in Bee-Culture, and learn something about the great South and the great West. There are many locations in the West that are not yet occupied—splendid bee-locations. If you wish to learn about them, send 25 cents for a six-months' trial subscription, or $1.00 for one year and one untested Italian queen. Or, send $2.00 and we will send Gleanings one year and one of our celebrated Red Clover Queens.

THE A. I. ROOT CO., Medina, Ohio.

[1884]

George W. York & Co. 144 & 146 Erie Street, Chicago, Ill.

are headquarters for Root's Bee-Keepers' Supplies in Chicago. Send to them for their free Catalog.
APIARY OF H. W. CORNELISON, WASEBURY CO., WIS.
(See next page.)
Weekly Budget.

HON. EUGENE SNEOR, of Winnelago Co.,

Iowa, writes as July 25, said:

FRIEND YORK,—The past month has been unprecedentedly hot and dry. Bees leaving outside the hive to prevent combs melting.

The following lines express part of what we have endured in the last two weeks:

* * *

SOMETHING IN THE AIR:

From out the burning east Comes fiery Sol:

At God's first call He climbs the heavens to feast On wilding corn and ripened grain.

Turned yellow ere its time for lack of rain.

The rolling cattle seek The airy steep.

Or feel deep In nearest friendly creek:

The pastures, shorn and parched to brown,

In vain appeal for the rain to come down.

The hot earth shrivels and cracks Beneath the glare.

And men shun care As deer shun hunters' tracks.

And every bee to hell Is praying in animal language for rain.

Outside the hive the bees Are forced to rest

To cool the nest,

And wait for beneficial trees

And flowers to yield the diurnal drop Which heat and drought have caused to dry up.

No woodland song is heard From feathered throat—

Termed cloistered

Is dead within the bird;

He pants and seeks the spring in vain—

The fountain itself is thirsty for rain.

Thus wears the torrid day,

The round, red sun

Has course run

And no man bids him stay.

For night is welcome since within

Such days will never bring the longed-for rain.

EUGENE SNEOR.

* * *

MR. ELLIS E. MASON and Miss Anna E. Hirth, both of Toledo, Ohio, were married July 24, 1901. Mr. Mason is a son of Dr. A. B. Mason, secretary of the National Bee-keepers' Association.

May long life and much happiness be theirs.

HON. H. W. CORNELISSEN, of Washburn Co., Wis., has a very nice apiary as is shown on the first page. The picture taken from the northeast corner of the apiary looking to the southwest. The bees are located against the hills, and the ground being rough Mr. C. has elevated some of the hives in order to level up and avoid washing by heavy rains. The row of posts in the middle of the hives were used to support poultry-netting. The trees in sight are butternuts, and his bee-supply house is at the right, obscured by the trees. The hill sloping to the north affords protection from strong south and southwest winds, and a tight board-fence extends along the north side of the apiary.

Mr. Cornelissen calls it "Summit Apiary," as the town is situated on one of the highest points in the State. The lake on the shore of which the village is located is called "Summit Lake," it is about 3 by 4 miles in size.

"THE HOME CIRCLE."—A. I. Root quotes approvingly a passage written for "The Home Circle" of this journal, and says:

"There is one special point in the above that is worth noting. In any contest requiring the fullest development, both of nerves and muscles, and especially alertness as well as strength, the young man who does not use tobacco will, as a rule, come out ahead: expert cyclists learned this a long time ago; and in every department of business where a clear head and a cool, ripe judgment are required, the boy or man who lets stimulants alone has the advantage. Long live 'The Home Circle' in the American Bee Journal; and may Prof. Cook be spared for many years to conduct it."

MRS. JUDGE E. G. BRADFORD, of Newcastle Co., Del., is making quite a success of bee-keeping. A local newspaper, dated Aug. 2, says she has an apiary of 20 colonies, and that from one colony she took 140 pounds of honey recently. The other colonies were also in good condition, and promised an equally fine yield. Continued success to the "Mrs. Judge."

Mr. A. I. Root, no doubt to the delight of his old friends, perhaps forced into it by the absence of his son Ernest, has been giving considerable attention to the columns of our journal, and he has been of especial interest as a result to the subject of bee-keeping. He seems to be especially interested in the great difference in bees, and wants the experimenter stations to tell us whether 40,000 bees in one hive gather more honey than 40,000 bees in another hive. If he will cabbages and posies alone long enough to give continued attention to bees, he will probably find there is as much difference in them as in folks.

THE NATIONAL ABBEY of bee-keepers is still growing in membership. Since our last report we have received the following names, and one dollar each:

JOHN SCHAFMAN, JAS. PONDHEIER, H. H. MOE, E. M. BRANDENBURG, W. W. WESTOTT.

General Manager Secor, in a letter dated Aug. 1, says that the Association membership list "will crowd 1000 before September." That's good. Now, if only a lot more bee-keepers would feel sufficient interest to send in their dollars for dues, we would be glad to announce their names in this column.

We started out to get 200 members before the first of July, but found that the Association membership list "will crowd 1000 before September." That's good. Now, if only a lot more bee-keepers would feel sufficient interest to send in their dollars for dues, we would be glad to announce their names in this column.

The pictures shown herewith is a reproduction of a motto queen-button that we are furnishing to beekeepers. It has a pin on the underside to fasten it.
Shipping Comb Honey.—As the list of readers of the American Bee Journal is constantly increasing by the addition of new and inexperienced beekeepers, it seems almost necessary to mention some things at least annually. One of the "things" is that of preparing comb honey for shipment.

All comb honey should be put up (see think) either in 12 or 24 pound single-tier cases, the former showing three sections through the 3-inch glass front, and the latter showing four. After placing the sections in the cases with a follower back of the last row, and newspaper crowded in back of the follower, to act as a cushion, then put a dozen of the 12-pound cases or nine of the 24-pound, into a large crate. First, however, there should be several inches of straw put in the bottom of the crate to act as springs or cushion under the cases of honey, to insure safe handling.

It is best, also, to have say 13x1 inch boards nailed edgewise along the top of each side of the crate, and extending six or eight inches beyond the ends, to be used as handles by two men to enable them to carry it between them when loading or unloading.

Some firms send out the following directions to shippers of honey:

1. Put your name on the crate. No name on crate.
2. Put a caution card on each crate.
3. Put the gross weight, tare, and net weight on the front of glass side of each case before packing the honey in crates.
4. Put the total weight of all cases on the upper side of the crate, so this can be found without opening the crate.
5. Mark each case with the grade.
6. Mark each crate with the grade.
7. Put only one grade in a case.
8. Put only one grade in a crate, if possible.

Comb honey put up as above, should go safely anywhere with almost any kind of handling. It pays to prepare it properly, for it profits the bee-keeper nothing to produce a lot of nice comb honey and then have it broken and smashed in shipping, on account of careless or inadequate preparation for safe transportation.

The Building of Drone-Comb.—The editor of the Bee-Keeper's Review despairs thanks for calling attention to an error in these columns which should not have occurred. He says:

Drone-comb is seldom built by a newly-hived swarm for the purpose of rearing drones. As a rule, such comb is used for store-comb the first season. I mention this as I see an editorial in the American Bee Journal in which one objection urged against the use of starters in the brood-nest is that drone-comb is built, and, "as fast as it is built it will be more filled with or less drone-brood—generally more—and that brood is a waste." If frames furnished with starters are placed in the brood-nest of a colony just before it is ready to swarm, these frames will almost surely be filled with drone-comb, and the cells filled with drone-brood; but when a swarm is hived upon, starters, no drone-comb will be built so long as the queen keeps pace with the comb-builders; but let the queen get behind, or go back to fill the cells from which the bees are hatching in the center of the brood-nest, and comb is then built to store honey in, it is quite likely to be store or drone comb; but it is very seldom that it will be filled with drone-brood at the time that it is built. By sorting over the combs in the fall the drone-comb can be taken out and used after that in the sapers. Contrary to the belief of some, I believe that, under such conditions, combs are built at a profit even if they are to be melted into wax.

Mr. Hutchinson is quite right in saying that drone-comb when built by a swarm will not at once be filled with brood. The question, aside from that, whether it is advisable to allow such comb to be built, afterward to be cut out by the bee-keeper, is an open one. For one who has plenty of time for the work, and who will do it, the plan may be all right. It should be understood that it is possible to have all combs worker-combs without the use of founders. In some cases this may be said, but in exceptional cases where labor and time are in so much greater supply than money to buy foundation that it may be economy to dispense with the latter. Given a lot of combs containing patches of drone-comb of greater or less size, it is certainly paying work to cut out all the drone-comb and replace it with patches of worker-comb. It is well, however, even for one who thinks it advisable to dispense with foundation to take some pains to limit the amount of drone-comb built. It is usually practicable to do this by taking advantage of the fact that Mr. Hutchinson mentions, that soon as the laying of the queen in a swarm keeps pace with the building of comb there will be no drone-comb. Hive a swarm on four or five frames, and little or no drone-comb will be built until these are filled. Then foundation or drawn combs may be given to fill the hive, or, if only starters, the drone-comb will be limited to these latter combs.

It is well to know, also, that nuclei or weak colonies may be depended upon almost entirely to fill in holes with worker-comb, whereas if a patch of drone-comb is cut out of a broadcomb, and the comb returned to a full colony, the hole will be most likely to be filled again with drone-comb. The age of the queen makes a difference, the older the queen the greater the inclination to build drone-comb, even a very weak colony with an old queen sometimes insisting on building drone-comb.

But when all the trouble and inconvenience of mending combs are taken into account, the number is very large to those who think it cheaper in the long run to forestall the actions of the bees by filling the frames with worker foundation.

Utilizing Cappings.—Efforts have been made at different times to get bees to use wax in building combs, the wax being furnished by the bee-keeper. Success has not always attended the efforts. E. Puffy now reports in the French journal, Revue Internationale, that he has had excellent success. He gives back cappings to the bees. The secret of getting the bees to use them lies in the technique between the layers of the cappings. It is essential that the cappings be not washed. Taken just as they come from the uncapping knife, they are packed into a ball from the size of a walnut to the size of one's head, and put in the hive beside the feeder. Combs are then built out rapidly.

The Honey Crop of 1901.—Editor Root has been scanning the field, and concludes that beekeepers need be in haste to dispose of their crop for fear of glut. Even if the season were better than last year, there were fewer bees to gather it this year, especially in Southern California, where probably three-fourths of the bees have died through neglect or starvation, their discouraged owners thinking they could not afford to continue feeding them year after year. Elsewhere in general there is a falling off in bees, and he thinks prices should not fall below those of last season.

A significant fact is that the A. 1. Root Co., which is one of the largest buyers of honey in small lots, has had no more honey offered this year than last. The well-informed beekeeper will be in no hurry to sell his honey for less than it is worth. Editor Root says:

Let me give one interesting fact in this connection. The Root Co, finds it can buy honey, from those who do not read bee-journals, at a lower figure than from those who take one or more and keep track of the market. It is not our rule to set prices. We ask for a sample and the prices asked; and it is a fact that the fellow who thinks he cannot afford to take a bee-journal will sell his honey enough lower in one season to pay for all the bee-journals for ten years.

And yet there are people who say that bee-papers are of no value to them! Of course not, if they "know it all," or are too lazy or careless to read them and profit by the information which the papers furnish.
Contributed Articles.

Pear-Blight and Bees in California.

BY PROF. A. J. COOK.

THE relation of bees to the spread of pear-blight has become a very important question, not only in California but in other parts of the United States. It is now recognized that this disease, which is bacterial in nature, and is called "Bacterial Nectar Disease," exists in many parts of the country. It first appears in the bloom and is propagated by the honey bee, which spreads the disease from tree to tree. The disease is caused by the presence of certain bacteria that are present in the nectar of the pear tree and are carried by the bees to other trees. The disease is called "Bacterial Nectar Disease" because it is spread by the nectar-eating behavior of bees.

The disease first appears in the blossoms, where it may be seen as a small, round, brown spot on the petals. As the blossoms age, the spots expand and the petals become wrinkled and discolored. The disease then spreads to the developing fruit, where it may appear as a brown spot on the skin or as a dark, slimy growth on the surface.

A number of factors contribute to the spread of the disease, including the presence of infected trees, the availability of nectar-eating insects, and the proximity of uninjured trees. In California, the disease is most prevalent in areas where pear orchards are mixed with other fruit crops, such as apples and berries.

The disease is a serious problem for pear growers, as it can reduce crop yields by 50% or more. It is also a concern for beekeepers, as it can spread to other crops that are pollinated by bees, such as apples and cherries.

The disease is managed through cultural and chemical controls. Cultural controls include the removal of infected trees and the use of resistant varieties. Chemical controls include the use of antibiotics and insecticides to control the spread of the disease.

The disease is a complex problem that requires a multi-faceted approach to management. It is an ongoing challenge for growers and beekeepers, and continued research is needed to understand its underlying biology and develop effective control strategies.
partly above the water-line, and partly below, something like this:

Pure Wax.
Refuse and Wax.
Netting or Sieve.
Refuse and Water.
Water.

I said that below the water-line there would not be any wax. That is true only when by sufficient stirring and boiling the wax has had the chance, or rather the time, to disentangle itself entirely from the refuse. Now when the quantity of wax is considerably larger than the amount of refuse, all that needs be done is to take the cake out and scrape off the under part composed of wax and refuse mixed. The scrapings can be added to the next melting.

But when the amount of refuse is considerable, there is not enough wax to rise over the refuse, and the cake you take up is a mixture of refuse and wax. The problem was how to keep all the refuse under the water-line. I first melted the combs in the tin bucket with water enough to fill it about two-thirds, stirring and boiling long enough to disengage the combs entirely. I then put in the sieve made of wire-netting re-enforced by bands of galvanized iron, and fastened it there. Then I added enough boiling water to bring the wax entirely above the sieve, and let the whole boil long enough to give all the wax time to come through the netting. When cold it is something like this:

Wax.
Water Line.
Water.
Netting or Sieve.
Refuse and Water.
Water.

Some of the finest refuse came through the netting, but not enough to be objectionable.

One difficulty I met. I had to boil the whole thing quite a time in order to get all the wax to rise. After thinking about it, I concluded that by adding a considerable quantity of salt to the water the wax would rise much quicker. And it did.

Somebody may want to know how that can be. Why does the wax come on the top of the water? It is because the wax is comparatively lighter than water. That difference of weight is the force that pushes the wax above the water. That force amounts to about 3-100 of the actual weight. That is, if a vessel full of water contains 100 ounces of it, the same full of wax will contain about 97 ounces of wax. And as I said, that slight difference of weight—three one-hundredths only—is the force that pushes the wax above the water.

Now let us add, say one pound of salt to the gallon of water. The volume of the water will not be increased, but its weight will be increased by about 12 percent. That is, the same vessel which contained 100 ounces of pure water will now contain 112 ounces of salted water. The difference between the comparative weight of the water and the wax will now be 15-100 of its weight, instead of 3-100, that is, five times greater.

And the force that pushes the wax above the water will also increase in proportion, and be five times greater with the salted water.

Do you wonder now if the wax does actually rise faster when melted in salt water? Knox Co., Tenn.

Cheap Packages for Extracted Honey.

BY C. DAVENPORT.

In a previous article I mentioned that I expected to be able to use for retail trade, a package for extracted honey that, aside from the work of preparing it, would cost only about half a cent for a package holding a few pounds. At that time I said, not with much regard to the matter until I had experimented with, or tried, the package in a larger way, for as yet the whole matter is in the experimental stage with me, as it was too late in the season, or rather, my extracts were very weak and I was unable to sell my all sold last season before I thought about using these packages. Upon reflection, I have, however, decided to tell what I know in regard to the matter in the hope that it will lead others to experiment in this line.

All I have already learned is that any part of the problem, or perhaps upon further trial in a larger way some serious defects may be found about it. As the reader has probably surmised, these packages are paper sacks, and probably many of the experiment work about the grade of tough glazed manilla paper will hold, or resist the action of, honey almost as well as tin will, for how long a time I am unable to say, though the grade or kind of paper used would have much to do with this, for there are a great many kinds of paper called "manilla," many of which are entirely worthless for this purpose, and if the paper of which the sacks are made will not itself hold honey, I have found that these poor grades of glazed manilla paper are in most cases inferior to good sheet paper, to other grades or kinds of paper that are not glazed.

So far as I have gone at present I believe that if the sacks are to be waxed they are better if made out of tough, unglazed paper that is slightly porous, paper that would, when waxed, resist the action of honey for some time; again, I am unable to say how long, but certainly long enough to serve for a retail package to the producer who delivers direct to the consumer.

Whether paraffine would answer in place of wax is another thing I do not know, for I had none on hand last fall. If it would, besides being cheaper its color would make a more attractive and inviting looking package, though a waxed sack is no defective package, and the waxed sack is a clean sanitary package. Perhaps a mixture of, or preparation of, both wax and paraffine might answer better than either alone. A small amount of rosin might also be a benefit. There is a good chance that this is a clean, sanitary package and I hope that all others who experiment in this or any other way in regard to the matter will report results, whether favorable or otherwise, for it would no doubt be of interest to many besides myself. I do not have the time to deal with this small amount of the experiment work on many things in regard to our pursuit that I should very much like to do, but I shall this season try these sacks in a larger way than I did last year. I have little doubt but what they will, with me, solve a perplexing problem.

When using them, if the honey is delivered, all that would be necessary to insure their safe carrying would be to pack, or lay, the filled sacks in a large tin can or case, that has a tight cover to exclude dust. The sacks should be tied up and then wrapped, and then used as otherwise the honey would be lost. The most convenient way to use these packages, I think, would be for the producers to prepare them, or to have them prepared, and sell to the customers, who would not answer, for we would surely lose trade if we furnished a package that failed to carry safely.

To overcome this would be quite easy. I have not tried it except in a limited way, but I think whatever that this part of the system will work all right in every way. All that is necessary is to make an outer package or covering from strong cardboard, or what is called "building paper" is what I used; this is about like cardboard or pasteboard, but instead of being stiff or brittle like

The Premiums offered this week are well worth working for. Look at them.
No. 5—Some Reminiscences of an Old Bee-Keeper.

BY THADDEUS SMITH.

I have been in the habit of making such frequent visits to "My Old Kentucky Home" that I hardly feel that I have lost my citizenship there, and I have not forgotten or lost my interest in her citizens, especially those who may be classed as belonging to the former generation; and as I purpose to notice some of the more interesting reminiscences of 50 years ago, in whom I felt most interest, it is but natural that I should call up the Kentuckians first.

My neighbors, Dr. John Dillard, and Mr. D. Burbank, of Lexington, and Prof. R. A. Broadhurst, of the Kentucky Female Orphan School at Midway, were intelligent, enthusiastic bee-keepers, well informed in the science as far as it was then developed; and so was Mr. Nebbit, of Cynthiana, and Mr. W. A. Langstroth, of Adair, Kentucky, who, although he did not keep himself very prominent before the bee-keeping public by frequent communication to the bee-papers, because they had no "ax to grind" in the sale of paint to bee-keepers.

The most clever writer and original inventor of that State was Mr. D. L. Adair, of Haws ville, who contributed many interesting and instructive articles to the columns of the American Bee Journal when published in Washington, D. C. Mr. Adair had originality with a bright, investigating mind, well stored, and a fluent, agreeable way of expressing his ideas; but some of his ideas and conclusions were peculiar. For instance, he held that bees could live on the air without honey, and that they had a capacity for receiving fresh air to their compartment—that they could be sealed up tight in a box, and they would live and remain perfectly quiet without injury for a number of days. I do not remember the limit of time he gave to their confinement. I do not know how they would be affected if they were excluded from fresh air. It was a singular position to take, yet from the facts he gave and his plausible reasoning, one could hardly dissent from his conclusions. I would like to know whether others who have these ideas can have made any experiments that has ever been thoroughly tested and confirmed, or exploded.

Mr. Adair was the inventor of an original controllable movable-comb hive, quite different in principle from Mr. Langstroth's hive, or from the hives of Mr. Langstroth's manufacturers. His method was to construct sections, put together side by side and held in place by a simple and ingenious device. These sections were made of thin stuff, just as wide as the width of a comb and the space between, were placed in each, and when put together formed a box, or the hive proper—using boards for the ends. The sections were about the size of a Langstroth frame, being somewhat deeper and shorter, and could be taken apart easily, and could be used to separate sections of the hive, and the size of the hive depending upon the number of sections used. Sections were placed at each end for surplus, either for extracting or for comb honey in sections; and thus I was originated the idea of the movable-comb, or side-storing surplus arrangement. As this section hive was made of thin material, an outer receptacle had to be provided for its protection; and these were made of wood, brick, stone, or other solid material; in some cases, the section hive with its surplus receptacles, that were shoved into it through a door in the rear, and had to be withdrawn for examination.

I once made an Adair hive. It looked right; but somehow I never had the courage to put a swarm of bees into it. It remained in my honey-room for a number of years, and I kept thinking I would try a colony in it, but I never did. In comparison with the Langstroth-Simplicity, and with Smith's Simple-Combination, etc., hive, it seemed too much bother.

I think Mr. Adair really believed, at that time, that his hive possessed advantages over the Langstroth, and other frame hives. Hundreds of his hives were used in Kentucky and Tennessee, but I doubt if any one uses them now by preference.

Since I am so well known as a beekeeper, I have been frequently asked to explain my system, but I have never done so. I have spoken of it to a few friends, and they would agree that it was the best, but they both acted on the same principle—"keep the workers out!" Thirty years ago, when the country was full of black bees and comparatively few Italians, there was great difficulty in getting Italian queens purely mated, and the subject of controlling fertilization was an important one for...
the numerous queen-breeders that then sprung up all over the country, and hence many were led to experiment to get queens mated within the hive, or in some other enclosure where they could meet only selected drones. A number of persons claimed that they had succeeded in getting queens mated within the hive, and also in a tent with just such drones as they selected. But the more reliable aparian teachers did not come forward to endorse these claims, and the general bee-keeping public were slow to believe that the thing had ever been done. As the Italians increased in the country, and the black bees vanished in proportion, there was not so much danger of queens mating with black drones, and as to prevent this was then the only object of seeking fertilization in confinement, the subject was not considered of so much importance. Although Mr. N. Young claimed success with his tent, he said as far back as 1872, that he would not use his tent the next year, as the place where he intended to rear queens had but a few colonies of black bees in the neighborhood, and these few he intended to inter-convert, he would not consider it necessary to take his tent with him.

Thus the matter has been suffered to lie dormant these many years, until Mr. Hutchinson heard of Mr. Davette and his tent, and published an account of it a few months ago. It is now considered that the Italian bee itself, and probably all other races of bees, can be improved in their honey-getting qualities, and in their dispositions, by select mating; and it is claimed that a good deal has already been done in improvement of the Italians by selection of queens only, and it is believed that much greater improvements could be made if the drones could be selected also. Hence the new interest now found in this old subject of fertilizing queens in confinement with select drones. It is to be hoped that the thing will be fully and fairly tested, and all doubt removed from the possibility, or else the whole thing condemned as impracticable.

X. M. Angel was another intelligent Kentucky bee-keeper, who sometimes gave us the benefit of his knowledge through the columns of the American Bee Journal; but I have not seen his name or that of any of the others in the papers lately, and I don’t know how many of them are still alive.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marenco, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, where he will answer them, and please do not ask the Doctor to send answers by mail.—Edittor.)

Requeening an Apiary Now.

Would it be of any use to requeen my colonies at this time? Would they produce any more honey? Some of the old colonies are losing around in a listless manner, while the new swarms are working full time?

ANSWER.—It depends upon circumstances. If you requeen with better stock it would be a good thing. It is very advisable for you to keep a close record of the work of your colonies, and try to have swarms in all the colonies from those that have done the best work.

Getting Bees Into the Sections—Uniting Colonies, Etc.

1. How late in the summer do bees build comb? Is there any particular time for them to cease building? In July or August I buy colonies south of June, and they have not replaced the comb or rebuilt anything. What is the reason?

3. My bees don’t seem to take to the supers that have one-pound sections in them, where they had starters, etc. Would it be any inducement to remove everything above the brood-chamber but the super with the one-pound sections? or would a super of shallow frames filled with honey and merely left on the hive till wanted for use, cause the bees to go into the pound sections to work, giving them that much more to cover and care for?

4. Would it be a practical and successful way of uniting two weak colonies, each having a queen, to put one hive over the other; placing a piece of wire netting between for a day or night, and then let them regulate which queen they shall retain?

S. Is there any way of telling when a colony has lost its comb, and is it growing weak, without going into the hive to examine?

6. Can the presence of the moth-worms be known without opening the hive to examine for them?

MISSISSIPPI.

ANSWERS.—1. The most of the building is done during harvest-time, but there is no particular time for them to begin or quit. They will build comb whenever needed, in rare cases even in quite cool weather.

2. The probability is that it was very much coming in, and they had no necessity of filling the vacancy.

3. What you say in the previous question makes it probably that no honey was coming in, in which case they would not do anything in sections. If there was a large number of shallow frames on top, those frames being partly filled with honey, the bees would not so readily enter the sections unless they got more honey than they could easily store in the shallow frames. In the same way, if a super of sections partly filled were on the hive, they would not touch another super of empty sections. But if you remove the super of shallow frames, the bees will begin on the empty sections sooner than if the frames had not previously been there, always providing any honey is coming in. In this case, it will be taken, in working the whole hive, and you will be safer against fighting if you remove one of the queens a day or two in advance. There must be an entrance to both upper and lower hives.

4. Not for certain.

6. Not certainly. If you see worms dragged out, you will know, but you don’t always see that.

Late Wax-Secretion and Laying Flying Drones.

1. How late in the fall can bees make wax?

2. How late does the queen lay eggs?

3. Is it profitable to kill the drones now when we want no more swarms?

ILLINOIS.

ANSWERS.—1. Very late if it is necessary, although there is generally no occasion for it. I think bees might be forced to secrete wax in the middle of winter.

2. The time varies greatly. A queen may stop laying in September, or she may continue till frost. Much depends upon the yield of nectar. Sometimes queens continue to lay although no brood is reared. If the honey production there be very small generally superimposed on top of frames and sealed brood in the hive, but no unsealed brood. The queen keeps on laying, but the bees do not take care of the eggs; perhaps eat them. My place is in the region that suffered so terribly from the July drought, and brood-rearing was almost entirely suspended, although the queens continued to lay. In some hives were found neither sealed nor unsealed brood, although eggs were always present. If I had been a better bee-keeper, I suppose I would have fed to keep up brood-rearing (I did later on), but I had never had such an experience before, and was expecting a change every day.

3. Yes.

A Beginner’s Bunch of Questions.

1. I use the 8-frame hive. I have only eight colonies of bees, having bought five last spring, all Italians. I had two hybrid colonies. Now there are four hybrids. Is there any way to keep these colonies in line for becoming hybrids?

2. Can I breed them back and make them all Italians again? If so, how?

3. I haven’t had any swarms issue yet. They are all strong, and working well. What is the cause of their not swarming?

4. What is the best time of day to rob the bees?

5. I would like to increase my colonies to 15 or 20. As they will not swarm, what and how shall I do? Is it too late now to transfer? The cotton-boll hive has four main honey crops.

6. What is the best way to catch the queen and handle her without hurting her?

7. How many colonies can one man attend to?

8. How much honey is it expected that a strong colony will store in one season?

TENNESSEE.

ANSWERS.—1. So long as there are black or hybrid bees within two or three miles of you, the likelihood is that most
of your colonies will be of mixed blood. Rear from pure stock each year, and eventually you may work out the black blood.

2. As in the previous answer, your most hopeful plan is to raise your own queens from pure stock, and when you run out of pure stock get a pure queen. A careful study of your text-book may be of some help.

3. Hard to tell. Possibly they are not getting enough honey.

4. Right in the heat of the day, when the bees are busy at work. If there is danger of robbing, however, it may be better to take away the honey in the after part of the day, so that darkness may cover any tendency to robbing.

5. It is difficult to advise just what is the best way for you. If you will carefully study your text-book you will probably be better able to judge for yourself. One way is to take all but one frame from the hive and put them in a new hive on a remove the honey from the old stand. Let the queen on the old stand. Let all the adhering bees be taken with about half the frames, and shake off into the old hive the bees from the other half. It is not too late to transfer.

6. Catch her by the wings or by the thorax (what, perhaps, you would call the shoulder)—never by the back part or abdomen.

7. Probably five colonies are as many as would be wise for you to have till you gain some experience. An experienced bee-keeper may care for 100 colonies or more. A few very old and vigorous bees I do think the drones are the ones we ought to be particular about. I think if we can get our bees, queens and drones all with the same marking, we will have better bees and more honey, as my experience of about 20 years with bees has shown.

**The Afterthought.**

**The "Old Reliable" seen through New and Unreliable Glasses.**

By E. E. Hasty, Sta. B Rural, Toledo, O.

**Gardens for the Children.**

Ancient page 409, where Prof. Cook talks of a garden for each child, there are two children at the home in which I live. The ground is made up of plots of land, but seems to me almost idiocy as to the details of the matter. Surely, I thought, it would be no use to give them gardens. Well, this summer their father took it into his head to do just that. And he didn't give them little and worthless bits, either, but large plots of very fertile ground. The result is that with a very moderate amount of advice and assistance they are having some success. Their crop will not total much in money; but when we come to consider things worth more than money, no equal area of the farmyard produces so much. Had the plots been smaller, so as not to oversize the amount of hoeing they enjoy doing, it would have been a little better.

**A House-Cellar for Bees.**

Some have doubted whether a house-cellar, with footsteps and children's play immediately over the bees, could be anything else than a very poor place to winter bees in. As a counterblast to this it is interesting to see that the Gleanings, in a machine, overhead, proved a first-rate place. The fact seems to be that bees will get used to almost anything if it is only experienced hourly or very frequently: but when noise or jar occur irregularly, and not much often than once a week, then they are disturbed and injured. Page 413.

**Queen Fertilizing Eggs.**

F. Grether may be right, page 420, that the queen fertilizes eggs, or omits to do so, entirely without volition. Something other than space, or curvature of the queen's body, may deeply affect the activity. I opine, however, that a "straw vote" would show him badly in the minority.

"Jouncing" Extracting-Supers.

I don't want to make sport of any manipulation which a practical brother finds to succeed even tolerably well. If I did I might try to be funny over Mr. Davenport's method of jouncing out the bees of an extracting-supers. I'll be respectful; but I'll wait till a lot more of the brothers find it a success before I Jouncer. Page 420.

**Swarms Going Back.**

Tell Dr. Miller, page 425, that among Ohio bees more than two swarms go back to the old hive after hiving, for each 95 that go to the woods. Of unmixed swarms, with laying queens, and the queen all right, perhaps his proportion would answer. Swarming and going back into the old hive again has been abnormally rare—going back before clustering, and going back after clustering, and going back during attempt to hive, and going back after hiving—all sorts of going back. When bees from different hives get mixed in swarming (a very common thing in large apiary with swarm-fever raging) the queen or queens will often be balled—at least half the time if the bees are light of honey—which is also a common thing, at least in this yard. The little ball of bees and queen often falls from the cluster to the
ground, and is liable to be left unnoticed. Then, of course, the queenless bees go home, either before or after hiving. Sometimes the ball is formed after hiving, or deposited with the pollen. Then the bees go to the wind and carry off where they run in. In these cases also the bees go back to the old hive—never to the woods. I think. While we are on the subject of swarming let me "swat" another old and popular fallacy—the idea that if you do it with honey, you can prevent it. They go just as they happen to be. I am pretty well convinced. A swarm imprisoned will sometimes quickly begin to die of starvation. On the other hand, after three days and two nights of imprisonment, they will almost always build a good pieces of comb and have a honey flow in it. This imprisonment trick is a hobby of mine, and thus I know.

WINTERING OF DIFFERENT STRAINS OF BEES.

I suspect it is easy to be mistaken when we say that one kind of bee winters better than another. In a mild climate, however, which may happen nevertheless to be a climate in which staying quietly indoors is much more profitable than bustling around, it is reasonable to expect that blacks might winter better than Italians. But, Mr. Whitcomb, mightn't a poor and lazy strain of Italians idle and prosper just as well as a blacks could do? Might not prosper as well next June, eh? Then I guess you're pretty much altogether right. Your fourth point is hardly important enough to rank with such important things as the first three points comprise.

The Home Circle.

Conducted by Prof. A. J. Cook, Claremont, Calif.

STRAWS POINT THE WIND.

We all court or desire popularity. Few of us get it in as generous proportion as we would, and so we are inclined to be a little envious of our friends whose not only love and admire, but who are general favorites. Everybody is quick to take them up, and even more slow to let them slide out of their social circle. I have often thought, and as frequently said, that two fortune could be justly said to out-rank that of having for our life's work that which we enjoyed most to do. It is almost as beneficent and helpful to be attended in our life-journey by those who admire, respect and love us, and who are ready to trust us with their lives, as it is to be in the habit of being used, and tenfold. I know of no thing that gives such full satisfaction as the sure thought that those who know us best believe in us. There is no show of wavering in their faith.

We all have known public men whose presence among their neighbors and friends is sure to bring loud acclamations. They are ever greeted by their constituents with loud and heartfelt cheers. All this is most grateful to him who is so happy as to receive it, and must be a most potent influence, not only in making the life more pleasurable but also in causing to yield richer and more abundant fruit.

So great a factor in the happiness and success of our lives is well-earned popularity, that we are all wise to study the ways and lives of our most esteemed friends, that we may, if possible, differ as few as possible from them. We may strive with unabated effort to crown our own lives with like virtues. Life-furnishes most excellent opportunity for such study. The "straws which point the wind" are ever in evidence.

We are in camp. Many other campers are near neighbors. The meals are to be provided: the wood chopped; the dishes washed; the camp to be kept neat and tidy; not only our friends, but other who have not such evident claim on us are, or ought to be, entertained. The books brought to camp are very entertaining; the many magazines abound with fascinating recitals or stories; special friends are so attractive; how much there is to make selfishness assertive, how many straws will show the trend of character.

Here is where the one who has grown into a life of thoughtfulness for others shines forth as the noonday sun. Such a one takes no heed to find the exact bounds of his allotted tasks, but is ever reaching out to make others happy, instead of laying the burden on one. He is quick to lay aside the entertaining story to help some other in a wearying task, or to entertain some older person, or, possibly, some visitor who has come to the camp for a recreation which the home camp has failed to furnish.

Some one in camp has been off on a long tramp, climbing the ever-aluring mountains, or seeking some pool where the trout are more or less reluctant to bite. Yet it is to see that the meal is prepared, or the wood chopped, or the dishes washed. The dragging step and tell-tale pallor are quickly noted, and he finds his work is snatched from his tired hands, by those who have learned of thoughtful unselfishness. It is a rare thing, and tells a whole chapter of character trend, which ever charms, wins, and sweetens. If one ever gets just "dead tired" and "dead gone" with hunger, his Tranquility is in the habit of bringing trout, honey, or bread from the deep, wooded canyons, or climbing the steep mountains, where lured on by beauty and awful grandeur the tramp carries us often away beyond our strength, and yet we must retrace our whole rugged journey because of the good food possibly before water—can bring the longed-for refreshment.

Here is where the Mark Tapleys shine out.

"OLD BALDY" (San Antonio Mountain).

Where is it? and what? It is one of the three highest peaks of the Southern California mountains. It reaches up 10,000 feet, and lies 23 miles north from Claremont. It is 16 miles west of our camp, which is something over 3,000 feet above the sea-level, and for miles we may see the tall graceful forms of whom won ladies. Horses or mules, and one pack-mule, carried us and our belongings 12 of the 16 miles. Then we must walk and carry our food and blankets, for we must sleep that night on the very crown of the lofty summit. What a climb—1000 feet or 1000 feet to the mile! Two and one-half miles more on the very ridgepole of a great roof-like mass of granite—a mere narrow path often hardly a foot wide, and steeper on each side than steepest roofs; often almost perpendicular. All have adored and5 ever the mad, 1000 feet—more than one-fifth of a mile. Often this path stretched upward as fast as onward, and yet our party hunched not, but all slept that night on the very crest of this grand mountain peak. Only one took to hands and knees, and she but once. But more than one wondered if they could do it. And almost all drew long breaths as the most trying points were scaled. So rare was the air that ever and anon all would pause to draw a half dozen quick breaths in rapid succession, before resuming the ascent.

It was a tremendous climb but the outcome warranted the labor, the fatigue, the trepidation of fright, for the outlook from the crest, as also the sunrise, were entirely indescribable. I if one ever seems right in God's very presence it is while on some such top. BALDY, as the mountaineers call it, is surrounded by a boundless, varied, far-reaching landscape, I uttered the truth that I would rather have given $25 than to have had my daughter miss the experiences. She made the trip with easy, lightsome steps, and hardly knew her weakness till the race the bald summit; with a good camp-fire and our blankets we kept the chill away, and slept some.

At 5 a.m. we enjoyed the transcendent sunrise which alone paid for the journey. We were precociously seated, and had camped at 12:30. Oh, we were so tired! All our party kept their cheer, their smiles, and their tempers. I heard all by my own tired muscles, and was prouder that I had such friends and comrades. Those light of weight, and used to every kind of toil and weakness.
ADVERTISEMENT.

To Our Shippers:

We were obliged to notify you a few weeks ago that one Joseph M. McCaul had leased our old quarters at Nos. 120-122 West Broadway, New York City, and had there started up business under the name "HILDETH, McCaul Co.," and had distributed a multitude of circulars so worded as to create the impression that his business was a successor to or a branch of the business of Hildreth & Segelken.

For the protection of our shippers and ourselves, we at once instructed our attorney to commence action to enjoin the said McCaul from using the name HILDETH in any manner whatsoever in connection with his business. On the 10th day of July, 1901, Hon. David McAdam, Justice of the Supreme Court of the State of New York, after a full argument upon the merits, issued a peremptory injunction, of which the following is an extract:

"And it appearing that the plaintiffs have for a long time been and now are carrying on business under the style of 'Hildreth & Segelken,' and that the defendant has recently opened a business at 120-122 West Broadway, in the Borough of Manhattan, City of New York, and is carrying on the same under the style of 'Hildreth, McCaul Co.,' and that such act is in violation of the plaintiffs' rights, and that the commission or continuance thereof, during the pendency of this action will produce irreparable injury to the plaintiffs: it is

ORDERED that the defendant (Joseph M. McCaul) and each of his agents, servants and employees and all other persons acting under his authority and direction be, and he and they are hereby restrained and enjoined from showing, displaying or otherwise using during the pendency of this action in or upon any papers, devices, sign or signs, or otherwise, in the business conducted by the defendant at No. 120-122 West Broadway, in the Borough of Manhattan, City of New York, or elsewhere the name of "Hildreth" separately or conjunctively with any other name, designation or description."

Outside of our desire in our own interests to protect the name which we have built by years of satisfactory dealings with our customers, we hastened to procure this injunction as soon as possible, to prevent our shippers from being misled into sending their goods to one who would make an attempt to gain their trade by such a trick and device.

With thanks for the many expressions of good-will we have received from our shippers concerning this attempt to trade under our name, we are,

Sincerely yours,

HILDETH & SEGELKEN,

265-267 Greenwich Street, NEW YORK, N. Y.

Please mention Bee Journal when writing.
Is the "Wide-Open" Fair a Financial Success?

The Civic Committee of Boston has sent a series of questions to all the State Boards of Agriculturists, asking whether, in their opinion, the purely legitimate Agricultural fair or the "wide-open" fair is better in the long run financially, socially and educationally. Opinions in reply have been received from all the States, including two Provinces of Canada.

Without exception these officials say that the purely legitimate Agricultural fair or the "wide-open" fair is better in the long run financially, socially and educationally. Opinions in reply have been received from all the States, including two Provinces of Canada.

They are also unanimous in rigorously excluding all games of chance; for strictly prohibiting the sale of alcoholic liquors except in the States; and they severely condemn vulgar tent-shows and suggestive demonstrations on the outside of tents.

As to whether "circus" features tend to absorb time, strength and interest of patrons to any disadvantage, the exhibitions of farm, home, school and factory products, the majority believe that they do, and therefore should be encouraged. Queen of the writers lean to the view that entertainments, those foreign to the real features of the fair, should be done away with as fast as the people can be educated to appreciate the fair for its own sake. The Civic Committee.


Very Dry in Idaho.

It is very dry here now; but the bees are doing some great work on clover, buckwheat, and buckwheat. I have nice, strong colonies from two colonies I purchased a year ago. I try to prevent swarming as far as possible, but use X-frame hives, but the best helper I have is the American Bee Journal.


Good Season for Honey.

I am a beginner in the bee business, and hope, in time, to make a success of it. I worked for six months, and I do not expect to get much honey, although this has been a great season for honey here. There is an abundant supply of sweet clover, and the bees are working well. I hope and expect soon to be a member of the National Bee-Keepers’ Association, as I think it is a worthy cause.

L. C. Larken.

Will Co., Idaho, Aug. 6.

Building a Mouse-Proof Honey-House.

G. M. Doolittle tells how to build a honey-house, on page 436, emphasizing the necessity of having it mouse-proof. I think I can tell the readers of the American Bee Journal how to erect such a building and have it mouse-proof without the trouble and expense of "fitting it with tin," and I can do it best by telling how I built my own.

After laying the sills on good-sized rocks, then nailing and nailing with the sills in place, I then laid the floor—good, matched material, free from knot-holes, and kild the joists all around; then spiked 2 x 4 scantling flatwise on top of the floor cleat around the outside, like a plate; then nailed the siding to the cleat, covered it with good, matched drop-siding, painting the tongues with thick paint as fast as it was put on.

The building is provided with five windows and a door, a door, all provided with screens, the windows and door, and have them glassed for summer and winter, so that if the door is care-
FOR SALE

3.5 acres, well suited to cherries, peaches, plums, pears, apples, currants, raspberries, blackberries. Good house, barn, vegetable green-house, house, 50 or 100 colonies of bees, situated in good bee-locality. Title clear. For further information, write A. L. KILODOW, Sheffield, Ill.

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Catnip Seed Free!

We have a small quantity of Catnip Seed which we wish to offer our readers. Some consider catnip one of the greatest of honey-yielders. We will mail to one of our regular subscribers, one ounce of the seed for sending us ONE NEW SUBSCRIBER to the American Bee Journal for a year with $1.00; or will mail to any one an ounce of the seed and the American Bee Journal one year—both for $1.30; or will mail an ounce of the seed alone for 50 cents. As our stock of this seed is very small, better order soon.

GEORGE W. YORK & CO.,
144 & 146 Erie St.,—CHICAGO, ILL.

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AMERICAN BEE JOURNAL
Aug. 15, 1901

FREE as a ....
A Foster Stylographic Pen....

This pen consists of a hard rubber holder, tapering to a round point, and writes as smoothly as a ball point. The point and needle of the pen are made of platinum, alloyed with iridium—substances of such great durability which are not affected by the action of any kind of ink. They hold sufficient ink to write 10,000 words, and do not leak or blot.

As the best line of uniform width at all times they are unequalled for ruling papers. Pens are furnished in neat paper boxes. Each pen is accompanied with full directions, filler and cleaner.

BEST Mail-Order Pen on the Market.

19,000 Postmasters use this kind of a pen. The Editor of the American Bee Journal uses the “Foster.” You should have one also.

How to get a “Foster” FREE.

Send two new subscriptions to the American Bee Journal for one year, with $2.00; or send $1.00 for the Pen and your own subscription to the American Bee Journal for one year; or, for $1.00 we will mail the pen alone. Address.

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U. D. GIVENS, LEBANON, I. S.

Please mention Bee Journal when writing.

THE MULBERRY AS A HONEY-PLANT.
Do you believe in telepathy? Then how do you explain the fact that since I accidentally started a mulberry tree from a mulberry bee-food for honey-producing—before the article in reference to mulberries had appeared in the American Bee Journal—over 400 enquiries have been received, special explanations being desired?

If the editor will permit me space I will cheerfully add the result of recent and more extended experiments. I should have been more explicit in some of my details in the first article, to which I will advert in this.

I am not certain as to how large dimensions the white mulberry l. and its kind.

I know, grows to be large, in some sections used for saw-logs, but the white may not

LOW RATES to Buffalo Pan-American.
The Nickel Plate Road is selling tickets at unusually low rates to Buffalo and return, good for 10, 15 and 30 days. For particulars and Pan-American folder of buildings and grounds, write John V. Calahan, General Agent, 111 Adams St., Chicago. Phone Central 2057. City Ticket Office, 111 Adams St. 19–31
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25 cents Cash
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Every Manufacturer, Miller, Carpenter, Carpenter, Mason, Mason, Mechanic, Wheelwright and Farrier, or any one using a grindstone, should have one of these Tool-Holders. One boy can do the work of two persons, and grind much faster, easier and with perfect accuracy. Will hold any kind of tool, from the smallest chisel to a draw shave or ax. Extra attachment for sharpening scythe, knife, or saw blades is included in the price above. The work is done without wetting the hands or soiling the clothes, as the water flows from the operator. It can be attached to any size stone for hand or steam power, is always ready for use, nothing to get out of order, and is absolutely worth 100 times its cost.

No farm is well-equipped unless it has a Tool-Holder. Pays for itself in a short time.

How to Use the Holder.

DIRECTIONS.—The Tool is fastened securely in the Holder by a screw-screw and can be ground to any desired bevel by inserting the arm of the Holder into a higher or lower notch of the standard of the holder. While turning the crank with the right hand, the left one does all the work on the holder. The holder is turned to the right or left across the stone, or sharpened while grinding, as readily and in the same way as it is held in the hands.

For grinding Round-Edge Tools, the holes in the standard are used instead of the grooves.

GEORGE W. YORK & CO., 111 & 114 Erie St., Chicago, III.

As to Editors of Bee-Journals,

It seems to some a matter of reproach that editors of bee-journals are not completely informed on all topics relating to the subject. The subject is a big one, and it is impossible to keep up with all that is new. If the editor is not completely informed, it is not reproach in itself. The editor must be careful to keep the journal free from errors and to keep it as current as possible.

Red Clover—How Important is It?

The desire to obtain the nectar secreted by red clover is one of long standing; and the common impression is that a very large quantity of nectar per acre would be secured from it if the flower-tubes were not too deep for the bees. Actually, such a credit has been cast upon red clover as a honey-plant, even supposing that all its nectar might be found to be utilizable, that it is not a plant of universal cultivation.

There are a few plants that yield an enormous quantity of nectar, but as they are not only in greenhouses, averaging less than one plant to the acre, they are valueless from a bee-keeper's standpoint. If, however, any good honey-yielding were widely distributed in dense quantity over a single State, then it would assume some degree of importance. The buckwheat crop of the State of New York would be of trifling matter, even if not another acre of clover that were found wherever the United States. It was impossible to obtain certain bees that would double the buckwheat honey crop of New York, the amount of money gained by that would warrant no small outlay. It is not possible that there are single States in which the nectar will be distributed in such a way as would amount to several thousand dollars.

But is red clover confined to a rather limited area? It would be interesting to know just what is the average acreage. Lacking that, some estimate may be made from the amount of clover seed raised. The government statistics give us the figures, and it is probably safe to infer that by "clover seed" is meant that from red clover. According to the last census available, that of 1890, an amount of clover seed, large or small, is given as being raised in every State and Territory of the United States except Montana and Wyoming. Certainly that shows that it is not confined to so small an area.

The North Central division leads with a product of 2,244,904 bushels. The South Central comprises 1,175,718 bushels; North Atlantic, 71,128 bushels; South Atlantic, 39,156 bushels; Western, 21,350, Total, 3,756,581 bushels.

That shows a very unequal distribution; but this distribution of the growing plants is by no means what it would be. From the States that are the greatest producers, as New York and Pennsylvania, large quantities of hay, and, of course, States import, thus making the acreage grown in the different States much more uniform than the seed produced.

If all the seed raised is sow said—and it is not likely that it is ever used for any other purpose—and if a yoke of seed is sown to the acre, it would cover a little more than 11,000,000 acres. To speculate as to the amount

FREE FOR A MONTH ....

If you are interested in Sheep in any way you cannot afford to miss the "White Clover" Sheep Paper published in the United States.

Wool Markets and Sheep has a hobby which is the sheep-breeders and his industries. We get our information from the latest publications, and from all the time. Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.

We arranged with one of the oldest and best queen-breeders (having many years’ experience) to rear queens for use in the United States. His bees average a little more than 1 gallon per month, but, in the good deal the longest tongues of any yet measured. The Breeder he uses is direct from Italy, having imported her himself. His worker-bees are large, some what tardy, but keep their honey and syrup well.
of honey that could be obtained from this acreage would be outside of the present inquiry, and it is doubtful as to there being sugar maples in this vicinity, and a reasonable estimate is only desired to show that the aggregate of red cedar territory is large enough to warrant the expenditure of $1,000 and that it is widely distributed. Gleanings in Bee-Culture.

**Distance of Apiaries.**

At a conference of the Victorian Apiarists’ Association, it was agreed that, under any existing conditions, even if brought back by mutual consent and purchased by some one party to the executive of the Association, no reservation of any member’s apiary by mutual consent, and that to observe this rule, should be adhered to by all. The following is a reproduction of the resolution:

"All the member practicing production of the
products of the apiary, or guilty of fraudulent pressings as a bee-keeper, should be disqualified."

It was pointed out by one and another that the best members of the bee-keeping club were crowding close to another apiary, often of superior numbers, was made by one that the bee-keeping club was the best, so that no effort was made by anyone who had not the moral sense of honor and fair play, and that the members should be kept in keeping at a fair distance from their neighbor. Several bee-keepers thought the distance between their hives apart, and no doubt was expressed that this is in all but the very best of bee-country quite close enough. A man never says as much as he does of bees of the season is very much too close for apiaries of any considerable size.

**The Bee in Law.**

Under this caption has begun in Gleanings in Bee-Culture a series of articles by F. D. Fisher, with a view to having them afterward in a similar form, so that the bee-keeper may, will serve a convenient purpose, especially as laws of different States are by no means alike. As to ownership, Mr. Fisher says:

With regard to bees, Blackstone, the great lawyer-giver, says: "The bees are mere naturae (wild by nature), but when hived and reclaimed, a man may have a quality possessed in them by the law of property, giving them to himself at the law.

And to the same purpose, not to say in the same words with the civil law, speaks Bracut: "Occupation, that is, hiving and includ- ing the bees as his property, makes him the owner of them."

For, though a swarm alights upon my tree, I have no more property in them till I have hived them than I have in the birds which nest thereon; and, therefore, if another hives them, he shall be his proprietor; but a swarm which flies from one of my hives, and so long as I can keep it in sight and have power to purses them, and in these circumstances no one else is entitled to take them."

But in respect to such animals as are in the habit of obtaining and placing in their hives, a large number of which, which are accustomed to go into the woods and fields, and come again, we have no right to own them if they come again. They have the right of returning, and if they return in search of the intention of returning, they also cease to be ours, and become the property of the first house that they come to."

"It is a fine thing to preserve the copies of the Jour-

nal as fast as they are received. If you have this "Emerson" so further binding is necessary.

**DO YOU WANT A HIGH GRADE OF**

**Italian Bees and Queens?**

2-frames Nuclease with Undetermined Queen, $2.00, purchaser pays insurance and postage.

**NOTICE.**

Having sold my property I am required to give possession soon, as well as move myself and apiary. September 1st. Our bees will be put in a more roomy place, and there prepared for winter.

Months: Jan. 1, 2, 3, 4, 5, 6

Golden Queen:

-Tested - $2.50 - $2.75

Select Tested - $2.95 - $3.00

Honey Queen:

-Tested - $3.50 - $4.00

Select Tested - $3.75 - $4.00

\[\text{Please mention the Bee Journal.}\]

**WANTED**

Fancy White Comb Honey in no-drip cases; also Extracted Beeswax, 50¢ and 75¢ per pound, delivered. We pay spot cash. Fred W. Atch, Front & Wolf Sts., Cincinnati, Ohio.

**WANTED—Honey.**

Car Lots or otherwise; will pay highest market price, spot cash. Address, stating quantity, quality, and delivery at manager. We want to buy 5000 pounds soon. To be delivered to us at Hunting NIC, St. CLAIRE, MO.
We have a Large Stock on hand and can ship promptly.

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WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of The American Bee-keeper free. Address, THE W. T. FALGONER MFG. CO., JAMESTOWN, N. Y.

River Forest Apiaries!
FILL ALL ORDERS
By Return Mail.

Italian Queens Warranted

Untested, 75 cts.; Tested, $1.00; Select Tested, $1.50. Half dozen or larger lots as may be agreed on. Address, RIVER FOREST APRIARIES, RIVER FOREST, Oak Park Post-Office, 30th Please mention Bee Journal when writing.

Italian Queens Free
BY RETURN MAIL.

For sending us One New Subscriber for one year, to the American Bee Journal, with $1.00, we will send, by return mail, a fine Untested Italian Queen free. This offer is made only to our present regular subscribers.

We will mail one of the above queens alone for 75 cents; or 3 for $2.10.

Please do not conflict the above offer with the one on another page which refers to Red Clover Queens. For sending us one new subscriber at $1.00, and 25 cts., we will mail you free an Untested Red Clover Italian Queen.

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Very fine pure-bre’d BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised, The classic in Bee-Culture—Price, $1.25, by mail.

Beeswax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

Please mention Bee Journal when writing.

More Bee-Keepers’ Paradies....

E. R. Root has just returned from a 6,000-mile trip through some of the best bee-locations in the world, and has already begun his series of write-ups, accompanied with fine photos, in Gleanings in Bee-Culture. The following editorial appears Aug. 1, and will give something of an idea of what he will describe:

Some little time ago I promised to tell about the bee-keepers’ paradise in Texas. I have this on the docket, and it will appear as I take up the line of my travels. But since running across that paradise I have run into two or three others. There is one west of the Rockies, in Colorado, that is not yet overstocked with bees or bee-keepers; another one in Central Idaho—in fact, I do not know but the whole State. These will be described in turn. The fact is, millions of capital are being invested in irrigation; irrigation means alfalfa; alfalfa means a paradise for bees. But I found all along my trip that alfalfa-growing preceded bee-keeping by two or three years, for it seems to take about that length of time before bee-keepers find these gold-mines that have been hitherto unoccupied.

If you are dissatisfied with your present location, and for financial reasons, or on account of health, will be compelled to leave, subscribe for Gleanings in Bee-Culture, and learn something about the great South and the great West. There are many locations in the West that are not yet occupied—splendid bee-locations. If you wish to learn about them, send 25 cents for a six-months’ trial subscription, or $1.00 for one year and one untested Italian queen. Or, send $2.00 and we will send Gleanings one year and one of our celebrated Red Clover Queens.

THE A. I. ROOT CO., Medina, Ohio.

GEORGE W. YORK & CO. 144 & 146 Erie Street, CHICAGO, ILL., are headquarters for Root’s BEE-KEEPERS’ SUPPLIES in Chicago. Send to them for their free Catalog.
TWO PAN-AMERICAN BUILDINGS.—See next page.
Weekly Budget.

CLOSED SATURDAY AFTERNOONS. — It seems that some of our customers have forgotten that our office and store are closed Saturday afternoons from July 1 to Oct. 1.

MR. E. M. HUNT, son of M. H. Hunt of Wayne Co., Mich., was married to Miss Jessica Sawtell, Tuesday, Aug. 13. Heartiest congratulations to them.

ON TO THE THOUSAND. — Still they come — those who are helping to make up the first 1000 members of the National Bee-Keepers’ Association. These names have come to this office, with the dollar each, since our last issue.

GEO. W. HARRISON, JOHN CONSER, FRANK L. GOSS, THEO. J. WOODWARD.

MR. H. W. CONGDON, of Hardin Co., Iowa, called on us Aug. 9. He was on his way to Buffalo, to visit the Pan-American Exposition, and also his parents who live near there. Mr. Congdon has between 40 and 50 colonies of bees, and hopes next year to establish out-apiaries. This crop this year, owing to the drought, has not been very much. Still he is not discouraged.

DR. WILLIAM CRENshaw, of Fulton Co., Ga., dropped in to see us Friday, Aug. 2, when on his way home from the national meeting of the dentists of America, at Milwaukee. Dr. Crenshaw has about a dozen colonies of bees, and is doing nicely with them. Of course, he keeps them more as a pleasurable pastime, in connection with his profession, rather than as a source of financial profit. The Doctor is a very pleasant gentleman to meet. Succeeded to him.

MR. N. E. FRANCE, of Grant Co., Wis., inspector of apiaries for that State, will be the judge of the apiarian exhibits both at the State Fair in Milwaukee, Sept. 9 to 12, and at the Fair at Platteville, Sept. 17 to 20. The judging will be well done, and all will be satisfied.

Mr. France says he has been quite busy treating foul brood, and has had many obstacles to overcome the past year. But he says further that he has now gotten the disease pretty well stamped out of the State, and all remaining cases under quarantine control.

Oh, that every State had a bee-inspector, and every one equal to this one with a French name!

PAN-AMERICAN BUILDINGS. — On the preceding page we show two of the many beautiful buildings of the Pan-American Exposition. The Agricultural Building contains exhibits of agricultural products, processes and articles pertaining to the farm, of the most interesting character. In these days of scientific farming the successful agriculturist finds it necessary to acquire a fair knowledge of many of the sciences. The agricultural exhibits show many of the wonderful possibilities in farm work.

At the Pan-American Exposition, as we understand, are shown the largest display of electrical machinery and appliances ever presented. Nearly every article in the very latest design, and the visitor will find novelties without number in this interesting division. The Electricity Building is of very rich and beautiful design, having a broad loggia on the southern side, while the roof-line is broken with domed towers.

Doubtless many of our readers will have an opportunity to see the Exposition while attending the annual meeting of the National Bee-Keepers’ Association at Buffalo next month — Sept. 10, 11 and 12.

HE WORKS STANDS. — In one of the recent issues of a certain bee-paper an old and experienced writer says, “I work 200 stands.” Just think of working the “stands!” Wonder what he does with them? But quite likely he meant colonies instead of stands. It’s almost beyond understanding how one bee-keeper can stand around and still talk about their stands of bees. Or, perhaps they’ll say they had so many hives in the spring, and increased to twice as many “hives.” They don’t say whether they bought the extra hives from some bee-supply dealer, or got them by “in-breeding.”

Of course they mean colonies, and not “stands” or “hives.”

A BADGE PIN for the members of the National Bee-Keepers’ Association is thus suggested by Mr. N. E. France:

“I wish the National Bee-Keepers’ Association would adopt some design for a badge pin, and every member have one to wear. The one used at Chicago is good enough. I could relate several instances where persons have asked what that bee-keeper’s badge represented. (I wear one all the time.) I answer always, ‘National Bee-Keepers’ Association.’ In one case I was called to settle a dispute about bees, and was introduced as State Inspector and member of the National Bee-Keepers’ Association. The fact that I belonged to said Association seemed to settle all dispute, and both were willing to leave their troubles for another day, and most of them belonged to the State or National organization of bee-keepers, but they will join them both at our next meeting.”

Harrah for a badge pin for the members of the National Bee-Keepers’ Association! Why not adopt one at the Buffalo meeting? True, the badge pin used at the Chicago convention last year is all right. Why not adopt it?

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with order, post age free.

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Prices subject to market changes. 50 cents per pound more than the 5-pound rate, and 10 cents extra for postage and 5-pound rate. 10 cents per order for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEO. W. YORK & CO.

144 & 146 Erie St., CHICAGO, ILL.
Editorial.

Beware of Honey-Dealing Frauds!—Such caution, not many years ago, was absolutely necessary. It was our privilege, as well as enthusiastic pleasure, to help drive out of business a few of the most daring honey-sharks that ever "sharked." And so far as we know they are not "sharking" beekeepers now, we are glad to say. Many of our readers have at least peculiar reasons for remembering the Horrie-Whalen-McConkey crowd that a few years ago so successfully fleeced the unsuspecting honey-producers, here in Chicago. Just now we are not aware of any here that are getting ready to "do up" the "easy" bee-keeper. And yet it is always well to be on one's guard, for no one knows just when the wolf will show his claws through his sheepish covering.

It is a pretty good rule to make a thorough investigation before shipping honey—or anything else, for that matter—to new firms or strangers. The facilities are fairly ample in these days, to learn of the financial responsibility and character of those who solicit the products of the apiary and farm. Also, it is generally true that an old and established firm can do as well, if not better, with any produce entrusted to them, than can new firms. At any rate, we should hesitate a long time before changing from "the old and tried" to the new and untried. The latter may be all right, of course; and then, again, they may not. But if you must experiment with new dealers, our advice is to ship no more at a time than you can afford to lose— until you are satisfied they are honorable and satisfactory in their business conduct.

We can assure you that it isn't pleasant to feel the necessity of giving such caution as the foregoing, as it may be an injustice to some splendid new firms; and yet, the good and well-meaning must sometimes suffer on account of the fraudulent actions of those for whom they are not in any way responsible. But such is the stern law of public trade and dealing. It is hard, and yet there seems to be no other safe way of escape.

Seasonable Articles, that are articles given at the right time for putting into practice the suggestions contained in them, have been strongly urged at times. What is the use of giving advice about a thing just as the time of year has ended when that advice can be put into practice, and nearly a year must intervene before the next opportunity to try it? In spite of that, F. L. Thompson advocates in the Progressive Bee-Keeper that the close of the swarming season is the best time to discuss the swarming problem. And he gives reasons for it that are not to be despised. Right when a thing is yet fresh in mind with all its particulars is a better time to give it than to wait till particulars are partly forgotten, and enthusiasm has died away. One or two bees at a time are allowed to escape, in many cases, if not in most cases, the bee-keeper concludes he will not write at all.

A horticulturist once gave as a rule for the best time to prune trees. "Prune when your knife is sharp." It may be a good thing for the readers of this journal to follow something like the same rule.

Whenever you have any item that you think would benefit some other bee-keeper, sit down right and write it off, in season or out of season. Sometimes some little thing will be learned, and just because it is a little thing it is not thought worth while to send it. Bee-keeping is largely made up of little things, and many a beginner strikes upon a little thing that some of the veterans have not yet learned, and will be glad to know.

When you have gained some new light, send it in. If it is something that is so generally known that it is not worth while to print it, you need not feel hurt that it does not appear in print. But the danger of that is small. A good many things bear repeating.

Don't be afraid to add your mite.

A Novel Method of Feeding Back to get unfinished sections completed is thus given in the Bee-Keepers' Review by Fred H. Fargo:

The honey to be fed back, which may consist of unfinished sections, or any combs of suitable honey from three to four pounds in quantity, is daily placed in a hive (the entrance to which must be contracted to admit two bees at a time), and a few rows from the apiary, and not a great distance from the colony upon which are placed the unfinished sections to be completed. A section of honey, bruised so that the honey is ready to run, and covered with bees, is then taken from the colony upon which are the unfinished sections, and placed in the hive containing the honey to be fed. Or, we can place a section or piece of comb honey on the alighting-board and leave it there until sufficient bees from this colony are taking the honey, then place in the hive as above stated. These bees, thus carried from their home and placed in a hive containing honey, will work back and forth between this hive and their home, carrying the honey to the last and the strange part of it is that they will defend both hives from robbers.

In selecting the colony to do this work, choose one containing good workers that will protect their own home against the intruding robber-bees. The fact that the work of carrying away the honey is commenced by bees that are all from one colony accounts for their combining in a defense of the spoil.

Commenting upon this, Editor Hutchinson says:

"If one had broken pieces of comb honey, that method might be all right; but for the feeding of extracted honey I think that I should prefer a regular feeder that could be set upon the top of the hive in which the work is being done."

It is barely possible, however, that in some cases there would be an advantage in Mr. Fargo's plan, even if the feeding were done in the usual way. It is probably always the ease that when there are sections to be finished, there are at the same time sections that contain only a small amount of honey, that amount being so small that instead of trying to get them finished by feeding back it is better to have them emptied out by the bees so as to be used as baits the next season. If it is true that in all cases the bees will defend the robbed pile as Mr. Fargo says (there seems some reason to believe it when it is remembered that there is often severe fighting among robbers), then two birds may be killed with one stone. When the light sections are put in a pile to be emptied out for baits, as is the practice of many, instead of letting all the bees of the apiary work upon them, just take Mr. Fargo's plan, and let the honey be all used by one colony.

Washing Black Combs.—It is well known that combs become black with age, especially those in which brood is reared, but it is not so generally known that when such combs are dipped with water and allowed to stand a few days the water becomes inkly black. It is reasonable to suppose that when so much of the dark color is soaked out by water, at least some of it will be absorbed by honey, hence it has been the practice for some time, when a choice article of white extracted honey was wanted for show purposes, to use only new combs for extracting. It is suggested in Gleanings in Bee-Culture that the same end may be reached by washing the coloring-matter out of the old combs. "Lay the combs flat, fill the cells with water from the nose of a watering-can, then after soaking throw the water out with an extractor."
**Contributed Articles.**

**Making Swarms—How It Is Done.**

**By Dr. E. Gallup.**

On page 47n, is an extract on "Close Imitation of Natural Swarming," by G. M. Doolittle. A Langstroth hive makes a very convenient box with the entrance closed, and a board nailed on the bottom, for a clustering-box. You can set up the box open side outward, and let the bees come in the bottom and make the box, instead of waiting for them to run in, as in hiving. They will begin to cluster at the top end of the box at once. If you have two or more swarms come out at one time and crowd together, you can make a second swarm of more queens than one, and you wish to separate them, shake them into the clustering-box and let them stay for half or three-quarters of an hour, and the bees will fill the surplus queens, and roll down to the lower edge of the box, and you can cage them and then measure out the bees with a tin dipper, pour them down in front of the hives, and let them run in, the same as hiving a natural swarm.

I once caged eight virgin queens from one after-swarm, and they were so carelessly reared, as they were not good ones. In that case the bees hunt out the surplus queens for you. Sometimes they ball every queen, but not usually. It is an easy matter to tell whether every division you make has a queen by the number of bees. Bees in a clustering-box, or hived on empty frames without a queen, will very soon manifest uneasiness, and begin to run about, etc. If they have a queen they remain quiet. They will accept any strange queen—even virgins will be accepted, or a queeness, or a frame of brood containing eggs and unsealed larva.

Four years ago I had an observation hive in the wood-house, and the bees were passing out and in through a knot-hole. One queen was wanted. I flew through that knot-hole, so I went to work. I set up my clustering-box in the shade, went to a populous colony, carefully took out a frame of brood and adhering bees, shook the bees into the clustering-box, and as the bees were gathering nectar rapidly there was enough shaken on the bees and in the box to cause them to gorge themselves completely. I placed the comb back in the hive and closed it; I had not disturbed the old colony, either with smoke or drone-smoke. I went right along with the labor as usual. I went to four different colonies and took the bees from one comb, each in the same manner. I had my smoker on hand in case I needed it, but I did not have to use it, was careful not to get the queens from any hive I took a frame of brood from two different hives, inserting an empty frame in their places. It was in the middle of the day, so the old bees were nearly all in the field.

I placed the two combs with the adhering bees in a hive, and the cluster, all placed them in the wood-house, and now the boys have the satisfaction of seeing how the loaded bees throw themselves into that knot-hole instead of alighting on the outside and crawling in, as one would naturally suppose they would. The two boys take a great interest in the bees, so I am giving them lessons by actual demonstration.

One can make nuclei for queen-fertilizing or introducing at any time, in the above manner. If there is no sealed nectar to shake out with the bees, sprinkle them with diluted honey or melted sugar of the right consistency, so they will fill themselves. Be careful not to excite robbers at any time when the bees are at work. If there is danger, go through the operation just at night. I learned all those kinds of making swarms, nuclei, introducing queens, etc., in old box-hive times, from my old friend Wellhausen, years ago. It takes all the fight out of a bee when she is wounded with a stick, and then I am able to take the clustering-box and letting them stand awhile. They can then be hived and placed where we want them. They are to all intents like a natural swarm. One can take a pint of bees, mix them up with forty or fifty colonies and let them from a dozen colonies. Mix them all up in a clustering-box, and make a good swarm without perceptibly weakening the old colonies, and you get bees of all ages, the same as in nature. I was always taught that it makes them work with an extra vim.

I have occasionally received a queen from some friend, and have no colony that I wanted to introduce her to. So I have a swarm of bees from several different colonies. As soon as the bees manifest their queenlessness, hive them and let the queen run in with them, and the job is done.

In introducing a virgin, hive them on empty frames, and let them stand for a few hours, say over night, before giving them a frame of brood and honey. For I always like to set them up by themselves, as sometimes if they are not satisfied and will start queen-cells if given eggs and larvae at once. When we have a swarm, sometimes the weather turns bad for a few days, and then they need honey in the hive, or ought to have it.

I have moved my bees at times from one position to another by shaking and brushing them from their combs into a clustering-box, moved the hive to the new stand, and then let them stand awhile in the box, and they are moved.

**Italianizing Colonies of Black Bees.**

**By G. M. Doolittle.**

A CORRESPONDENT writes thus: "I am a beginner in bee-keeping and wish to know how I can best manage to Italianize ten or twenty of my black bees with the view of being least liable to go wrong. I am taking the American Bee Journal and am so captivated with it that I am anxious to know how others have met it away for reference. And so I should like to have you answer through this paper, and then I shall have your answer where it will not get lost."

Well, your last thought is one not often hinted at, and I must confess it is the black eaters, or what I shall hereafter meddled away for future reference. I have mine so filed, and there are few things in the back volumes of these papers, which are of practical value to the apiarist, but what I can turn to them, I can give you a very short time. If moving the beekeepers realized the value of the back numbers of the bee-paper they are taking, there would be more wisdom in our ranks than is often manifested, and less bee-papers found among the bundles the "paper-rags-buyer" carries off after visiting their homes.

But to the question: The Italianizing of your apiary depends upon whether you are desirous of doing all the work yourself, and thus learning all the little kinks of queen-rearing, or whether you simply wish to have all of your bees of the Italian variety as speedily, with no further attention being paid to the matter. If the latter, then I would advise buying untested queens of some reliable dealer; learn through him how to introduce them safely, and when introduced successfully you will have solved the matter.

If, on the other hand, you would like to know something of queen-rearing yourself, and no bee-keeper is fully a competent bee-keeper until he is perfectly familiar with the habits of the worker-bee, the queen, and their dependence on the queen-breeder, each one being good enough to stock an apiary with, and rear queens from one and drones from the other. Keep down all black drones by using only worker-combs and the comb of brood. These will make a piece three or four inches square in one comb, keeping that comb in a certain position in each hive, so that once every three weeks you can take these combs from the hive and shave the heads from the nearly mature drones.

Then if you paint that portion of the top-bar red, right over where the drone-comb is, you can at once tell where this comb is, should the frame get misplaced, from any reason, and if you have this comb near the top-bar to the frame and you keep the frame near to the side of the hive, you will rarely have to decapitate the drones more than twice a year, for it is natural for the bees to store honey at the top of the outside frames, and as soon as honey is stored in the comb, that ends the drones for that year. In this way you will have no black drones, and if your neighbors do not keep bees, and there are no colonies of black bees in the timber in any woods not nearer than four miles of you, you will have little difficulty in having the majority of your queen-mating bees black. I shall generally keep Italian, no matter whether you increase to 1,000 colonies, or allow them to remain at their present number.

But should there be black and hybrid drones in your neighborhood, do not become discouraged, for your young queens will breed true for the most part. The drones and the queens in this country are so hardy that the next year the most of your queens will mate with these. When, by selection after you have seen the progeny, you can soon have the apiary stocked with new drones.

By adopting this plan of rearing your own queens you
I BELIEVE, Mr. Bond, I promised yesterday to tell you about robbing in the apiary, when I could get a good opportunity. Well, I just noticed something about this drone-beheading business that has brought the mind to mind again—I mean those shavings from the drone-comb which I carelessly allowed to fall to the floor, and forgot to give the diron wood attention to, because I believe that fully seven out of every ten instances when robbing breaks out among bees, it is owing to some violation of an important rule—some thoughtless transgression of the law of vigilance, which in an apiary is always in force.

The sight of those drone-head shavings reminds me of an experience with the worst case of robbing I have ever been compelled to deal with. It was my first experience in api-surgery—the process of the sixth of Aug. I went from hive to hive in my search for drones and sliced all the drone-brood I could find. I found it harder work than I had anticipated, and it took more time than I had counted on; but it proved to be of inestimable importance in the course of that experience I failed to see—or foresee. I would better say.

Well, I was at the sixth hive in the course of my work when, suddenly I thought—but the fact is I have been too eagerly engaged in the work to notice anything else going on around me, and I was not aware that a large number of bees going over my head. For the first time since I had begun the job I looked up—and for about a minute by the clock I kept looking. It took that long for my startled mind to realize the little thing. 

"Robbing!!" I exclaimed aloud to myself, when I had finally taken in the most prominent signs and symptoms of the case.

Under ordinary circumstances I would have tried to figure out what was going on, or, on this sudden outbreak, before doing anything else—my mental machinery is built that way—but I had quick wit enough, for the moment, to see that this was no ordinary case of robbing. This was plainly evident to the naked eye, for the air was full of bees; I saw that a large number was going on in a darting—not merely flying, mind you, Mr. Bond—in every direction, and with a noise which I can't describe, but which sounded in my ears for weeks after.

"It is not usual for me to lose my head on the occasion of an apiary case, or, on one of this sudden outbreaks, before doing anything else—my mental machinery is built that way—but I had quick wit enough, for the moment, to see that this was no ordinary case of robbing. This was plainly evident to the naked eye, for the air was full of bees; I saw that a large number was going on in a darting—not merely flying, mind you, Mr. Bond—in every direction, and with a noise which I can't describe, but which sounded in my ears for weeks after.

"But that was not all, as I found when I came near the end of the row, for there stood the second of those hives open—I had forgotten to replace the cover. This alone is often enough to start robbing in an apiary, but here it was aggravated by a combination of circumstances. These circumstances, however, could not have combined to operate against me had I been thoroughly informed as to certain details. I did not know that the afternoon would not do as well as the forenoon for such a job of manipulation. Neither did I then know that it was not a good time for such a job when all the colonies are comparatively idle and are preparing for winter. And I tell you this, the fact that bees are never idle or quiet during the daytime unless there is no honey in the fields.

"And I tell you this, the fact that bees are never idle or quiet during the daytime unless there is no honey in the fields."

"The fact is—and I may as well own it, Mr. Bond—I had at that time a slight attack of a complaint known as 'big-head.' Nearly all bee-keepers have had it, more or less severely—usually during a fever caused by unexpected success. I imagined that I had already mastered the intricate science of bee-culture when, in truth, I had many of the most important things yet to learn. I had made the mistake, too, of supposing that because I had read two or three kinds of bee-books I had nothing more to learn. I have since learned that many essentials in the art of successful bee-keeping can not be found in bee-books—not because those who write bee-literature are not thoroughly informed, but because many things come to our knowledge by inference, and are not expressed in words.

"Well, I said to myself—I thought out loud during that exciting experience, Mr. Bond—"this is a sweetness! If only I knew what to do! But I can't think of a blessed thing I ever knew about robbing! And it's getting worse and worse all the time! The fracas is on all along the line—and getting worse at the other end, I declare!"

"At this moment I heard some one shouting my name, and on looking around I saw my dear little wife—any possibility of helping me to finish robbing the honey at the kitchen doorway, gesticulating, and shouting: ' Shut the hives, John! Shut the hives, quick!'

"I didn't at once understand what she meant by 'hives,' not being aware that more than one was open; I had enough reason to turn to me so that I could see the hive right before me and the cover by its side. I had been too completely dumbfounded to see that first important thing to be done toward controlling the robbers! I quickly put that to right, and, robbing them, I could not help seeing another all the way from the house. She pointed toward the end of the line of the six hives. I ran in that direction and slapped the cover on that hive in a jiffy. In the midst of excitement and having the robbing going on, I had left the hive without replacing the cover, and the robbers had discovered my mistake before I did.

"What did you do next?" queried Mr. Bond. We were walking toward the honey-house as I was talking; and, as I opened the door and asked him to walk in and take a seat, I answered:

The next thing I did was promptly to execute another suggestion my wife made to me, and partly executed herself when she came running toward the apiary with an armful of quilts and pieces of carpet, calling as she ran, 'Here, John! Take these and throw one over each of the hives most in danger, and call this the daytime work all the way around.' And then she wanted to know whether she hadn't better get her bee-veil and help me get out of the scrape! I tell you, Mr. Bond, it never pays to ignore our women-folks in this business. They remember things better than most of us men, and they nearly always know what to do in sudden and perplexing emergencies.

"Did that put a stop to the robbing?" Mr. Bond inquired, as though not having heard the last sentence.

"No, it did not. But it seemed to bother the robbers for awhile, as my wife suggested it would. But by this time I had recovered my wits, and was now ready for further development. I didn't dare to close, or even to contract very much, and I knew that my hives were safe. I had experienced a fine colony in that way the year before, and by the same process also ruined two supers full of nicely finished section-honey.

"Not knowing what I could do further to stop the robbing I got my sprinkling can and for an hour or more kept the hives where the bees were the most aggressive wet all the time. Soon after, night came on; and that put a stop to the business for that day.

"Before I went to bed that night I got out my bee-journals and looked them over for articles on 'robbing,' I found some good things on the subject, and stored them 'for keeps' in my memory. No doubt I might have arrived at the same conclusion if I hadn't first came to hand, but not having an acute case of robbing on my hands at the time I did not charge my memory with the subject-matter, and hence my forgettery took charge of it instead.

"Well, one of the articles on robbing advised the putting into a raw of water. I proceeded to see what kind of water had that was being robbed, and then keeping it wet by sprinkling water on it at frequent intervals. That struck me as a good idea and I determined to try it next day if robbing remained.

"Another of the articles said, 'Take the hive that is being robbed and carry it into your cellar, if you have one and it's handy, and leave it there for a few days.' I thought that was a capital scheme, too, and resolved to try it next day, if necessary.

"In another article I found the prescription highly recommended, to change the location of the bequeathed hive, reverse the entrance-front, and cover the hive with a
piece of carpet to disguise it. I am not now certain that this triple-advice was given by the same author, but I am sure that I used it next day in that combination, and with satisfactory results.

"The straw recipe I used next day on those of the hives that were not badly afflicted, and it worked splendidly. I liked it especially because it called for no lifting or carrying of the heavy hive. I have often tried that since, and always with the same success."

"But the cellar recipe took the cake, of course—that is, as far as effectiveness went. It suited me too, because I wanted to test all these methods, and because I had a cellar; and also because it happens to be handy for emergencies caused by bee-frecasies, as you probably remember, Mr. Bond.

[To be continued.]"

**The People of Rochester, N. Y., v. The Bees.**

On page 483 we published a statement from General Manager Secor concerning the lawsuit between the city of Rochester, N. Y., and Mr. W. R. Taunt, a bee-keeper residing there. The National Bee-Keeper's Association helped defend Mr. Taunt, and of course won as usual.

Mr. Secor has forwarded the following copy of the brief submitted by Attorney Frederick L. Dutcher, counsel for the defendant:

**POLICE COURT, CITY OF ROCHESTER, N. Y. v. THE PEOPLE, v. TAUNTON.**

**Memorandum for Defendant.**

The defendant was arrested upon a warrant based upon an ordinance passed by the Common Council of the City of Rochester on April last, which provides in substance that no bees shall be kept or maintained within the limits of the City of Rochester, without the permission in writing of the lot owners owning lots within one hundred feet of the hives within which any bees are desired to be kept or maintained.

At the trial, the defendant moved that the warrant be dismissed and the defendant discharged, upon the grounds:

First.—That the ordinance upon which the warrant is based and which defendant is accused of violating, is unconstitutional and void.

Secondly.—That the ordinance in question is not fair, impartial and reasonable, but is oppressive.

Thirdly.—That the ordinance in question is an unlawful attempt on the part of the Common Council to delegate its power to private individuals.

Upon this motion, the defendant will not discuss the question whether the Common Council has power to prohibit the keeping of bees, as that question does not arise under this ordinance.

In the first place, the question whether the ordinance is unconstitutional, or whether it violates some other principle of law is a question of law for the Court, and must be decided irrespective of the facts in any particular case.

In People ex rel. Kraus v. Durston, 110 N. Y., at page 578, the Court says: "If it can not be made to appear that a law is in conflict with the Constitution, by argument deduced from the language of the law itself, or by showing in accordance to which a court can take judicial notice, then the act must stand. The testimony of expert or other witnesses is not admissible to show that in carrying out a law enacted by the legislature, some provision of the constitution may possibly be violated."

In the Matter of Elevated Roadway, 70 N. Y., at page 287, the Court holds that a Court can not take proof of facts for the purpose of showing a statute valid and regular upon its face to be unconstitutional.

So that the question whether the ordinance is fair, impartial and reasonable must be determined from the ordinance itself.

In Beach v. Public Corporations, Sec. 512, the learned author says: "It is a well-settled principle that a municipal by-law or ordinance must be reasonable. The Courts will decline to enforce it, it will be declared void as a matter of law."

And again at Section 514, the same author says: "It is, of course, a question of law and not of fact for the Court, and not for the jury, whether any specific ordinance is so unreasonable as to be void."

**First.**

The ordinance is passed under the so-called police powers of the City, but the police powers of the City are not above the Constitution and are subject to the control of the Courts.

In Re Jacobs, 38 N. Y. 98, at page 110, the Court says: "These citations are sufficient to show that the police power is not without limitations, and that in regard to the legislature must respect the great fundamental rights guarantied by the Constitution. If there were otherwise, the power of the legislature would be practically without limitation. In the assumed exercise of the police power in the interest of the health, the welfare or the safety of the public, every right of the citizen might be invaded and every constitutional barrier swept away. Under the mere guise of police regulations, personal rights and private property can not be arbitrarily invaded, and the violation of any of the fundamental rights of the legislature is not final or conclusive in such matters not that the legislature may. in the title to the act or in its body, declare that it is intended for the improvement of the public health. Such a declaration does not conclude the courts, and they must yet determine the fact declared and enforce the supreme law."

**Second.**

The ordinance is unconstitutional for two reasons. First, it is an attempt to take property without due process of law; and, secondly, the ordinance denies the equal protection of the law, as guaranteed by the fourteenth amendment to the United States Constitution.

In Steward v. Palmer, 74 N. Y. 183, due process of law is defined as follows: "Due process of law is not confined to judicial proceedings, but extends to every case which may deprive a citizen of life, liberty, or property, whether the proceeding be judicial, administrative, or executive in its nature."

In Re Jacobs, supra, the facts were that the legislature passed a statute prohibiting the making of cigars in tenement houses in New York and Brooklyn. The Court of Appeals set the statute aside as unconstitutional upon the ground that it was depriving persons of property without due process of law. The Court says, at page 104: "What does this act attempt to do? In form, it makes it a crime for a cigar-maker in New York and Brooklyn, the only cities in the State having a population exceeding 500,000, to carry on a perfectly lawful trade in his own home. Whether he owns the tenement house or has hired a room therein for the purpose of prosecuting his trade, he can not manufacture therein his own tobacco into cigars for his own use or for sale, and he will become a criminal for doing that which is perfectly lawful outside of the two cities named—everywhere else, so far as we are able to learn, in the whole world."

In the case at bar, the ordinance makes it lawful to keep bees in one part of the city, provided certain consents can be given; but to keep the bees in another part of the city would be unlawful if the consents were not obtained.

The Court further says in the case cited, at page 105: "The constitutional guaranty that no person shall be deprived of his property without due process of law, may be violated without the physical taking of property for public or private use. Property may be destroyed, or its value may be annulled; it is owned and kept for some useful purpose, and it has no value unless it can be used. Its capability for enjoyment and adaptability to some use are essential characteristics and attributes without which property can not be conceived; and, hence, any law which destroys it or its value, or takes away any of its essential attributes, deprives the owner of his property."

In Butcher's Union Co. v. Crescent City Co., 111 U. S. 746, Judge Field says: "The common businesses and callings of life, the ordinary trades and pursuits, which are innocent in themselves, and have been followed in all communities from time immemorial, must, therefore, be free in this country to all alike upon the same terms. The right to pursue them without let or hindrance, except that which is applied to all persons of the same age, sex and condition, is a distinguishing privilege of citizens of the United States, and an essential element of that freedom which they claim as their birthright."

In the same case, Judge Bradley says: "I hold that the liberty of pursuit, the right to follow any of the ordinary callings of life, is one of the privileges of a citizen of the United States, of which he can not be deprived without invading his right to liberty within the meaning of the constitution."

In the case at bar, the ordinance attempts to deprive a person of his property and prevent its use at the mere will of a private individual. The duly constituted authorities of the City do not act in the matter at all, but turn over their powers to private citizens who are taking the liberty at their own sweet will to destroy the property
belonging to another. Can there be any question that this is taking property without due process of law?

Secondly.—The ordinance is unconstitutional because it denies the equal protection of the law, as guaranteed by the fourteenth amendment of the United States Constitution. Upon this point, we will call the attention of the Court to the case of *Vick v. W. Hopkins*, 111 U. S. 356. In this case, the Board of Supervisors of the City and County of San Francisco passed an ordinance which provided that it should be unlawful for any person to establish, maintain or carry on a laundry within the corporate limits of the City of San Francisco, without having obtained the consent of the Board of Supervisors, except in the case of buildings constructed of brick or stone. It will be noticed that in the San Francisco ordinance the consent of officials was required, while in the ordinance which we are discussing, only the consent of private individuals is required. An ordinance which requires the consent of officials is certainly more reasonable and proper than one which requires the consent of individuals. Public officials are bound not only by the dictates of their consciences, but also by the weight of their judicial and executive responsibility to the people for their actions; while private individuals can act at their own sweet will. In speaking of this ordinance passed by the Board of Supervisors of San Francisco, the Supreme Court of the United States says, during the progress of its opinion: ‘We are not able to concur in that interpretation of the power conferred upon the supervisors. There is no machinery in the ordinances which points to such a regulation of the business of keeping and conducting laundries as the supervisors are especially empowered to do. A discretion is to be exercised upon a consideration of the circumstances of each case, but a naked and arbitrary power to give or withhold consent, not only as to places, but as to persons. The power given to them is not confided to their discretion in the legal sense of that term, but is granted to their mere will. It is purely arbitrary and acknowledges neither guidance nor restraint.’ And, again: ‘It does not prescribe a rule and conditions, for the regulation of the use of property for laundry purposes, to which all similarly situated may conform. It allows without restriction the use for such purposes of buildings of brick or stone; but as to wooden buildings constituting nearly all those in previous use, it divides the owners or occupiers into two classes, not having respect to their personal character and qualifications for the business, nor the situation and nature and adaptation of the buildings themselves, but merely by an arbitrary line, on one side of which the persons who are permitted to pursue their industry by the mere will and consent of the supervisors, and on the other those from whom that consent is withheld, at their mere will and pleasure. And both classes are alike only in this: that they are tenants at will, under the supervisors, of their means of Hiving.’ And, again: ‘For the very idea that one man may be compelled to hold his life, or the means of living, or any material right essential to the enjoyment of life, at the mere will of another, seems to be intolerable in any country which vests in a public authority the right and power of making rules as to the use of property, to which all similarly situated may conform. It allows without restriction the use for such purposes of buildings of brick or stone; but as to wooden buildings constituting nearly all those in previous use, it divides the owners or occupiers into two classes, not having respect to their personal character and qualifications for the business, nor the situation and nature and adaptation of the buildings themselves, but merely by an arbitrary line, on one side of which the persons who are permitted to pursue their industry by the mere will and consent of the supervisors, and on the other those from whom that consent is withheld, at their mere will and pleasure. And both classes are alike only in this: that they are tenants at will, under the supervisors, of their means of Hiving.’ And, again: ‘The same principle has been more freely extended to the quasi-legislative acts of inferior municipal bodies in respect to which it is an ancient jurisdiction of judicial tribunals to pronounce upon the reasonableness and consequent validity of their by-laws.’ And, again: ‘Though the law itself be fair on its face and impartial in appearance, yet, if it is applied and administered by public authority with an evil eye and an unequal hand, so as practically to make unjust and illegal discriminations between persons in similar circumstances, material to their rights, the denial of equal justice is still within the prohibition of the Constitution.’ And, again: ‘The discrimination is therefore illegal, and the public administration which enforces it is a denial of the equal protection of the laws and a violation of the fourteenth amendment of the Constitution. The imprisonment of the petitioners is therefore illegal, and they must be discharged.’

No authority is needed except the case cited. A reading of the complete opinion of the Supreme Court of the United States will show that that high judicial authority condemned in the most severe terms ordinances like the one which we are discussing, as being not only not reasonable, but a denial of the equal protection of the law.

**Third.**

The ordinance is void, because it is not fair, impartial and reasonable, but is oppressive.

In *Beach v. Public Corporations*, Sec. 90, the author says: ‘A city, although fully authorized to enact ordinances, can not pass unreasonable ones. The ordinance of a city must be reasonable. It must not be oppressive; it must not be partial or unfair.’ The same author says, at Section 512: ‘It is a well-settled principle that a municipal law or ordinance must be reasonable.’

In *Dillon v. Municipal Corporations*, Sec. 319, the author says: ‘In this country, the courts have often affirmed that general incorporated power of municipal corporations to make ordinances, but have always declared that ordinances passed in virtue of the implied power, must be reasonable and consonant with the general powers and purposes of the corporation, and not inconsistent with the laws or policy of the state.’

In the case of *Vick v. W. Hopkins*, supra, also held that municipal corporations must be reasonable.

Can it be said that the ordinance which we are discussing is reasonable?

It does not provide that citizens living within one hundred feet must give their permission to keep bees, but that the owners of lots wherever they may live must give such permission. These owners might live in New York, Buffalo, or in Europe, and have no personal interest in the matter, and yet their permission is required. Again, under this ordinance, permission might be obtained, and then, immediately afterwards, the lots within one hundred feet of the place where bees are to be kept might be sold, and permission would have to be obtained of the new owners.

Under this ordinance, a person who owns a lot in the outskirts of the City, a mile from any dwelling, might not be permitted to keep bees, while a person living in a thickly populated district can keep bees, if he get the requisite permission. In other words, under this ordinance, the owner of a lot in the center of a city or adjoining a municipal park may be permitted to keep bees, while a person owning a lot in the outskirts of the City would not be permitted to keep bees. In fact many illustrations might be given, and will readily suggest themselves to the mind of the Court, of the purely arbitrary character of this ordinance and the unjust manner in which it may operate.

The private citizen, from mere caprice or ill-temper or bad feeling against the bee-owner may deprive him of the use of his property.

In fact, the right depends wholly upon the personal inclinations and caprice of adjoining lot owners.

**FOURTH.**

The ordinance in question is an unlawful attempt to delegate the powers conferred by law upon the Common Council to private individuals.

Article Two, Section 12, of the City Charter, provides that the Common Council ‘has authority to enact ordinances not inconsistent with the Laws of the State, for the government of the City and the management of its business, for the preservation of good order, peace and good health, for the safety and welfare of its inhabitants and the protection and security of their property.’

This statute plainly contemplates that the discretion as to whether a certain thing is or is not a nuisance must be vested in the Common Council; but in the ordinance in question, bees are a nuisance, or that they should only be kept in certain prescribed portions of the City, but the Common Council has turned its powers and its discretions entirely over to private individuals. That the Common Council has not passed upon the question as to whether or not bees shall be kept, is illustrated by the fact that with the requisite permission of adjoining lot owners, bees can be kept in every lot in the City of Rochester. There is an ordinance in force which provides against intoxication in public places; but suppose an ordinance should be passed which would provide that a person might be intoxicated in a public place, provided he could get the written permission of every person owning property within a certain distance of the place where he desired to get drunk—could such an ordinance be supported in the Courts? And yet, such an ordinance would be precisely like the one in question.

In *Birdwell v. Clark*, 73 N. Y., 473, the Court holds that public powers of trusts devolved by law or charter upon the Common Council or governing body of a municipal corporation, to be exercised by or when and in such manner as it shall judge best, can not be delegated by such body to others.

The ordinance is not a determination by the Common Council that the preservation of good order, peace and health, the safety and welfare of the inhabitants of the city, and the protection and security of their property demands that bees shall not be kept; but the ordinance leaves such questions entirely to the determination of private individuals. Under the ordinance, there is absolutely no restriction to the keeping of bees in any part of the city, providing the bee-owner can obtain the consent of his adjacent lot owners. There can be no ques-
Caging the Queen During the Honey Season.

1. If you wish to cage a queen in the honey season, do you cage her in a fine wire cage, or in a cage made of Queen-excluding zinc?
2. If you had a queen that you could not use at the time, if you put her in a wire cage, and then in a hive, would the bees feed her? If so, what kind of wire should be used?
3. If you had a young swarm, and only wanted what honey you could get that season, would you cage the queen? If so, in what kind of wire?

Increase from Poor Honey-Gatherers.

I read on page 451 about a colony that gave twice as much surplus honey as the average does; and if an increase was made by swarming, it would be by the poorest surplus gatherers. Do you think that a good colony could not come from the poorer surplus gatherers? I do, for I bought a colony of bees where two small swarms clustered together, which were hived in an eight-frame hive. The colony got a good start last fall, but this spring it was weak; I think, because their queen was old. My bees did well this summer (for I think they have 50 pounds of extracted white clover honey), considering where I have kept them.

When to Buy Bees in Box-Hives, Etc.

1. If I bought bees in box-hives (the old kind), could I buy early next spring, and transfer to dovetailed hives before swarming-time?
2. What month in the spring would you advise buying?
3. How much sealed honey should be in eight frames to winter one colony? Give about the depth, as I am no judge of pounds in frames, as I am a beginner.

Hiving Swarms.

1. I noticed in answer to Ben Avon, in Gleanings in Bee-Culture, page 239, about hiving bees on empty combs, he puts four frames in the hive and then fills it with dummy's. What are dummy's?
2. Do you put on the hives of prime swarms surplus fixtures as soon as they are hived, with a honey-board between the brood and surplus?
The Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses.

By E. E. HASTY, Sta. B Rural, Toledo, O.

CO-OPERATION IN COLORADO.

W. E. Porter's account of co-operation in Colorado, on page 437, seems to show considerable success—a sort of boy-woodchuck success—and had to succeed, their local prices being cut down so low, and likely to go lower. Their being driven by their distance from market to act together in selling may eventually have a favorable effect on honey-selling anywhere. The boy who does not have to catch woodchuck may also go in to catch one.

WIRE-CLOTH OVER SMOKER-WALE.

So to keep that hounding "other fellow" from half spoil-
ing your smoker's valve with his bedaubed finger-tips—so simple—just a bit of wire-cloth put over. I'd go to work and thank Harry Howe for that, no one ever uses my smoker but myself. Page 444.

BEARS AND TURTLE'S EGGS.

We sometimes envy those who have the very best ranges of the world without thinking of the drawbacks. Where the ocean occasionally blows in almost all Baltic, and bears are pretty and come in, and both contingencies must be provided against—well, unless a fellow was pretty enterprising he might wish himself somewhere else. Stands seven feet high and bear-fence of barbed wire—say, dear Boss, ask him for a sample of that.

From Mr. Gifford's saying that sea-turtle's eggs are about as large as hen's eggs but not as good, I judge they use them— the better article being scarce in howling wildnesses. In a swamp near Fort Wayne, Ind., there used to be enormous turtles whose correspondingly big eggs provoked one to see if they could not be eaten. I have eaten them, but only a pretty hungry man would vote them worth eating. Page 444.

NATURAL INCREASE BY NATURAL SWARMING.

Dr. Miller touches a very sore spot, on page 445. Natural increase by natural swarming has many things in its favor. Perhaps the most important thing (most important if true) is, that the man who undertakes to improve bees, improves them the other way—disimproves them—and nature's proceedings are of larger scope than that. But we have to pause before the fact that the best colonies seldom swarm, and therefore we do not get increase from them but from poorer ones.

"DEAR BOSS" OR "DEAR BEESWAX."

And so instead of saying "Dear Boss," shall I say "Dear Beeswax?" Page 445-450.

The Crops of Wax-Scales.

If it takes 1,474,560 wax-scales to the pound, and the bee should increase a crop, the number of crops is 2,457,760. Comrundrum: How many crops will one bee produce as the result of a flow of honey lasting say seven days? I was going to say about three. But that would call for 8,192 bees. What's the matter? At least three things may be the matter. Possibly the secretions been add to the scale, and not been to reach up into finished wax largely increase the weight. It perhaps seldom happens that so much as a pound of wax is made during one run of honey. And perhaps my three crops from each bee should indicate in how rapid wax production crops of scales are raised? Possibly it may be already in print somewhere.

Let's begin again at the other end of the puzzle. A five-pound swarm (22,000 bees) need, in addition to the start their keepers gave till, a period of time to fill their chambers. If they really need 245,760 sets of scales, and nearly but not quite all the bees secret, that is twelve crops for each bee. So it looks as if when once begun the scale harvests came onerous than once a day. Page 446.

Evils of In-Breeding.

Apart the Simpson article on in-breeding, I am glad to see in-breeding opposed. Deededly harmful and "just awfully" handy. Often the ambitious breeder seems to have only the choice of breeding close, or giving up the thing he is working at. It is in us all to minimize too strongly evils of scents evens which we find very convenient indeed. The wise man should deplore necessary evils, not warp his judgment into praising them.

I can hardly agree that long tongues are merely a symptom of the long pole and the particular; it is not a symptom of the gale which swells them down. Pages 453-5.

The Home Circle.

Conducted by Prof. R. J. Cook, Claremont, Calif.

Kindness to Animals.

I have already, perhaps more than once, referred to thoughtful care and kindness in the treatment of our animal friends. I love the "Beautitudes," be they not fast locked in memory, but also enshrined in his heart. It is suggestive of that of the nine Beatitudes, the fifth, or pivotal one (and the one next to the "Blessed are the pure in heart; for they shall see God." Often I have heard a superintendent of public instruction, of Michigan, say that he would give a teacher a certificate who could not repeat the words to "America." Such a one would be incompetent in the line of patriotic instincts.

One is certainly better equipped for all life's struggle who has the "Beautitudes," not only fast locked in memory, but also enshrined in his heart. It is suggestive of that of the nine Beatitudes, the fifth, or pivotal one (and the one next to the "Blessed are the pure in heart; for they shall see God." Often I have heard a superintendent of public instruction, of Michigan, say that he would give a teacher a certificate who could not repeat the words to "America." Such a one would be incompetent in the line of patriotic instincts. Then, too, we ought to give earnest heed to our own reputation. The same blessed Book says: "Avoid the appearance of evil." How sadly must everyone be judged—whether we drive a lean, hungry, decrepit old horse. I can but think that such a one may well pray, "Lord be merciful unto me a sinner." Cruelty to a man, who can speak and defend his right, is indefensible; to a child unable to defend himself, it is despicable. "Lord be merciful unto him who neglects or mistreats his horse or cow? These faithful friends can neither defend themselves nor voice their ills. Shakespeare might well have said of such a one, as he did the miser, "I'd rather be a dog and bay the moon, than such a man." So much if we could all rise on that one, our pleasure, our profit, our reputation, were being weighed in the balance, we would clothe up the uncanny old ribs of the faithful old horse, and would feel more like men, in the assurance that we were not treading under foot that best precept—the golden rule.

All this is written because of an object lesson which our canyon experience brought to us. Each of two men—both splendid men—had their horses with them. These men were both of our party. They are men of high Christian character, and possess, deservedly, the love and sincere respect and esteem of all their neighbors and acquaintances. Yet in one respect there was a contrast. The horses of one were fat, fine and beautiful. Their round, plump bodies, and fine sleek, shining coats, showed that they were subjects of thought—
ful care and attention. There seemed to be a happy understanding between horses and master. Feeding and watering were always prompt, regular and generous. When out with the saddle, in climbing the steep, rugged mountain trails, a halt and rest was often necessary. If these were at all prolonged, the clinch was loosened. No wonder those horses were ready for the hardest climb, and stoutest pull, and it was a pleasure to note the pride which all in the family seemed to feel in these horses. I believe the horses felt the appreciation. It is a united family, and the horses may be counted in.

The other man's horse had ribs—great, big ribs—twenty-eight of them all standing out in boldest relief. He also had a sore shoulder. The feeding was not prompt, was not regular, was, I dare say, at times omitted entirely. This horse did not seem in love with life. Were I his master I should fear he did not love me. I am sure I should take no pride in driving him. And I hope I should have disturbing dreams, in which the 5th "Beatitude" and the Golden Rule would play a conspicuous part. I doubt if this horse was uncinced in the rest times, as he bore his owner or other up the steep mountain sides. "Old Tom" refused to draw his load as he came to the steepest, hardest climb. He seemed to say, "I can't do it; it is too hard."

I wish again to repeat the lines of Eliza Cook:

"Oh, if to us one precious thing
Not theirs—a soul—is given:
Kindness to them will be a thing
To bear it up to heaven."

MUSIC IN THE HOME.

I wonder if we all appreciate the added charm that music gives to the home. Charles Darwin made the lamentable confession that, whereas he, as a boy and young man, was very fond of music, art, and poetry, he gave his life so exclusively and so energetically to scientific research that he lost his love and taste for the other things. He did such grand work in science that we may the less regret the atrophy of the other qualities. He regretted this withering-up process, and said that were he to live his life over, he would give time to cultivate these other desirable faculties of his being. Does not the parable of the talent and the napkin urge us to round out our being and lives by cultivating all our faculties? I have had a somewhat similar experience to that of Darwin, and I also regret it. In my early life I was not only very fond of music, as I am still, but I quickly learned music. Hearing a piece sung once or twice, would make me able to sing it correctly. My daughter now sings, and some of her pieces delight me beyond expression. Yet, though I have heard them sung a score of times, I cannot sing them. Were I to live life again, I should keep this music in my soul, rich and full. I have missed much.

Again, I know of several who seemed to have little taste or aptitude in music, who, by study, have become fine musicians. Music is so rich a gift and so priceless an adornment in the home that its cultivation may never wisely be neglected. It refines performer and listener. It gives the healthiest and best recreation, the keenest and most wholesome entertainment. If anything will fasten the love of children in the home, and stay their footsteps from wandering away, it is music.

I wish all our home circles might be the center of fine and oft-recurring concerts, that all the members might be the more knit into one bond of love and good fellowship.
ADVERTISEMEN

To Our Shippers:

We were obliged to notify you a few weeks ago that one Joseph M. McCaul had leased our old quarters at Nos. 120-122 West Broadway, New York City, and had there started up business under the name "Hildreth, McCaul Co." and had distributed a multitude of circulars so worded as to create the impression that his business was a successor to or a branch of the business of Hildreth & Segelken.

For the protection of our shippers and ourselves, we at once instructed our attorney to commence action to enjoin the said McCaul from using the name HILDRETH in any manner whatsoever in connection with his business. On the 10th day of July, 1901, Hon. David McAdam, Justice of the Supreme Court of the State of New York, after a full argument upon the merits, issued a peremptory injunction, of which the following is an extract:

"And it appearing that the plaintiffs have for a long time been and now are carrying on business under the style of 'Hildreth & Segelken,' and that the defendant has recently opened a business at 120-122 West Broadway, in the Borough of Manhattan, City of New York, and is carrying on the same under the style of 'Hildreth, McCaul Co.,' and that such act is in violation of the plaintiffs' rights, and that the commission or continuance thereof, during the pendency of this action will produce irreparable injury to the plaintiffs; it is

ORDERED that the defendant (Joseph M. McCaul) and each of his agents, servants and employees and all other persons acting under his authority and direction be, and he and they are hereby restrained and enjoined from showing, displaying or otherwise using during the pendency of this action in or upon any papers, devices, sign or signs, or otherwise, in the business conducted by the defendant at No. 120-122 West Broadway, in the Borough of Manhattan, City of New York, or elsewhere the name of 'Hildreth' separately or conjunctively with any other name, designation or description."

Outside of our desire in our own interests to protect the name which we have built by years of satisfactory dealings with our customers, we hastened to procure this injunction as soon as possible, to prevent our shippers from being misled into sending their goods to one who would make an attempt to gain their trade by such a trick and device.

With thanks for the many expressions of good-will we have received from our shippers concerning this attempt to trade under our name, we are,

Sincerely yours,

HILDRETH & SEGELKEN,

265-267 Greenwich Street, NEW YORK, N. Y.
Drittner's Foundation! Retail—Wholesale—Jobbing.

I use a process that produces EVERY ESSENTIAL necessary to make it the BEST and MOST profiting for you and me. My PROCESS AND AUTOMATIC MACHINES are my two inventions which enable me to SELL FOUNDATION and Work Wax Into Foundation For Cash at prices that are the lowest. Catalog giving Full Line of Supplies, with prices and samples, tree on application. BEESWAX WANTED.

GUS. DITTNER, Augusta, Wis.

QUEENS

Now ready to supply by return mail, STOCK which can not be EXCELLED!!!

Bred under the SUPERSEEDING condition of the colony. GOLDEN ITALIANS, THE GREAT HONEY-GATHERERS. They have no SUPERIOR and few equal. 75c each; 6 for $4.00.

RED CLOVER QUEENS, the LONG-TONGUED ITALIANS, which left RECORDS behind in GATHERING HONEY; $1 each; 6 for $5.00.


Catal of free; send for same.

Bee's Supplies

Catal of Free.

1. J. STRIMINGH, 105 Park Place, • NEW YORK, N. Y. 12At Please mention the Bee Journal.

WHEN YOU SEE "HOUSE-HIGH, BULL-STRONG, FIG-TIGHT"' ADVERTISEMENTS THE PAGE WILL WAVE WICK WIK'S CO., ADIR, MICH. Please mention Bee Journal when writing.

An American M.

Bee's Did Fairly Well.
The bees did fairly well here the forepart of the season on white clover, but it all dried up. We did not have any rain for three weeks. It happened I think we will have some back honey next year.

Monroe Co., Wis., July 25.

Drott and Little Honey.

There is but little honey in southern Iowa, and in Missouri I think it is still scarcer. I had about 1,000 pounds from colonies enough to have stored 5,000 in a good season. The gathering came to a sudden stop in the early days of July. I have had swarms some seasons as late as July 15. I had the broad frames of a Jumbo hive. Our July was the hottest and driest anyone remembers. No rain up to June 27. We have had some rain now. Corn will make less than half a crop. Potatoes and garden vegetables are not over. I have no honey this June. I am going to have some of the swarms now. I am hoping for a fall flow. If it does not come I have the choice of heavy feeding or starving bees.

E. R. TULLI.

Bee's Have Done Well.

My bees have done well this season, giving me a nice surplus of white honey, with the fall flow now commencing and prospects good.

E. B. TURELL.

Geneseo Co., Iowa, Aug. 9.

Bee Selecting a Home Before Swarming.

Rip Van Winkle says, on page 492, he does not think that bee select their future home, for certain reasons. And I know they do, under certain conditions. Still, as a rule, they do not.

Years ago I kept bees in Canada, in box hives. I had a colony that swarmed the first year, and among the bees that were clustered on the outside of the hive would go into the hive, fill themselves with honey, and pack it closely in and under the hive. I had a colony for swarming, and it set in to rain, and continued more or less cold, windy and wet for eight days. Then the bees swarmed, and went directly to their selected (or where their selected) tree stood. The sun came out for half an hour, and the bees went to that tree, swarmed and selected the tree. I had two men shopping, and they reported that bee full of honey, an swarm of bees. So we cut the tree down, and not a bee was there. It was raining lightly when we cut that tree, but once the bees all go at once, almost like emptying a bucket of water by turning it upside down. It never rains without a storm. We went straight for their selected tree. They hazed about for quite awhile, and finally clas-
tered, and we bled them and took them home.

Another similar case was in Iowa. A swarm was prepared to come out, but the weather turned bad for eight days, and when they finally left in July, they kept on a surry. I ran about a mile into the woods and came up to them as they were going into their tree. They were heard by their loud hum or roaring at a distance of ten rods. I ran in the right direction, and then would stop and listen. The last run I made passed them about six rods. Of course I cut down the tree at once, and took them home.

A man at Linton reported a swarm of bees in his pile of fruit-boxes; that was four years ago, and he wanted me to get them, so I went and took them there. But they came the following day. The man saw the swarm there, and supposed they had already taken possession. Thus they were probably scouts from a clustered swarm. I do not believe one swarm out of a thousand looks up its locality before clustering in this climate, as there is no necessity for it on account of the weather being always favorable.

There was no rain on the 19th of last April. They had been clustered for two days, had dashed the limb of the tree where they clustered all white with wax. I now have eight colonies of them, Dr. E. Gallup, Orange Co., Calif., July 15.

No Rain for Over Two Months.

There has been no rain in this vicinity in over two months, and corn is ruined; there are dry and become dead, so no honey would be gotten for winter. Water in wells and cisterns is giving out, and fruit is scarce. Honey will bring a good price, or should do so.

E. T. Flanagan.
St. Clair Co., Ill., August 7.

The "Jouneer"—by the Original
Jouneer.

Upon receipt of the American Bee Journal for July 5, I was a little surprised,—gratified more than a little, and actually felt better over my condition. Mr. M. J. Y. reported that he uses in his enthusiastic praise of my quick method of getting bees out of an extracting-supplier. He has several of them, and he has never lost any. The "Jouneer," in my practice, was devised for the purpose of quickly riddling a shallow Heddon super of bees, and the crude affair filling out three or four boxes. He has about three years ago, worked so well that I made a neat, substantial device, constructed with a cloth bag upon the top of the super, the bees are caught, reducing the killing of bees to a minimum, and getting them in such shape as to dump them on the top of the extracting-supplier instead of scattering them all over the ground.

It seems to me that three years after description is a long time to be for beekeepers to catch on to such a very short cut.

But when I consider that my own enthusiasm over my device was somewhat curbed by the sort of half-way ridicule with which my statement in relation to its benefits were received by some of my brother beekeepers here, I do not wonder, then, that only one man, so far as heard from, has taken kindly to it.

Perhaps the name "jouneer" has something about it that excites the ridicule, or that the Rambler used it had some adverse effect. Any way, the bees are shaken out, they are given a sudden, quick jar, or for a more euphonious word, "jouneer, and the device, a "jouneer." I have used the principle more or less for the past few years, and have kept mum about it for fear of ridicule.

When I left my own apiary in the southern end of this State, in charge of other parties, I had a long string of bees turning over my jouneer to them. As the parties were very sensible young men, I ran the risk, first showing them by practical demonstration the use of the device and its effects. After the extracting season had well advanced, I received a letter from the parties, saying, "We are falling in love with your shallow super and the jouneer." That settles it as far as the Shaffner lives are concerned; they know a

Superior Red Clover Queen

For sending us One New Subscriber and 25 cents ($1.25 in all).

We arranged with one of the oldest and best queen-breeders (having many years' experience) to rear queens for us this season. His bees average quite a good deal the longest tongues of any yet measured. The queen bees are distant from Italy, having imported her herself. Her worker-bees are large, somewhat leather-colored, very gentle, and scarcely requiring veil or smoke. They stored red clover honey last season.

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This is a good time to send in your Beeswax. We are paying 25 cents a pound—CASH—for best yellow, upon its receipt, or 27 cents in trade. Impure wax not taken at any price.

Address as follows, very plainly,

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If you want the Bee-Book

That covers the whole Aplicultural Field more completely than any other published, send $2.50 to

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Send for circulars regarding the oldest and most improved and original Bingham Bee-Smoker. For 22 Years the Best on Earth.

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At Root's Prices.

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\[AN\ UNTESTED ITALIAN\]

For One New Subscriber and 25 cents ($1.25 in all).
good thing after they have used it, and have

gotten rid of the laborious process of brushing
bees from the combs.

It is just possible that others besides Mr.
Davenport have used the plan, or have tried
to use it; perhaps a comb or two has broken
down in the first attempt. I think they are
more likely to break in a frame deeper than
the Heddon—that may have condemned the
plan in their estimation: but what if a comb
does break now and then, has there not been
an immense saving of time? And the more
the plan is used, the more skill acquired and
less combs broken.

I think Mr. Davenport is entitled to some
credit for the use of the principle, for I have
used it only on similar supers, while he goes
further and uses it on deeper frames. Any
way, I hope the plan will be useful to other
kepers.

Fresno Co., Calif.

60 Pounds Red Clover Per Colony.

G. M. Doolittle says in the Progressive
Beekeeper:

For the past 30 years red clover has failed
to blossom in central New York, owing to an
almost infiniteesimal insect which works in
great numbers in each head, just before the
blossom would appear. This causes the head
to harden and no blossom to open. But this
year owing to our continued rainy weather,
or some other cause, we had fields red with
clover blossom again, and when the hot weather
came on the bees began to roll in the honey at
a rate never known before, outside of a
good basswood yield, and for three or four
days it was equal to any basswood yield. It
could leave combs of honey out in the bee-
yard all day long and not a bee look at the
honey, though several might be seen collect-
ing propolis off the ends of the frames where
they come in contact with the hive. And as
brood-rearing was pretty good, 37 days before
this clover yield began, from 50 to 70 pounds
section honey is the result from colonies
which had not been robbed of bees and brood
to make nuclei with, to rear queens for the
trade.

If I hear some one asking about the
"long-tongues," Well. I have not had time to
have any measurements taken, as I have
been too rushed this season hardly to sleep
nights, but if any have long tongues all must,
as I see little difference in the working of any
colonies, that is, against the crater-plate. This
and from the first crop of red
clover. The most claimed by those having
reared queens is, that they are on
the second crop, that is, of course combs, and then
the blossoms of the first crop.

The Root German Steam Wax-Press.

This is now put upon the market by the A.
I. Root Co. Copying after the Germans, who
have been ahead of us in this matter, a very
superior wax-press has been completed, which
is perhaps an improvement upon any
in Germany. It is of large size, holding
more than a bushel of combs at a time. Its
manipulation is given in Gleanings in Bee-Culture as
follows:

To use, the cane is placed on a common
stand, having with about three inches
to
water. The wire-cloth basket is filled with
old comb, slumgum, or any wax refuse. The
water is then added until the pressure-
plate is completely filled. The wire-cloth is
then set down on top of the can, and the
water is allowed to boil. The steam gen-
erated passes all through the mass, and when
the wax in the basket settles down, more re-
fuse is put in. After all the free wax is
steamed out, the screw and plunger-plate are
turned down. One person grasps the two
handles of the can, and another one turns the
screw down until a slight resistance is exerted. It
is then left for a little while when another
all along to keep up brood-rearing, and some-
times we get some surplus), we again go
through all, and, taking off the top (or third)
story, we go through the brood-chambers,
pulling all combs with honey in the top, or

Catnip Seed Free!

We have a small quantity of Catnip Seed which we wish to offer our
readers. Some consider catnip one of the
greatest of honey-yielders. We will
mail to one of our regular subscribers
one ounce of the seed for sending us
one new subscriber to the American
Bee Journal for a year with $1.00; or
will mail to any one an ounce of the
seed and the American Bee Journal one
year—both for $1.30; or will mail an
ounce of the seed alone for 50 cents. As
our stock of this seed is very small, better
order soon.

QUEENS! QUEENS!

From honey-gathering stock. Tested, $1.00; un-
tested, 75 cents. "SHEEP NOOK A.P.
JAMES WARREN SHERMAN.
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SAG HARBOR, NEW YORK.

Low Rates to Buffalo Pan-American.

The Nickel Plate Road are selling
tickets at exceptionally low rates to
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30 days. For particulars and Pan-
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ALBINO QUEENS.

If you want the most
prolific Queens—if you want the best
honey-gatherers you ever saw try my Albino.
Untested Queens in April, $1.00; Tested, $1.50.
J. D. GIVENS, Lisbon, Tex.

Please Mention the Bee Journal when writing
Advertisers.
the third super, and all the empty combs in
the two chambers of the brood-nest, arrang- ing
the combs so as to spread the brood, and
to push brood-rearing, as we want a great
force of bees just at the beginning of the
main flow, which will be about the first
of August.

The other super, containing the combs of
honey, is now set on top. This operation will
generally commence early in the month of
March, sometimes sooner or later, depend- ing on the earliness or lateness of the
season; and at this time, if the colonies
are overpopulous, combs of hatching
brood are taken from them and used either
to strengthen the weaker colonies or for
stocking nuclei. If some of the colonies have
already started queen-cells they are destroyed or ut-
erwise treated, and the white hive has
said something about swarming; but with
such a large brood-chamber, and providing
plenty of stores in the queen, there will be
very little if any swarming; but I gave the
foregoing for the "exceptions."

Now comes the time of our main flow, which is
just beginning; and we have above, in the
favorable we shall have strong colonies with
a large force of bees; and, besides having had
plenty of honey-flour, is put in this win-
time, we will have some surplus stored in the
shallow extracting-supers above.

When you start to get on the comb-
Baker reversible bottom-board, we proceed as
follows:
Prer set one of the section-supers down,
and on this set the upper (third) case of
the hive, without removing the cover.
Then move the frames with the double,
bottoms and all, to one side of the stand, and
in its place put the extra Danzebnaker-bottom
—the deep frames, without the cover, on the
upper one of the two brood-chamber cases,
and on this the lower one, thus cutting the
broom, will carry the honey up into the
upper frames in the center of the brood-nest for
the bees to remove, while the upper frames
are employed for the brood.

The two other supers, the section super
with the extracted-honey super above it, are
now set on top of the brood-chamber. Here
are two features of this system that you will
please; namely, in having bees first used to
storing in shallow extracting-supers; and
when we come to store the double, full and
clean boxes of honey can be produced between
such a super than where the cover is directly over
the frames, as it is in the shallow storage
-supers during the time before the main
flow, as we have honey coming in nearly all the
time, and it is really a little more necessary
for brood-rearing, it is stored in these
supers, leaving plenty of room for the
queen, while otherwise it would have to go to
waste or the bees would store it in the
brood-chamber, thereby crowding out the
queen.

With a set of these frames above, too, if a
colony has more honey in the brood-chamber
than is needed, the bees, when providing
room for the queen up into these frames,
also bringing the brood up to the
top of the frames.

California ! If you care to know of its
floral wealth, the climate or rainfall,
Climate or rainfall, see for a sample copy of Cali-
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The Pacific Rural Press,
the leading Horticultural and Agricultural
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Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

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Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.25, by mail.

Beeswax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

Please mention Bee Journal when writing.

More Bee-Keepers' Paradises....

E. R. Root has just returned from a 6,000-mile trip through some of the best bee-locations in the world, and has already begun his series of write-ups, accompanied with fine photos, in Gleanings in Bee-Culture. The following editorial appears Aug. 1, and will give something of an idea of what he will describe:

Some little time ago I promised to tell about the bee-keepers' paradise in Texas. I have this on the docket, and it will appear as I take up the line of my travels. But since running across that paradise I have run into two or three others. There is one west of the Rockies, in Colorado, that is not yet stocked with bees or bee-keepers; another one in Central Idaho—in fact, I do not know but the whole State. These will be described in turn. The fact is, millions of capital are being invested in irrigation; irrigation means alfalfa; alfalfa means a paradise for bees. But I found all along my trip that alfalfa-growing preceded bee-keeping by two or three years, for it seems to take about that length of time before bee-keepers find these gold-mines that have been hitherto unoccupied.

If you are dissatisfied with your present location, and for financial reasons, or on account of health, will be compelled to leave, subscribe for Gleanings in Bee-Culture, and learn something about the great South and the great West. There are many locations in the West that are not yet occupied—splendid bee-locations. If you wish to learn about them, send 25 cents for a six-months' trial subscription, or $1.00 for one year and one untested Italian queen. Or, send $2.00 and we will send Gleanings one year and one of our celebrated Red Clover Queens.

THE A. I. ROOT CO., Medina, Ohio.

George W. York & Co., 144 E. 18th St., Chicago, Ill., are headquarters for Root's Bee-keepers' Supplies in Chicago. Send to them for their free Catalog.
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National Bee Keepers' Association.
OBJECTS:
To promote and protect the interests of its members.
To prevent the adulteration of honey.
To prosecute dishonest honey-dealers.

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Membership Dues, $1.00 a year.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-label. It often serves to introduce the subject of honey, and frequently leads to a sale.

NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one of [the buttons] as it will cause people to ask questions about the bee-keeper, and many a conversation thus started would wind up with the sale of some bees."

There is an extra opportunity to enlighten many a person in regard to honey and bee-keeping in general.

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to beekeepers. It has a pin on the underside to fasten it.

Price, by mail, 6 cents; two for 10 cents; 6 for 50 cents. Send all orders to the office of the American Bee Journal.
The Buffalo Convention opens a week from next Tuesday evening, Sept. 10, in the Lecture Room of the Buffalo Library Building, at the corner of Washington and Clinton Streets, near the business center of the city.

We are looking forward to the largest gathering of bee-keepers ever held in the East. Chicago has set the pace, there being about 500 in attendance at one evening session last year when the National convention met here. There never had been anything like it, we believe—or at least not during the past eight years, as we have attended every national meeting during that time.

There are to be no papers read at this Buffalo convention. All the time is to be consumed in the discussion of questions. Such an impromptu program often proves to be one of the most interesting and profitable, when properly conducted. At least, the Chicago Bee-Keepers’ Association has found it so. But the main thing just now is to begin to get ready to go to Buffalo.

Pictures of Apiaries.—Some time ago we called for photographs of the apiaries of our readers, and quite a number have been sent to us. They will be used as time goes on. But we want more of them. If you have a picture of your apiary, why not send it to us? If it is not good enough to make a creditable engraving, we will tell you so, and return it, if you so request.

When sending, please remember to write your name and address on the back of the photograph, to avoid mistakes after we get it. Sometimes we receive several at one time, and desire to use every precaution to prevent errors.

Too Much Room in Spring has made sad the heart of H. H. Hyde, as he relates in the Progressive Bee-Keeper. It is the custom in his part of Texas to leave all the extracting hives on the hives during the winter, as the easiest way to take care of them. He says:

I had been drifting along like the balance, giving the question very little thought until this spring, which was a very late, cold, backward spring—the bees being very late and dilatory in breeding up. I very soon noticed that the single-story colonies, or such as had only as much room as they could occupy as needed, were outstripping those that had a large surplus in room. Single-story colonies soon built up strong and ready for the honey-flows, while the others were dragging along, and for a good part of the time only holding their own, the result being that when the spring blooms were in full vigor and there was no position to harvest the honey crop, I think that this has taught me a valuable lesson, and I am going to give every one else in this part of the country.

It is not difficult to understand why a colony should not do well in winter or early spring with a large empty space above it. It is too much like being outdoors. Heat rises, and in the winter time a thermometer will show the upper part of a living-room several degrees warmer than near the floor. If it is thought desirable to have vacant room in cool or cold weather, let it be below and not above.

Some Big Reports are assembled in The Pacific Bee Journal, including just a little to discourage bee-keepers in regions less favored than California. Emerson Bros. increased from 855 to 1,000 colonies, and took 40 tons of honey. C. A. Pyle increased 70 colonies to 102, and took 14 tons (100 pounds per colony.) J. B. McClure started in the spring with 230 colonies, and took 45 tons. A. Joplin with 225 colonies took 24 tons. G. Donbrowsky took 14 tons from 170 colonies, spring count. Merrier & Son, 50 tons from 255 colonies.

The Price of Honey is something that the bee-keeper sometimes finds it hard to settle upon. He is at a loss to know what price he should charge for his honey, or to sell it to a grocer or a private customer. It is a clear case that if he is to hold the trade of the grocer it will not do to sell to private customers as low as to the grocer, and it may be the better way to sell at retail at the same price as the grocer. But what shall determine the price to the grocer? G. M. Doolittle, in a conversation in Gleanings in Bee-Culture, discusses the matter very sensibly as follows:

Find the quoted price for each grade of honey which you have, in the city to which you would send your honey, did you ship any away, and then figure the expenses for freight, cartage, and commission out, and you will have what it is worth at your nearest railroad station. For example, the rates on comb honey from Skaneateles to New York City is 50 cents per 100 pounds. As this is cross weight, we find by a little figuring that about 55 cents per 100 pounds is what the freight will cost, and the cartage will bring it up to 60 cents. Quotations during the months of July and August are generally little more than nominal; but from them we will guess that fancy honey will bring from 13 to 15 cents this year. But unless your honey is exceptionally fine I should not put it above 14. Then as most commission men charge 10 per cent for selling, we have 14.40 as the cost of selling 100 pounds. This, added to the 60 cents freight and cartage, makes a cost of about 2 cents per pound to get our product to market, and the cash for it in our possession, so that, on the basis of these figures, if you can not sell the honey you have to Skaneateles and other places for under 23 cents per pound, you had better send it to New York.

"Well, I had never thought of reasoning it out in that way. I thought I ought to have 13 cents for it, or only one cent less than New York quotations."

It is an old saying, that ‘a nimble sixpence is better than a slow shilling;’ and I fear you will find that your honey will go very slow at 13 cents, while it would sell rapidly at 12 cents. Then there is a possibility that, when the market comes to be established this fall, honey may go still lower than the nominal prices we have used in which case it would be better to move it off rapidly by putting the price at 11½ cents, where a party will take a whole crate.

One phase of the case, however, Mr. Doolittle does not touch upon. In some places and in some years it happens that the local supply is so short that grocers send to the large cities for their supplies. In that case the bee-keeper would be foolish to follow the same rule as in years of full supply. It may be that grocers in Skaneateles never send to New York; it is certain that grocers within 100 or 200 miles of Chicago often send to Chicago for their supply. For the sake of illustration suppose the same thing should occur at Skaneateles. The crop is short, and the bee-keeper, following the general rule, sells to the grocers the few hundred pounds he has at 12 cents, the New York price. When these few hundred pounds are exhausted, the grocers must send to New York for a further supply, paying 60 cents per hundred freight, making the cost a little more than 14½ cents per pound. By what rule of right should the bee-keeper sell to the grocer for any less than this price? If he sells at 12 cents he is losing 2½ cents on every pound he sells. So when the crop is so short that part of the grocers’ supply must be secured from the large cities, the rule should be, not to deduct freight, commission, etc. from the city price, but to add to the city price the amount for freight.

Foundation Splints (instead of wiring brood-frames) have been warmly advocated by some bee-keepers. Splints about one-sixteenth of an inch thick are soaked in hot wax for the purpose. B. F. Averill says in Gleanings in Bee-Culture that he does not find it necessary to have the splints coated with wax. He merely presses the wooden splints into the foundation, having them longer than the inside depth of the frame so that the ends of the splints rest in saw-kerfs in the top and bottom-bar. They are put alternately on opposite sides of the foundation, six or seven to a frame, and no other fastening for the foundation is needed. One advantage is that the foundation is built right down to the bottom-bar.
Contributed Articles.

A Trio of Questions—Bee-Book Reviews.

BY PROF. A. J. COOK.

I REGRET if any one has questioned the wisdom or courtesy of my reviews of the bee-books. I believe we all—Dudant, Cowan, Root, and myself—wish only the truth. If we have made mistakes—and, of course, we all have—we are only too thankful that they be corrected. I always rejoice with exceeding joy at any kindly criticism of my books, or my journalistic articles. As Mr. Root said, I am not always right. If any earnest student thinks me wrong, I like to know, that I may re-examine, re-test, and very likely find I am in error. Then how quick I will be to correct; I am sure all our authors in question are of like mind.

There are two good reasons why these criticisms should not be withheld, viz:—
1. It brings mooted questions before us to be studied and rapidly decided.
2. Though possibly corrected in latest editions, the hosts have only the older editions, and surely they are entitled to have their text-books corrected.

BEES EVAPORATING HONEY IN TRANSIT TO THE HIVE.

The criticism of my position on this subject warrants reply. Surely, I seem to be almost discourteous and dogmatic, when I say, "I know bees never do this." I do not mean to call in question the truthfulness of those who claim to have seen the falling mist. I have never seen it, though I have tried to discover it often. When I say, "I know," I refer to the appended theory, "Evaporation of the nectar. If some one should report seeing a bee carrying a large drop of honey, and should add that he believed in an iron wedge weighing a pound. I would have no right to doubt the first part of the statement. I would have a perfect right to say I know regarding the second part.

The body holds the water in solution. It is a close integral part of the liquid. It can only be separated, so far as we know, by force, heat, or centrifugal motion. The bee can not possibly exert any of these on nectar within its honey-stomach. The statement of falling mist we may not dispute. The impossibility of evaporation we may affirm, and so say "we know." I repeat, if such droplets do fall from the bees, they are fecal, or respiratory—shall we say secretions?

KILLING BEES TO STING.

I also speak with a sort of offensive dogmatism on this point. I have over and over suggested to my students to perform the following experiment:
With a glove on anger the bees, till a dozen, more or less, sting the glove, and actually pull out their sting. Then they were to catch as many from the combs by taking hold of the wings. Each lot was put into a cage provisioned with honey or "Good" candy. In a few days all of the first lot would die, while all of the others would live for weeks. Often the second cage was peopled with bees taken as they were about to fly from the hive in quest of nectar.

This explains why Mrs. Clark's bees that stung her cow to death were so generally destroyed. She reports that her apary was seriously depleted, while thousands of bees were dead near the carcass of the cow. We all know that bees may sting and not lose the sting. Of course, such cases may not prove fatal.

SCIENTIFIC USE OF TERMS.

The dictionaries are conservative. They allow expressions which experiment would permit. Physiologists do not confound digestion and assimilation. It would not be exact, and so would be unscientific to do so. Is it not wise to go to the best and latest specialists in physiology for our definitions? I say that digestion is to fit the food for absorption; and that assimilation has to do with metabolism or tissue changes. The entomologist is wise in not calling a larva a worm, for it is not. The entomologist might possibly use the term miller for moth; it would be rare, however, but be surely would not say moth-miller. He would as correctly speak of a female woman. Are we not wise to consult the up-to-date specialists in our use of scientific terms?


[The above article was received at this office the latter part of May, and through some unexplainable way was overlooked until now. We regret the long delay precedingly, but trust it has not entirely lost its value.—EDITOR.]

Valueless Figures as Applied to Bees—In-Breeding.

BY G. M. DOOLITTLE.

FREDERICK B. SIMPSON is one of the comparatively new writers for the bee-keepers, yet his articles are full of mortal errors. He seems to be one of those authors with which a queen-mate is entitled to probably the same share in the results [greater, in my opinion—G. M. D.] as the queen's mother, and also that the mother of the drones with which the breeding queen's daughters are also entitled to some share, his figures are of little value.

Just so. And even at the risk of appearing "sassy" I wish to say that his, "whereas the real cause of quality is ignorance, and not the possession of the original selection," is quite incorrect. The bee-books of the highest authorities would be the one to judge with which a queen-mate is entitled to probably the same share in the results [greater, in my opinion—G. M. D.] as the queen's mother, and also that the mother of the drones with which the breeding queen's daughters are also entitled to some share, his figures are of little value.

I, in the American Bee Journal for June 20, Mr. Doolittle gave us some figures, but as he has not corrected them, I think the one should be proved to be hereditary in each pedigree, as given in his "in-breeding" article, are equally of little value, as applied to bees. And all the illustrations which have been given in the bee-papers during the past 30 years, no matter by whom given, as comparing the breeding of horses, sheep, poultry, or swine, with that of breeding queen-bees, have been equally valueless, for there is no common ground (on which to stand) between them.

Suppose Mr. Simpson, with all his horse knowledge, was asked to turn out a mare out of a 10,000 acre forest, filled with twice that many stallions of all grades, sizes and colors, she going way out of his sight and hearing before she met even a single one of them; of how much does he think it is? (2) When I read that a custom is to be hereditary in each pedigree, or about the "mother of the stallion with which he mated?" The fact is, the breed of queen-bees is the same the opening of the selection of drones, and all talk along the line of what drone any queen mates has no value attached to it whatever.

I have had a standing offer, outf or years, of $500 to the man or woman who would give me a practical plan whereby I could mate a queen-bee to any individual drone, with the same certainty that a horse-bred cosmic could make his stock. And I know of several other queen breeders who would give that from that twice that amount. Here is your chance, Mr. S. And not only a chance to get the $500, but also to prove the head of the best breeders of present and those who are to come after us during the centuries yet to come. And, until this problem is worked out, it is useless to talk about "hereditary," "skilful selection," how stupidly, how scientifically, and esthetically, or anything of the kind. And the "great big tent" plan, lately agitated, should it prove successful, would not at all meet the requirements of the Simpson horse-breeders, nor claim my $500 for that would be like turning out the mare, in the supposed case, into a forest containing from 50 to 1000 stallions, with the simple guarantee that they were raised from one mother. Some would be weaklings lacking some or all lines, lacking of proper form, proportions, etc., and would be something that no careful breeder would ever listen to, although it might be somewhat of an improvement over the first, or what we now have.

Those who have accused the present race of queen-
breeders of simplicity, and lack of insight into matters which go on behind the scenes. A, Mr. Simpson, why the regular contributors to the bee-papers have not shown any desire to give us any specific aid on this subject, is, because, under the present state of affairs, there can not well be. The present condition of the bees, and millions of drones, from scores and hundreds of hives, within a circle of five to ten miles in diameter, all congregating together, as the stallions in the forest, there is very little chance that any queen could possibly mate with a drone from her own mother. But suppose she did? Does not Mr. S. know that it would be only her mating with a half-brother? The drone is "the son of his mother," while the queen is the daughter of her mother and father. And as the drone is always, practically speaking, the son of his mother, in-breeding could be carried on for several generations, even with a full control of both queen and drone, before we could practically mate a brother and sister. And with the present conditions of mating, and the dearth of drones, there is no chance that it is simply folly for beekeepers to talk about in-breeding, or to say very much regarding the mating of the queen's way, as to what drone she mated with.

The very best I have been able to do on the drone-side, has been to keep a lot of drones from my best breeder, not nearly akin to the queen-mother, till fall, after other drones were killed off, then "hand pick" them, cutting out all the inferior ones, when I had some reasonable assurance that queencrowd was good. This was tried with some of these drones, providing that some other colony within the circuit of the flight of "drone and queen," did not have a failing queen, or was queenless, in which case there would probably be hundreds of drones from such a colony to where there was tens of my hand-picked specimens.

I spent much of the time during the later seventies and early eighties in trying plans for the control of fertilization, thinking them out nights and trying them days, besides nearly all the plans advised by others, and after having thought them out carefully? I finally settled down to try to do the best I could from the queen-side, which thing I have been doing ever since. But I am free to admit, with Mr. Simpson, that, if I could have had control of the drones, all the mate of the queen during all these years, there would have been more "value in the figures" than there is at present; although a yield per colony of from 60 to 90 pounds of comb honey from red clover this year, with little or nothing 20 years ago, proves that I have not labored entirely in vain.

Onondaga Co., N. Y.

(Continued from page 334.)

No. 12.—Practical Lessons for Beginners in Bee-Culture.

BY J. D. GEHRING.

One of the most serious of the short-comings among those who keep bees on the farm, is that they don’t know what to do with them in case of sudden emergencies. Robbing is one of the worst of these, please remember, Mr. Bond. Even if you reduce the present number of your colonies, as you now contemplate doing, down to one or two, you will need to be informed on this subject in order to be ready for business when the bees furnish the occasion.

A few years ago I sold a colony of bees to a man who lives two miles from here. If it had not been for the fact that his wife was crazy to have some bees, but didn’t know anything about managing them. But as he knew how, and wasn’t afraid of them, he thought they could risk it to begin with one colony.

Well, he took the hive I sold him home early in April. It was one of my best colonies. I instructed him how to make the bees mark their new location, and how to manage when a swarm should issue—the colony having a clipped queen.

A large swarm was secured all right some time during the month of May, and the queen taken care of according. But it was necessary to put another queen in, and I went and showed him how to put them on. All seemed to go well, except that no honey was stored in the supers, save a few pounds during the late season. I also instructed both of them one evening how to prepare the colonies for wintering, either in the trees, or in the cellar.

"Well, they thought I would be a capital idea to try both methods of wintering, so he carried one hive—the one containing the new swarm—into the cellar, leaving the mother colony out in the cold. The phrase, ‘out in the cold', is one severely emphasized by the fact—but I known to me till the following spring—that my friend neglected to carry out my instructions as to how the hive should be prepared for the outdoor siege. He didn’t even have time, he said, to take the sewer of nearly empty sections off before cold weather set in.

"One day in early April he came to me and requested that I should come and tell him what ailed his bees. The old colony, he said, was about played out, and the other hadn’t seemed to act right since he had brought it out of the cellar.

"When I had finished examining those hives I found no queen in the latter, and not a spoonful of honey in the former. Much I found four of them huddled together there. I told him to feed the honeyless bees at least a pint of syrup a day until fruit-trees were in bloom; and if more necessary, I furnished him a feeder and full instructions with. But that was all of little use again—about two days later. His wife thought it was too expensive to feed bees so much syrup; and, he, being more liberal, thought it took much too much. These points I got later, and from an outside source.

"Failing all else, he furnished a frame of brood, put it in place for him, and cautioned him to watch the hive very closely until a new queen could hatch out. He didn’t do it, although I had fully explained why it would be necessary. Then the colony, I am sorry to say, was destroyed.

"One day, soon after giving him the foregoing advice, he sent me word by telephone to come up as soon as possible—the bees were robbing. When I arrived on the scene an hour later I found the reverse of his statement to be only too true. The colony had been robbed! Not only the honey was gone, but all the bees also.

"On inquiring for particulars, I learned that early that morning the colony seemed to be all right, and busily working—‘lots of bees in the hive,’ he said. Here, then, was an entirely new—even to me—feature in a wintering success, which I couldn’t understand better than that, after realizing that resistance was useless, or worse, that colony of bees made a full surrender, filled up with honey, as they do when about to swarm out, and went with the robbers in a body. This is not to say that there were no robbers, there was. There was no other sensible explanation, as but a few dozen dead bees were found near the hive, and none in it.

"Before I left for home I requested my friend to show me the place in the cellar where the colony had wintered. There I found the solution of the case of the robbing: the dead queen on the cement floor of the cellar, among perhaps one-third of the bees, also dead! The foolish man had neglected to screen the bee-entrance, and had given the bees no ventilation in the hive; and he had also neglected to see to this until to this day, those people can’t understand how it was that I had an average, the previous season, of 75 pounds of honey to the colony, while they, only a mile away, and with two colonies of bees, did not produce even 50 pounds.

"I have related this case in detail, Mr. Bond, to show how absolutely essential it is to attend to all the details in the management of even one colony. It is even more important when you have one or two only, instead of 50, because, you lose one, or both, you are out of the business entirely.

"That’s a very interesting case," remarked Mr. Bond; and instructive, too, as far as it goes. But in telling the story you failed to tell me just what you did to those hives. Did you screen them for winter, each in a different way and place. I think I ought to know those details," concluded Mr. Bond.

I should have overlooked that fact if you hadn’t mentioned it," I replied; "and it’s the really valuable part of the story to you, too. Well, I can repeat the substance of
What I told that friend to do, and you can apply it next fall when it's about time to prepare your new colony out there for winter quarters, either outdoors, or in the cellar.

"Be sure to avoid, at the outset, the too common mistake of waiting with the winter-preparation work until cold weather has set in. Here in Kansas it is generally safe to wait until the middle of October—seldom as late as November.

"The first thing you must do has to be done whether the colony is to remain on its summer-stand, or to be transferred to the cellar, and that is this:

Prepare your bee-smoker as I have already shown you. Then you put on your bee-veil, remembering that at that season of the year the bees are much more touchy and liable to sting than during a honey-flow. Then you take your smoker and go to your hive. You have already given the bees a full blast in your hand. If you prefer to quiet the bees before beginning operations you rap sharply a few times on the outside of the hive. Then you wait about five minutes for the bees to circle about their hive. Then remove the cover in order to get at the super, which I will suppose you put on in time to catch the late surplus honey. This super you then take off, in the manner I have shown you, and set it, for convenience, on top of the hive-cover, where it is safe—if securely covered—until the rest of the job is done.

"You are now ready to loosen the ends of the brood-frames, with the tool you have brought with you for that purpose, and blowing a little smoke over the top of them while doing so, should the bees crowd to the surface and get in the way.

"When this is done you begin the real business to which the foregoing was merely introductory; namely, you begin in the middle of the brood-nest and take out the frames, one by one, examining each in succession to find the queen. It is the queen you are really after, more than anything else, because the prime object of this whole performance is, to ascertain—not to guess at, as many keepers of bees do—the fact that the colony has a queen. It is very important for you to be sure of this, not because the colony couldn't live through the winter without a queen, for it can; but because you then begin to look about for operations in early spring without a mother-queen. You could not, of course, very well go through such an operation in February or early March in order to find out what you should know before you shut the hive for the winter. I hope you'll never forget that, Mr. Bond.

"Of course the fact will suggest itself that, after you have found the queen, and have estimated the honey in the frames to be fully sufficient to last them till spring, you replace all the bees and cover them snugly with a piece of fine burlap. You then put a rim—an old one, or one that you have cut to suit the weather at the time, and your work is done for outdoor wintering in Kansas.

"For cellar-wintering you do no packing on top. Neither do you take the hive to the cellar before cold weather has begun. Then you remove the entrance-blocks and tack a piece over the brood-frames for the same purpose. Prepared in this manner your bees are safe in a dry cellar. But if the cellar is too cold—that is, below 45 degrees at any time—a piece of burlap or a piece of old carpet over the screen on top of the frames. It will keep them warm without depriving them of needed air.

"As a matter of choice, the frames are placed in the cellar, always with the exposed faces toward the cold, but in the south, where there is not much difference in temperature, it is often better to put them in the north.

"And do not keep your bees in the cellar without a good supply of water. If you have a cellar, put it in the corner. If you don't, make a hole in the floor and fill it with a box of water. Do not let the bees pass through the cellar, or wash them unless you have a spare room for them.

"Here endeth the lesson."

Mr. Bond took dinner with us and then departed for home, having left his colony of bees with him, as happy as he had ever known a farmer to be.

(The End.)

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**Questions and Answers**

**CONDUCTED BY**

**DR. C. C. MILLER, Marengo, Ill.**

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

**Mulberries for Bees.**

What Dr. Peiro says on page 525 leads me to think that it is possible there may be two kinds of white mulberry, and if any one is thinking of planting largely it would be well to make sure of having the kind that he speaks of as bearing luscious fruit. In Pennsylvania I was familiar with the black mulberry, of which I was very fond. When I came to Illinois I found white mulberries growing wild (not in this county, but further south), but the fruit was insipid, and to my taste hardly fit to eat. I do not suppose it would be difficult to get bees to work on the crushed pulp of mulberries or any other fruit, but the question is whether what the bees would store therefrom would pay for the gathering and crushing. It would probably take a good deal to make old bee-keepers believe that bees could store good honey from the pulp of any fruit.

C. C. MILLER.

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**Milkweed Pollen-Masses on Bees' Feet.**

I send a sample bee. By using a microscope you will see a foreign substance attached to its feet, which prevents walking or working. The other bees are pulling them out, and carrying them off in large numbers. What is it? What particular plant or flower do they get it from?

- PENNSYLVANIA.

**Answer.—** The milkweed is the culprit. *Aesclepias Cornuti.* The pollen-masses become attached to the feet to such an extent that the bees appear not to be able to climb upon the combs. At any rate, their sisters drive them out. It is possible that enough is gathered from the milkweed more than to pay for the damage done; at any rate the loss is not serious, and there is nothing you can do about it.

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**Loss in Introducing Queens.**

A queen sent me arrived in good shape, and I introduced her according to directions, but the bees did not receive her. I have kept the colony supplied with fresh eggs to prevent laying workers, if possible, and to give them a chance to rear a queen, but the queen-cells they have started have all been with eggs that were too old. I examined them carefully before I introduced the queen, and destroyed all their queen-cells, and I am very sure there were no laying workers.

1. Do you suppose the presence of fresh eggs in the hive would prevent the workers from laying?
2. What is my trouble? — NEW HAMPSHIRE.

**Answers.—1.** Laying workers are not likely to occur if the bees are kept supplied with eggs or young brood. 2. In asking what is your trouble, you probably mean to ask what was done wrong that resulted in the killing of the queen you were trying to introduce. Perhaps there was nothing at all wrong on your part. The attempt to introduce a queen is not always successful. Nineteen queens out of twenty may be accepted all right and the twentieth rejected, although exactly the same plan was used with the twentieth as with the other nineteen, and no one can tell just why the twentieth failed. I don't understand what you mean by saying they started queen-cells with eggs that were too old. When bees are without a queen they rarely start queen-cells from the egg; nearly
always from larvae; and an egg could not be too old unless dead. Neither would they start a queen-cell from too old a larva if constantly supplied as you say with fresh eggs. But the presence of eggs and young brood would be no help toward the acceptance of a queen, for they might think they could rear a queen of their own, and thus reject the one offered.

If you want to take the trouble, you can make the acceptance of a queen a sure thing. Take two or three frames of just-hatching brood, with no unsealed larvae, put them in a hive without any bees, put in the queen and shut the hive up bee-tight, and keep it for five days in a warm place in the house, or over a strong colony with wirecloth between, so that the heat but no bees can pass up through. You can make sure of frames of the right kind of brood by putting frames of brood eight days in advance in an upper story over a queen-excluder.

Late Swarming.

July 25 I opened hive No. 1 and killed the queen; July 27 I gave a new queen to the colony, and Aug. 10 this same colony swarmed. I caught the queen and had the bees to return to their hive. Two days later I opened the hive and found one queen-cell; I cut it out, and handed it to my daughter, when, to her surprise, the queen left the cell and was born, as it were, in her little hand. I caged the young queen and returned the old one.

1. Now, why did they swarm so late, when the flow is almost over with us here in Pennsylvania, and starvation staring them in the face?

2. Is the young queen of any value to me, as I see no drones flying any more? Pennsylvania.

Answers.—1. You do not say whether you know that the queen which you caught Aug. 10 was the same one you introduced or not. It is possible it was the same, and that the bees were nearly ready to swarm when you introduced her, but the break in laying postponed their action. The flow being near its close would not hinder the swarming, so long as the flow continued, for the bees might expect it to continue indefinitely. If, however, it was a normal prime swarm, the old queen issuing with the swarm, a young queen would hardly have issued from the cell so soon as two days after the issuing of the swarm. It is more likely that the queen you introduced was killed, and that a young queen issued with the swarm, for when young queens are reared upon the killing of a queen, the colony is likely to swarm when it might have had no notion of swarming if the old queen had remained. Bees seem to be more reckless about swarming with a virgin than with a laying queen.

2. The young queen is probably all right. Even when you think all the drones are killed off, a few are still likely to be flying until cold weather actually comes. Indeed, they are sometimes allowed to go into winter quarters.

Fall Transferring.

I have several colonies of bees, purchased in box-hives, and I want to transfer them to dovetail hives. Would you advise me to do so immediately, or would it be preferable to wait until spring? California.

Answer.—You will probably do well to wait till spring.

An Introducing and Swarming Experience.

1. I had a colony swarm a week ago (June 15,) and when I hived them everything seemed to go all right. But, alas, towards evening they killed their queen, so I let it stand a day and I introduced a laying queen. But they killed her, too, so I was almost crazy, because it was a valuable queen. So I got a little hybrid queen, laid her above the frame for a day, and then I put her in an introducing-cage, but they would not eat her out. So I let her out myself, and she went to laying. Now the point is this: Yesterday they cast a big swarm. What was the object of their swarming? They had the old queen with them, because she was clipped. They have five sealed queen-cells. They had supers on, and lots of ventilation, and they had not worked in the super very much.

2. Do you think they will go right to business? There was a flow from basswood and button-ball. Illinois.

Answers.—1. I don’t know. When a strange queen is introduced, either because the bees are not quite satisfied with her, or for some other reason, they very often start queen-cells, and when these cells are sealed they sometimes swarm. But if I understand you correctly, these cells were in the hive of the swarm, and they were sealed within a week after the swarm was hived. This could not be, unless you gave a frame of brood to the swarm, in which case cells were probably started at once when the brood was given. Of course, these cells were not started from the egg, but over larvae already there, and cells being called post-constructed or emergency cells. 2. Very likely they will now settle down to business.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.
RUSTLER BEES AND AVERAGE BEES.

Among the two pen pictures of the rustler bees and the average bees, on page 462, I hardly know whether to applaud or scold. Guess I’ll scold. It seems to me that where colonies are not queenless, not excessively weak, and nothing special the matter with them, the working of the bees does not differ very greatly—or if it, does the keeper needs a thrashing. Mr. Schaeffer, hadn’t the heads of those average queens ought to come off—that the heads of their grandmothers ought to have come off long ago?

**The Home Circle.**

Conducted by Prof. A. J. Cook, Claremont, Calif.

WASTE-PAPER BOXES.

Our good friend, that prince of California bee-keepers, J. F. McIntyre, has left his canyon home, which has harbored him and his for near a score of years, and has gone to the city, which in the future is to be honored by having him as a citizen.

What could lure him from the restful quiet of that grand canyon, where he has always had Nature at her best, and at first hand? Then, too, his bees, which he loved so well, and has cared for so fondly and so wisely, must be left behind. He and the ripple of Wespe must part company. This, at times, was a rapid, roaring, resistless torrent, which then swept grandly by his very door. This Grand and no less beautiful environment must have become very dear to all the McIntyres—must have crept in with its refining, elevating influence to more rugged the honesty, more prompt the sympathy, more pure and high the aspirations towards better things. How could they leave such environs? Why did they hie away, even though it was to move to a beautiful city by the sea? It was not to change grandeur for grandeur, the close mountains for the equally close ocean, whose surf is ever beating the shore, and whose breakers are ever chasing each other landward, as if tired of their own restless plunging. It was a good purpose—that the dear children might have better school privileges.

Oh! but this love of children is a most blessed thing; though it call for heaviest sacrifice, its call is not in vain, but gladly heard and heeded. Mr. McIntyre, as in all his relations, shows here his good sense and wisdom. Education—the best—is the most precious treasure he can bestow on those lovely girls. To sacrifice, that such treasures may be granted, is the greatest gain. Those fortunate daughters will ever remember it gratefully—the justly proud parents will ever rejoice that they could do this good thing.

Well, I, too, have tasted our friend’s kindness. I drove myself during the cool evening eastward to meet several of the ranchers in the rich, beautiful “Mound District.” And the next morning he accompanied me to look in upon the incomparable begonias of Mrs. Theodosia Shepherd, who by her wonderful skill in breeding plants and developing new varieties, has gained a world-wide reputation. How much pleas-...
Surely, the city, in maturity, train and throw and daughters saw the whole God and Native paths, the fair must be on the streets, and show my appreciation of these fair daughters of fair Ventura. The half-filled boxes, and the neat paper-and-rubbish-free streets show full well that the ladies' efforts are not unheeded. This means a whole lot more than clean, tidy streets, it means a toning up of the whole child population of Ventura. Need I limit it to the children? We children of larger growth need just such toning up. If all parents had time and inclination to instruct the children never to throw the paper-scraps, the banana peel, or other filth and rubbish, into yard or street, then our walks, paths, streets and yards would be a "a joy forever," and not the unkept reservoir for rubbish and rot that so often offend and disgust us in our strolls and rides.

As we parents are too often remiss in this, or else fail to impress our wishes, it is good that such as the Ventura Native Daughters should come to the rescue. May we not all take a hint from them, and go and do likewise? As also do all we may by word and more telling example to aid in this good work of a wholesome cleaning up? Surely, Ventura is happy and fortunate, in having this ever-present reminder—I should have said reminders, for these boxes are very plural—not to throw the litter on walk and street, and to pick up any that more thoughtless, careless hands have cast away to disfigure the landscape.

How many of us, as we see the disgusting scratch of many matches on beautiful walls, or see the scattered matches on floor or walk, rejoice that the fond, eager, loving mother in the long years past, busy though she was almost to the limit often of strength and endurance, yet was not too busy to train us in better and neater ways. The little child that is so taught that it will never mark a wall, never scratch a match where it will mar and disfigure, never cast the refuse paper or fruit-peel where it will offend good taste, has received a lesson that will make it more a lady or gentleman, as it comes to maturity, and more a patriot as it pushes out to live life's battles. I feel sure that one taught care and thoughtfulness in these matters, will have such respect for law and order that it will take great temptation to move him to join mob or engene in riot. Surely, such teaching must be rife in all homes of Ventura. For only from neat homes could come the impetus that fixed those boxes on the many street-corners of beautiful "Ventura by the Sea."

I wish these words might move others to act for home and elty, that we may become a neater people in our home, as also in our suburban life.

PROF. L. H. BAILEY.

And do some of you—not too many, I am sure—ask, Who is Prof. L. H. Bailey? Well, he is an old friend and student of mine, who by hard, earnest work has become known the world over. He is perhaps the most noted and best known horticulturist in the world. He is professor in Cornell University and has written some of the best books on growing and caring for fruits that are to be found. He is also at the head of the great movement in New York State that has succeeded so gloriously in taking "Nature Study" to thousands of children in the rural and city schools. He has inspired the teachers to this same nature study, so that they can interest the children.

And not content with this, he has pushed on to the farmers and has inspired them a desire to know more and much of nature. So that thousands of them are again in school, so to speak, and are happy in quest of truth as found in study of plant, insect, soil, and rock. This nature study, as carried on in New York, is full of promise. It is making life fuller, brighter and better in thousands and thousands of homes. Prof. Bailey even prepares the leaflets and booklets that are to be used as lesson helps in this grand quest of truth. More still, he either goes or sends some one to schools and homes, to give added help and inspiration in this great and beneficent work. May we not pray that the Lord of the harvest may send more Balies, and may we awaken to more nature study every section and State in our beloved country.

I have had Prof. Bailey lecturing with us for two days in the University Extension work in agriculture. It was a great treat to hear him, and the great audiences just hung on his words. Prof. Bailey says his whole life has been turned, brightened and tremendously influenced by a lady teacher, whereby early in life he was led to study the tree. I visited his home while he was but a lad, and was delighted to find him authority on all the birds of his neighborhood. Later it was my delight to be for four years his teacher, and to watch with profound joy, his leaps and bounds into the realm of knowledge. Will not the nature-study work, inaugurated in New York by Prof. Bailey, discover to the world other Balies who will walk in his footsteps, and thus multiply the glad fruit that is sure to come from all such well-directed effort?

The home circles in the great Empire State who have tasted of this blessed nature study fruit, may well help to incite other places and States to "go and do likewise."

LAKE IN THE PAN-AMERICAN EXPOSITION GROUNDS.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at $1.00.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.
ADVERTISEMENT.

To Our Shippers:

We were obliged to notify you a few weeks ago that one Joseph M. McCaul had leased our old quarters at Nos. 120-122 West Broadway, New York City, and had there started up business under the name "Hildreth, McCaul Co.," and had distributed a multitude of circulars so worded as to create the impression that his business was a successor to or a branch of the business of Hildreth & Segelken.

For the protection of our shippers and ourselves, we at once instructed our attorney to commence action to enjoin the said McCaul from using the name HILDRETH in any manner whatsoever in connection with his business. On the 10th day of July, 1901, Hon. David McAdam, Justice of the Supreme Court of the State of New York, after a full argument upon the merits, issued a peremptory injunction, of which the following is an extract:

"And it appearing that the plaintiffs have for a long time been and now are carrying on business under the style of 'Hildreth & Segelken,' and that the defendant has recently opened a business at 120-122 West Broadway, in the Borough of Manhattan, City of New York, and is carrying on the same under the style of 'Hildreth, McCaul Co.,' and that such act is in violation of the plaintiffs' rights, and that the commission or continuance thereof, during the pendency of this action will produce irreparable injury to the plaintiffs; it is

ORDERED that the defendant (Joseph M. McCaul) and each of his agents, servants and employees and all other persons acting under his authority and direction be, and he and they are hereby restrained and enjoined from showing, displaying or otherwise using during the pendency of this action in or upon any papers, devices, sign or signs, or otherwise, in the business conducted by the defendant at No. 120-122 West Broadway, in the Borough of Manhattan, City of New York, or elsewhere the name of "Hildreth" separately or conjunctively with any other name, designation or description."

Outside of our desire in our own interests to protect the name which we have built by years of satisfactory dealings with our customers, we hastened to procure this injunction as soon as possible, to prevent our shippers from being misled into sending their goods to one who would make an attempt to gain their trade by such a trick and device.

With thanks for the many expressions of good-will we have received from our shippers concerning this attempt to trade under our name, we are,

Sincerely yours,

HILDRETH & SEGELKEN,
265-267 Greenwich Street, NEW YORK, N. Y.
A Good, Growing Season.
This has been a very good, growing season here. I feel sorry for some as Dr. Miller and others who have suffered from lack of rain. If the Dorothy had sent her bees and pasture here last spring I think Nature could have furnished the liquid tonic to have kept them going. White clover was fairly good, and bees worked well on it; basswood the same. Buckwheat is to be heard from. There is a big honey crop this year, and as the weather has been congenial for its growth, we may expect a good flow of honey.

M. P. LOWRY.

The Outlook in Washington.
All the spring and to the first part of July it was very wet and cold here. All through the clover season the bees did not do much more than make a living, although they were very strong in bees, but now they are getting some honey from more than 50 colonies. I think some of my best colonies have about 50 pounds of honey to extract, but I think the honey-flow will be cut short considerably by the forest fires now raging. I have three days I have been out in the timber with several other men fighting fires, and I was surprised to see bees working on the flowers where the smoke was so thick that we could hardly stand it. But even if the bees do work in the smoke, I think it will cut down the yield some.

HANS CHRISTENSEN.

Don't Make Wild Honey Reports.
I think it is utterly wrong for beekeepers to make such enormous reports as, "A good year for honey," "Best honey-flow in years," "Honey-crop ever known," etc. Any man with brains in his proper place can very plainly see that all such reports have a tendency to lower the price of honey, and while some may be quite true, I fear a great many report too early, having a large crop in view, with perhaps two or three dozen colonies of bee foragers in the pasture where they plan to gather honey, and they find themselves minus their honey crop, and buyers don't care to raise the price after it is once down. Hence it is folly to report.

Beekeepers should put their minds on a level with the facts before them. We rarely see a beekeeper who keeps bees for business making such a whoop, whoop, humdrum boy! It is the still waters that are deep, and where we catch our largest fish. I caught 22 nice ones, Aug. 16.

P. W. STAHLMAN.

Ancient Ideas of Honey.
I send a clipping which would doubtless amuse the readers of the American Bee Journal.
We laugh at the assumed knowledge of things related much of three and a quarter centuries ago; but many of the notions which we cherish and hug to our bosoms at this dawn of the 20th century will appear as ridiculous to our descendants at its close.

Columbia Co., N. Y.
JAMES McNEILL.

The following is the clipping referred to by Mr. McNeill:

HONEY FOR SCHOLARS.
"Honey and bread was a great meat with Pythagoras and his Scholars, and counted a sufficient food for a rational life. For it keeps the body, and honey both nourishes much and also cleanseth away superfluous phlegm being asked by Augustus the Emperor how he lived so long! By nourishing (satieth he) my body with


BEE-HIVES

Sections, Shipping-Cases—Everythig used by beekeepers. Orders filled promptly. We have the best shipping facilities in the world. You will save money by ordering for our Price-List. Address, Minn. Bee-Keepers' Supply Mfg. Co., Nicotol Island Power Bldg., MINNEAPOLIS, MINN.

SWEET CLOVER

And Several Other Clover Seeds.
We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

<table>
<thead>
<tr>
<th>Seed</th>
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<tr>
<td>White Clover</td>
<td>$1.90</td>
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<td>Brown Clover</td>
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<td>White Clover</td>
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<tr>
<td>Red Clover</td>
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Prices subject to market changes. Single packets (5 cents each) are issued, 25 cents extra for postage and each. Add 25 cents to your order, by carriage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO., 144 & 146 Erie St., CHICAGO, ILL.
Bees That Have a Record

(See page 49 American Bee Journal.)

Have longest tongues, handsome, gentle, great busters for honey, all tested queens, and sold at rate of $8 per dozen. By return mail.


BEE WAX

We will pay 25c, cash, for pure, bright yellow beeswax, and 30c. cash, per lb. for pure, dark brown, 85-90 per cent. 2TA13

TENNESSEE QUEENS....

Fine lot of Choice Tested Queens reared last season, daughters of select imported and select golden queens, reared 3/4 miles apart, and mated to select drones, $1.50 each; Untested Warranted Queens, from same breeders, either strain, 75c each. No bees reared nearer than 3/4 miles. None impure within 3, but few within 5 miles.

28 years' experience. Discount on large orders. Contracts with dealers a specialty.

JOHN M. DAVIS,

34 A St. 

SPRING HILL, TENN.

Please mention Bee Journal when writing.

COMPLETE POULTRY BOOK FREE.

Contains 36 pages, profusely illustrated, plans for houses, incubators, brooders, etc. Given free if you send this advertisement and 25 cents for a year's subscription to our Journal.

INLAND POULTRY JOURNAL, Indianapolis, Ind. 2PD1

Please mention the Bee Journal.

UNTESTED Italian Queens Free

By RETURN MAIL.

For sending us One New Subscriber for one year, to the American Bee Journal, with $1.00, we will send, by return mail, a fine Untested Italian Queen free. This offer is made only to our present regular subscribers.

GEORGE W. YORK & Co.

41 & 46 Erie St.,
CHICAGO, ILL.

Honey, and my outward parts with Arla. The like answer likewise made Dumpsicron, being demanded the like question. Furthermore, it was a general matter in the word of the mark, as old men agree, to take care of the long, bright, cleansing their branches, opening their pipes, warming their stomachs, resisting putrefaction, restoring the sweet and recommendable blood. Raw honey is never good, therefore clarify it thoroughly at the beginning. It is also good to put a little thyme and other good herbs in the oven. Then may you boldly give it as meat to young children, to cold and moist complexions, and to those sickly old men, especially in Northern Countries, and cold climates, and in the winter months.—From Dr. Thomas Fergusson, 1765.

Poor Season for Bees.

It has been a poor season here this year. What little honey there is has no good taste and flavor. It is worth about 30 cents per pound. There is nothing but pollen for the bees to get now, but they seem to be making good use of it, and are rearing lots of young bees.

Lafayette Co., Wis., Aug. 12.

Dreadfully Dry.

We have had dreadfully hot weather here. The thermometer registered 112 degrees in the shade. It completely dried everything. A few drops of rain are coming from the west. The weather is much more favorable now.

W. T. STEPHENSON.

Very Short Honey Crop.

In this section of country, with not half a crop of bees to start with last spring, I have taken 238 one-pound frames, or sixty-five colonies, spring count, and increased to 15. The weather was very dry, and white clover and many other plants yielded almost nothing. I know of but one bee-man that has taken any honey, and he had 50 pounds from 13 colonies. The bees have come the bee-papers—and can't afford it, they say. They have just as good pasture and bees, although my bees work on the clover and wild flowers.

What I know about bees I learned from the American Bee Journal. I bought six colonies from one of those fellows that don't read bee-papers. I paid 90 cents per colony for pure Italian bees in 10-frame hives. They worked on red clover for 50 days. I get 15 cents per pound for honey, and have sold 182 pounds, and the rest will be gone in a few days. I sell it right. I know my honey is not bad, I give the good "old reliable " American Bee Journal full credit for my success, and lots of pleasure besides. Without it I, too, would have said, "It don't pay to take beepapers!" and keep bees.

Hurrah for the American Bee Journal! Pike Co., Ohio, Aug. 12.

J. M. West.

An Experience in Bee-Keeping.

Three years ago I sent to a Tennessean for four 2-frame nuclei, at $2.50 each, after being assured that the express charges would not exceed 45 cents apiece; but when they arrived there were $7.50 express charges on them, and one of them was dead, and, of course, died. I never could hear from that firm again, although I wrote several times to them.

The other three nuclei built up strong, and filled the eight brood-frames. They wintered on the summer stocks all right, and the next spring, about June 1, they commenced swarming, and they did everlastingly swarm. I was away from home, and no one had any experience with bees, had her hands full. She succeeded in hiving six swarms, and she says five or six got away. Was a result of excessive swarming the original colonies were reduced so that they did not store much

QUEENS

QUIRIN— THE QUEEN-BREEDER — has now on hand, ready to mail, 500 young, long-tongued Red Clover Queens, Golden and Leather Colored.

We have one of Root's best breeders from his $20, long-tongued, Red Clover Queen, and a Golden Breeder which we are told worth $400, if there is a queen in the U.S. worth that sum. J. L. Gandy, of Humbolt, Neb., tells us that as the colony he had saved after five years, is now 400 pounds mostly comb honey in a single season. A. L. Root's folks say that our queen is extra fine, while the editor of the American Bee Journal tells us that he has good reports from our stock from time to time.

We have years of experience in mailing and rearing Queens. Queens positively by return mail from now on. Prices for balance of season as follows:

<table>
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<th>Grade</th>
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<tr>
<td>1</td>
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GREAT GATHERERS.

QUIRIN, Parkertown, Ohio.

(Parkertown is a Money-Order Office.) By contract this ad. will appear twice per month only.

30106

Please mention the Bee Journal.

SOLD OUT.

For SALE

9 3.5 acres, well suited to cherries, peaches, 2 plums, pears, apples, currants, raspberries, blackberries, and strawberries. Good house, barn, vegetable green-house, hone-house, 50 or 100 colonies of bees, situated in good bee-locale. Title clear. For particulars address, A. L. KILDOW, Shelby, Ill.

The Nickel Plate Road are selling tickets at exceptionally low rates to Buffalo and return for 10, 15 and 30 days. For particulars and Pan-American folder of buildings and grounds, write Mr. J. Calahan, General Agent, 111 South Main St., Buffalo, N. Y. Please mention Bee Journal at Root's Prices. Catalog free; send for same.

Low Rates to Buffalo Pan-American.

The Nickel Plate Road are selling tickets at exceptionally low rates to Buffalo and return for 10, 15 and 30 days. For particulars and Pan-American folder of buildings and grounds, write Mr. J. Calahan, General Agent, 111 South Main St., Buffalo, N. Y. Please mention Bee Journal at Root's Prices. Catalog free; send for same.
honey. We got about 50 pounds of comb honey from the new swarms, but none from the old colonies. Two of the old ones became queenless, and died during the summer. The seven remaining colonies wintered all right on the summer stands, but last season they did nothing. I got no increase and no honey, and they were light in the fall that I did not expect any of them to survive the winter. I think that fully 50 percent of the bees have been lost in this way during the winter. But by feeding mine pretty liberally during the warmer days of winter and early spring, all they came through in pretty good condition, and, notwithstanding that the extreme wind, heat, and drouth, my bees have done much better than could have been expected considering the very unfavorable season. They have increased just 100 percent, and most of them are beginning to work in the supers.

One of the old colonies, I think, is queenless, at least I have failed to find any queen, although I may have overlooked her. They have considerable honey and unhatched brood, but no newly laid eggs. I found quite a number of old, torn-down queen-cells, but no new ones.

N. A. CHEENEY
Barton Co., Kansas, July 25.

Drout and Heat in Iowa.

The drouth and heat have been hard on bees. Our hives are holding swarms after being hived. I got three swarms from one colony in five days, and they are doing well for a change this year. The forecast for the season was good, the bees having harrassed and white clover to work on. I am in a good location, on the Des Moines river.

W. Irvine, Sr.
Webster Co., Iowa, Aug. 12.

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**THE FINEST IN THE WORLD.**

Our New 1901 Fifty-Two Page Catalog Ready.

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Branch, G. B. Lewis Co., 19 S. Alabama St., Indianapolis, Ind.

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Please mention Bee Journal when writing.

25 cents Cash paid for Beeswax.

This is a good time to send in your Bees-wax. We are paying 25 cents a pound—CASH—for best yellow, upon its receipt, or 27 cents in trade. Impure wax not taken at any price.

Address as follows, very plainly,

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

If you want the Bee-Book that covers the whole Apicultural Field more completely than any other published, send 50 cents to Prof. A. J. Cook, Carmel, Cal., for his “Bee-Keeper’s Guide.”

Liberal Discounts to the Trade.

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**SEND FOR CIRCULARS!**


WALTER S. POUDER,
SIESS M.'S, AVE., INDIANAPOLIS, IND.

**A Superior Red Clover Queen**

(An Unstained Italian)

For sending us One New Subscriber and 25 cents ($1.25 in all.)

We arranged with one of the oldest and best queen breeders (having many years’ experience) to rear queens for us this season. His bees average quite a good grade, and the largest tongues of any in the country. The breeder he uses is the best from Italy, having imported her himself. Her worker-bees are large, somewhat feather-colored, very gentle, and scarcely requiring vell or smoke. They stored red clover honey last season.

All queens guaranteed to arrive in good condition, and all will be clipped, unless otherwise ordered.

We would like each of our present readers to have one or more of these fine Queens. Simply send us the name and address of a new subscriber for the American Bee Journal for one year, and 25 cents extra, and the Queen will be mailed to you. Our queen-rearer is now caught up with orders, and expects to be able to mail them hereafter within 48 hours after we receive the order. He is in another State, and we will send him the Queen orders as fast as we get them at this office. He is prepared to rear and mail a large number.

The cash prices of these Queens are $1.00 each; 3 for $2.75; or 6 for $5.00.

Send all orders to

GEORGE W. YORK & CO.,
144 & 146 Erie Street, CHICAGO, ILL.
boil is built over the cell, and this is built downward to make the full size desired. In the meantime the larva has been invisibly fed some grubs. The larva is turned out of the narrower part of the cell. Because such a queen-cell is built from a cell after it has been started as a worker-cell, it is thus amalgamated by a larva, it is called a post-construction cell.

You may not always be able to tell from outside appearance whether a cell is pre-construction or post-construction, but you can always tell by tearing it down and seeing whether it has a smooth conical base, or an angular and sharper base, like a worker cell. A pre-construction cell has an egg deposited in it, never a larva at the start. A post-construction cell is built over a worker-cell containing a larva, although in very rare cases it may contain an egg.

Editor Fout thinks it would be better to call them swimming-cells and emergency-cells. The name emergency-cells is entirely inappropriate, as applied to cells that are built to meet an emergency, and there is just as much appropriateness in the term swimming-cells when such cells are built for swimming. But to use it for cells that are meant for superseding, when there is not the slightest intention of swimming, seems exceedingly inappropriate.

Bees and Alalfa.

The introduction of alfa-flax into Kansas has made the State richer by one million dollars. But the discovery that the honey-bee can feed on alfa-flax blossoms has added another million. Bees and alfa-flax are an ideal combination. Experiments have been made by thousands of beekeepers and they report most favorably upon the blossoms of the alfa-flax.

Alfa-flax contains a certain degree of sweetness not found in either the sweet clover or white clover. Every stock-bred beekeeper that in-and-out in breeding will cause a deterioration in the honey that he produces. He is therefore in a position to give a new life and vigor to the breed. As it is with animals so it is with bees. A bee will produce honey that is as refined as it is to be by feeding the beekeeper a crop of alfalfa.

Bee-keepers can purchase this crop of alfalfa by buying the sugar, which is made from it. It is a sugar that is much more expensive than the sugar made from clover. The sugar, however, is the best that can be obtained in the United States. It is made by the bee-keepers, who do not have to pay for the sugar, as they do when they buy it from the sugar-refiners.

The price of this sugar is $1.25 per pound, and it is sent to the beekeeper in a large box, which is returned to the sugar-refiner. The sugar is then sold to the beekeeper at a lower price than the sugar that is made from clover.

FREE FOR A MONTH....

If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper published in the United States.

Wool Markets and Sheep has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested in Sheep? WOOL MARKETS AND SHEEP, CHICAGO, ILL.

FARMERS SAY

"PAGE FENCES have the most fence virtues and the least fence faults." AS 800. PAGE WOVEN WIRE FENCE, CO., ADAM, ILL. Please mention Bee Journal when writing.
WANTED.


Please mention the Bee Journal.

WANTED.

To Buy Honey

What have you to offer and at what price?

ED WILKINSON, Witon, Wis.

Please mention Bee Journal when writing.

Fancy White Honey Comb and Extracted Honey.

Delivered.

We pay cash, F. W. Mills, 417 S. Main St., Front & Walnut Sts., CINCINNATI, Ohio. Reference—German National Bank, Indianapolis.

Please mention the Bee Journal.

A party to manufacture PATENT COMB FOUNDATION on a royalty basis.

Also, 105 colonies of bees to sell. Will advance $5.00 each.

H. Vogeler, New Castle, Calif.

Please mention the American Bee Journal.

WRITE US

If you have large or small lots of honey.

State quantity, how put up, kind of honey, price expected, and, if possible, mail sample.

Reference—Wisconsin National Bank.

E. R. Pahl & Co., MILWAUKEE, WIS.

Please mention Bee Journal when writing.

WANTED.

Comb and Extracted Honey!

State price, kind, and quantity.

R. A. Burnett & Co., 197 S. Water St., CHICAGO, ILL.

Please mention the Bee Journal.

Standard Belgian Hare Book!

By M. D. Capps.

This book of 175 pages is a clear and concise treatment of the Belgian hare industry; its growth, origin and kinds; the sanitation and construction of rabbitries; selection of breeding stock; care of the young feeding, diseases and care of the fur, marketing, shipping; and all other phases of the industry. A complete edition of 500 copies sold was in advance of publication.

Price, in handsome paper cover, 25 cents, post-paid; or with the American Bee Journal one year—both for only 1.10.

GEORGE W. YORK & CO., 114 & 16 Erie St., CHICAGO, ILL.

Daily Excursions Via Nickel Plate Road Chicago to Buffalo and New York.

Special low rates and favorable limits to all points East. Call on or address John Y. Calahan, General Agent, 111 Adams St., Chicago.

21st—31st

HONEY AND BEESWAX MARKET QUOTATIONS.

CHICAGO, Aug. 22.—White comb brings 15c per pound, for the season, while clover honey does not grading No. 1 selling at 10c14c; light amber, 12c13c; dark, 10c12c. Extracted, fair degree for spot cash, sugar feed at 11c; white clover at 9c10c. Fancy white comb honey sells at 13c14c.

C. W. WEBER.

BOSTON, Aug. 19.—Our market to-day is about the same as last week, with prices for additional material greatly reduced. Several lots of new Vermont honey in cartons has thus far been received, at a ready sale at 17c, although of course in a small way. Extracted, fall supply, light demand.

BLAKE, SCOTT & LEE.

ALBANY, N. Y., Aug. 20.—We quote: Fancy white comb, 10c11c; No. 1, 15c16c; No. 2, 13c14c. Extracted, 10c12c; mixed, 6c8c.

OAHU, Aug. 8.—New comb honey is arriving by steamer in small quantities from Iowa and Colorado, and selling at 20c to 25c a case retail. California extracted honey is being offered cartons at 45c to 48c per box at the California shipping points, but we have not heard of sales having been made. The production of extracted honey seems to be quite large this year in Colorado, Utah and California.

CHICAGO, Aug. 7.—There is some demand for new crop of comb honey, and receipts are quite disappointing (1c to 1.5c a pound). It would appear that they have been principally from the South, but we have not heard of any shipments from New York State and near-by. We quote: Fancy white, 15c; No. 1 white, 13c14c; amber, 11c12c. New harvest is the nearest, and at this time we do not expect any before next month. Extracted is decided dull. Honey traders, with only a limited demand, and quotations are rather nominal. We are selling at from 30c, according to quality, and branding at from 35c per gallon. Beeswax dull and declining; for the week, 2c.

BRETHREN & SOEKOL.

DE LA MOYNE, Aug. 7.—There is very little buying here in new crop of honey. Some small quantities by production are finding their way to market and selling in a retail way at 50c to 52c a case. We do not look for much of a demand in this line before Sept. 1. Our market does not consume a great deal of honey and we sell only of new as yet.

PECKY BROK & CHACE.

DRENT, Aug. 12.—Fancy white comb honey, 14c15c; No. 1, 13c14c; no dark to quote. Extracted, white, 60c80c; light amber, 50c55c; amber, 42c45c. Beeswax, 50c80c.

BUFFALO, Aug. 10.—Quite a good demand for fancy honey, 10c14c, and lower grades, 12c16c in fair demand. Advise moderate orders, as there is only new as yet.

M. H. HUNT & SON.

SAN FRANCISCO, Aug. 14.—White comb, 11c12c cents; amber, 80c1lc; dark, 60c70c. Extracted, white, 55c65c; light amber, 45c55c; amber, 40c45c. Beeswax, 25c50c.

Ripon, Aug. 8.—Comb honey seems to be in plentiful supply, as a rule, unwilling to unload at prices generally lower by wholesale operations. Prices represent as nearly as possible the values prevailing at this date for round lots, although free sales continue. The market is large for both buyers and sellers, while, on the other hand, higher prices than quoted seem to be realized in the selling of some small orders.

KANSAS CITY, Aug. 6.—Some very fine Missouri honey is available for immence selling at 10c11c per pound for fancy white comb honey. Colorado and Utah shippers are offering new comb honey at 10c per pound for delivery, and No. 1 extracted at 8c per pound for No. 1, and 7c4c for No. 2. We quote $1.75 to $1.80 for Fancy white comb honey. Extracted is honey as yet rather unsettled, asking prices from $1.25 to $1.40, f.o.b. shipping point. Hayers, however, seem to be in a hurry to make contracts.

PECKY BROK.
We have a Large Stock on hand
and can ship promptly.

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Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more
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Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs
for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.25, by mail.

Beeswax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

ANOTHER ENDORSEMENT FOR
Root's Red Clover Queens

ALEXANDRIA, IND., Aug. 1, 1901.
The A. I. Root Co., Medina, Ohio.

Dear Friends:—The tested clover queen came in good condi-
tion and has filled seven frames with brood two weeks from
the day she arrived, which is better than the combined efforts of three
"yellow" queens purchased two years ago. I believe she is going
to be the counterpart of the queen purchased of you in 1896, in
which case money could not buy her.

Yours Fraternally,
Evan E. Edwards.

PRICES OF RED CLOVER QUEENS:
Gleanings in Bee-Culture one year and Untested Queen ... $2.00
" " " " " " " " " " " " " " " Tested Queen ... ... 4.00
" " " " " " " " " " " " " " " Select Tested Queen. 6.00

If you want something good you can not do better than to
order one of these queens. All orders are filled promptly.
No extra postage on these to foreign countries.

THE A. I. ROOT CO., Medina, Ohio.

GEORGE W. YORK & CO., 144 & 146 Erie Street,
CHICAGO, ILL.,
are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO.
Send to them for their free Catalog.
Weekly Budget.

Two More on the 1000.—We have two more names to report before the Buffalo convention, which meets next week. We hope the membership will reach the 1000 mark very soon. We have tried to do something toward raising the number to that figure during the past two months. We will not feel that it is our fault if the desired number is not secured within the time mentioned. We still believe that every bee-keeper ought to be a member of the National Association, which has done such excellent work for the benefit of bee-keeping.

The two names to be reported are these:

Chas. E. Kemp, A. J. Stratton,

Buffalo Convention Lodging.—Secretary Mason writes us that he can secure for such, who desire, “a good, nice, clean place to sleep and get your breakfast at Buffalo for 75 cents.” He says he can get such places for about 60, if they will apply to him at the convention. If more places are needed, The Dr. Pierce’s Free Bureau of Information, at 652 Main Street, will furnish them in such style and at such prices as will be satisfactory, provided they will call for Sydney S. Nepper, for arrangements have been made to accommodate all on reasonable and satisfactory terms, provided the applicant is not unreasonable in his demands; and the information furnished will be free to all convention members.

The Apiary of Mr. H. S. Ferry, of Westchester Co., N. Y., appears on our first page this week. At least a portion of one is shown, which gives a pretty good idea of how Mr. Ferry has his neat bee-yards arranged. The surroundings can not be appreciated unless one visits the yard including his home were given. His house is one of the finest in the city where he lives, and to protect his property he bought 100x100 feet running from the rear of his house lot to another avenue, and this he has for lawns and apiary. The small, long building seen in the rear is a bee-house with doors in front and rear, which opens as a shade in summer. This is for queen-rearing, etc., as well as honey.

The photograph was taken by Miss Mary E. Bickmore, who is a teacher in the High School in New York City. Bee-culture comes in her line. Mr. Ferry has an observation hive, which is used in schools before the classes.

Daniel Wurth’s long-tongued five-banded queens—you can hardly afford to let this season pass without trying a few of them. See his advertisement on another page of this number.

Dr. A. B. Mason, secretary of the National Bee-Keepers’ Association, has declined to act as judge of the aparian exhibit at the Ohio State Fair, on account of the Fair being opened on Sunday. That is the kind of a stand to take. Some Fair managers need to be taught a lesson, and the Doctor has had the courage of his convictions, and let the Ohio Fair managers know that he doesn’t countenance Sunday desecration. He will have no part or lot with them. Fairs or expositions that can’t succeed without opening on Sunday better “die a-borning.”

The Nickel Plate railroad is the one over which Dr. C. C. Miller and the editor of the American Bee Journal will go. The latter expects to leave on Friday evening, Sept. 6, and spend the following Sunday with his mother, about 50 miles south of Cleveland. Dr. Miller will likely leave Chicago Monday, Sept. 9. Mrs. Miller and Mrs. York expect to accompany their respective partners—to keep them straight.
The Buffalo Convention—next week, beginning Tuesday evening, Sept. 10.

Place—Lecture Room of the Buffalo Library Building, corner of Washington and Clinton Streets.

Question—Will you be there?

Rearing Queens for One’s Own Use is the subject of an article in the American Bee-Keeper. The first thing to select are two best queens, one to rear queens from, the other for drones. He greatly prefers the Alley plan for starting cells, not only because it requires less labor, but because there is more danger of getting inferior queens by the Do-something plan. He gives no reasons in support of this latter view, and it would be nothing strange if he should be asked for something more than a mere assertion.

As to the simplicity of the Alley plan, however, there can hardly be question. One who would make a bungling job of forming cell-cups and transferring larvae might easily succeed by the Alley plan, which in brief is as follows:

Take a piece of comb containing eggs; shave away half the depth of the cells on one side; cut it into strips of one row of cells each; twist the head of a match in every alternate cell so as to destroy the egg on the shaved side; then dip into melted wax the other side, and fasten it upon the lower edge of a half-depth comb, the edge of the comb being cut rounding so the cells will not be built too close together; and it is ready to be given to the queenless bees.

Honey and Beeswax Market.—The following is offered by Mr. Stoughton Cooley, one who has read this paper for some years:

Editorial American Bee Journal:

Editorial American Bee Journal:—

Permit me to offer a criticism of one feature of your very good paper. The general excellence of the paper is such that I would not offer this but for the fact that the fault can be easily corrected.

In the column headed "Honey and Beeswax—Market Quotations," you publish quotations of various dates. In the issue of Aug. 8 appear quotations from Chicago, July 18; Cincinnati, May 17; Boston, June 29; Omaha, May 1; New York, July 5; and so on, winding up with San Francisco, June 16. The criticism I offer is that these quotations should be kept nearer current quotations, and should be placed in the market source if possible. For instance, the Chicago market has a regular trade bulletin quoting the prices of honey and wax as sold on South Water Street from day to day. A glance at this paper would enable you to get prices from a disinterested source, and, if you so wished, on the very day you go to press. The other large cities issue similar trade bulletins, and if they would not exchange with you, a single copy a week would surely not cost much.

We wish to thank Mr. Cooley for his suggestion. For some time we have been in the habit of sending out return postal cards every two weeks to those quoting the markets for this paper, and if the report was not changed it was evidence that there had been no change in the market prices for that particular city.

The hint that interested dealers might not furnish as reliable quotations as others, doesn’t appeal to our idea of the matter. As practically all who quote in our market column are commission men, it would seem that it would be to their interest to quote as high prices as can be secured, for the more they get for the honey the more will their commission amount to.

Again, those who make a specialty of selling honey, ought to be able to secure higher prices than other firms, as they naturally must have a line of customers developed who depend upon them for their honey supply.

The trade bulletin suggestion may be well to investigate. We will do so, and see what the Chicago bulletin has to say about the honey and beeswax market. If as good, or better, service can be secured for beekeepers in that way, we must have it, as nothing is too good for our subscribers.

We hope our readers will feel free to offer any further suggestions or criticisms they may think valuable. When presented as courteous a manner as Mr. Cooley has done, they will be welcomed, and acted upon favorably if deemed advisable.

Robbers and Thieves among bees are perhaps generally considered as one and the same thing. W. W. McNeal, in the American Bee-Keeper, calls attention to the fact that they differ greatly, and it is probably true that few beekeepers suspect the existence of thieves among bees. A robber is one which enters a hive and takes honey by force; a thief takes it by stealth. Robbers prey upon the weaker and queenless colonies, being more especially troublesome in times of scarcity; thieves find their best foraging ground in the hives of strong colonies at a time when honey is coming in a flood. There seems to be no way to circumvent this quiet stealing. The practical point in the matter is the danger of giving credit to a colony for extra-storing ability when that storing comes from thieving and then breeding from such stock. Some times a colony is found storing when other colonies must be fed: and Editor Hill suggests that it would be a good thing to compare the honey stored by such a colony with the feed given to the others, to see if it might not be the same.

Keeping Over Extra Queens from one season to another, Editor Root thinks, can only be successful by keeping the queens in nuclei in a good cellar.

Pasteboard on Queen-Cages has been in use for some time, the object of the pasteboard being to delay the bees getting at the candy to release the queen. But it has been found that sometimes the bees fail to gnaw the card, and so the queen is not released. The A. I. Root Co., who originated the pasteboard plan, now instruct to tear off the pasteboard in 24 hours, if not already removed by the bees.

Fumigating Section Honey is insisted upon as absolutely essential by some, while others say it is not at all necessary. One thing upon which there can be no disagreement is that it will not do to put upon the market section honey with waxers in it. It is possible that the difference in bees has something to do with the difference in experience. A good strain of Italians or hybrids may keep the combs so clean of worms that fumigation may not be necessary. Close watch should be kept by the novice to see whether there be any evidence of worms in the way of a white powder on the edge of the unsealed cells, especially on the bottom part of the section close to the wood. When anything of this kind is to be seen, fumigation should be resorted to at once.

The common plan is to use sulphur, which easily destroys the young larve, but is less effective against those of larger growth, while it makes no impression at all upon eggs. This makes it necessary to fumigate at a second time. Some are enthusiastic as to the use of bisulphide of carbon in preference to sulphur, claiming that it kills eggs as well as larvae. So the sections can be fumigated as soon as taken from the bees, or as soon thereafter as may be convenient or desirable, and no further attention will be needed. Another advantage claimed for the bisulphide of carbon is that it does not dissolve the sections, while too much sulphur will give a coating of green. But care must be taken to avoid having a light come near the bisulphide, as it is very explosive.
The Art of Bottling and Selling Honey.

BY J. C. WALLENMEYER

HAVING had an experience of eight years in bottling a
dozen different kinds of honey in a dozen different
kinds of packages or containers, I thought I would
give the benefit of my somewhat varied experience to the
readers, that they might possibly profit by avoiding the
usual mistakes of beginners in using unsalable packages.

I have bottled honey from alfalfa, basswood, willow-
herb, white clover, California sage, Florida mango, saw
and cabbage palmetto, wild aster, and smartweed (or hearts-
order) mixed; dry-weather honey-vine, and fall flowers.

For containers I have used pint and quart Masons, costing
50 and 60 cents per dozen; 6 and 8 oz., and 1 and 2
pound square flint-glass jars, costing $2.70 and $2.50 per
gross (corks included); 13 and 16 oz. jelly-glasses; ½-gallon
fruit-tablet jars costing 5 cents each; lard-buckets; glass
bowls, and Root's No. 25 round flint-glass one-pound jars—
quite a variety to select from.

I found Root's No. 25 jar the best and quickest seller of
all, because, after being emptied, it could be used as a self-
sealer for jelly, preserves, jams, etc.; only flint-glass jars
should be used, as they show the honey off to perfection.
Amber honey will sell nearly as well in quart Masons on
account of the universal use of the package; but it is hard
to sell 3 pounds of honey to every-day consumers. Most
people prefer a small, cheap package. Our market demands
a honey of light or light amber color, heavy body, mild
flavor, and fine bouquet or aroma. It does not pay to bottle
a poor grade of honey. The people generally get accus-
tioned to the kind of honey produced in their own locality.
I found this out to my sorrow when I tried to sell three bar-
rels of mangrove and palmetto honey from Florida,
although I thought it fine indeed. This matter of selection
is very important. If you happen to run short of honey,
and must buy, procure an article as near like your own as
possible. I have found that patrons grow suspicious when
they get different honey. I find honey from white clover,
dry-weather honey-vine, and fall flowers, to give the best
satisfaction for bottling, in my locality.

Williamson Co., Tex.
Briefly stated, there are three essentials for success in bottling honey:
1. Best quality of well-ripened honey.
2. Neat attractive packages, useful when empty.
3. Aggressive selling methods.

You might have the very finest honey, but if it is not put up attractively, it will not sell. You may, however, get up a neat attractive, gayly labeled package, but no one will buy a second time. Again, you may have a fine article of heavy body and fine flavor, put up in the right kind of package; but if you are not aggressive, why will it sell? Aggressive selling tactics, of course: be aggressive; talk honey everywhere you go. I built up an enormous trade in the fall of 1894 with a well-ripened crop of honey from dry-weather vine and fall flowers. I controlled that time of year, to a large extent, by the dray trade in Evansville, and probably half of the grocery trade. I bought 5 barrels of Root's No. 25 1-pound jars, and one gross each of the 8-oz. and 8-oz. square flint Muth jars, and from this stock of 2-pound Muth jars, all at one time. I had every kind of package to please the most fastidious. I sold both the 1-pound square and round jars at $2.00 per dozen, to retail at 20 cents. The 5 barrels of Root's No. 25 bar were gone in a jiffy, while I have nearly all the 5 and 8 oz. jars yet. These I use at fairs to give away as samples. I often sold a dozen of the round jars to housewives who wanted a set for jelly, etc., but never sold more than one big jar or so of the square jars at one time to any lady. They are considered worthless when empty, although my wife likes them for small pickles and catsup. I use the No. 50 label, costing 1 cent per 1000, for both round and square 1-pound jars. This label is showy, and will not soil easily in fly-time. I find the 2-pound square jar an easy seller to parties who mix their own cough medicine ever so mildly.

I have now dwelt at length on the merits of various packages, as I think it a very important item to help sell our honey. I forgot to say my worst-selling package was the tin lard-bucket, Mr. R. C. Aikin notwithstanding. They might be all right to sell to old customers, but the main objection is that people can not see the contents unless it is opened. To get new customers to buy your honey, invest 5 cents in a "glass show-case." As honey is poured into these, you construct the grocer to place conspicuously, and you will have the pleasure of selling both "show-case" and honey at the same time.

HOW TO LIQUEFY; HOW TO WASH THE BOTTLES.

We will now proceed to the process of bottling. Have your honey liquefied, if candied, holding the same at 150 degrees for two or three hours. By using a gasoline stove you can regulate to a degree, almost. Be sure not to overheat, as this is troublesome in 180 or 185 degrees; but I prefer not to risk losing the aroma and injuring the delicate flavor. If you are compelled to buy honey, always buy in 60-pound tin cans, as they are more convenient to handle. While you are liquefying your honey, wash your bottles, using clear, soft water with sal-soda, and shoot to remove dirt and particles of glass if new. Then rinse in clear water, and place bottom upward in racks to drain. This will make flint jars clear and sparkling. I did use a ten-gallon filling-can, bought of Mr. Muth, but now prefer to use my extractor (with cross-arm and basket removed), raised to a convenient height. I prefer to bottle honey hot, as it runs quicker, retains its aroma, and will stay liquefied much longer.

Have the rack containing empty jars at your left. Place the pan under the honey-gun to catch any drippings. You will soon learn how to cut off the flow just right the first time. Pass the jar to an assistant at the right, who presses the cork (cost 75 cents per gross) in the mouth, then dips the jar into melted wax and paraffine, half of each. A second assistant puts on the tinfoil (costs 75 cents per gross) in place; winds a capping-strip around the jar with the tinfoil, and then holds the jar in the left hand, running the head up and down on the strap until the cap is nicely smoothed down. A pasteboard, about 12x20, covered with dextrine (costs ten cents per pound), is covered with another pasteboard, and the operation is repeated. While the jar down flat, deftly catches the label by the corner, removes it from the board, attaches it to the center of the jar, smoothing it out with a soft cloth; then she places the jar in the case at the right, holding a dozen each.

After a little practice, three persons can easily fill, cork, wax, tinfoil, label, and pack 800 pounds a day, and not spill a drop of honey, by this method. The corks used for honey-jars are seconds, and ought to be covered with wax to effect an air-tight sealing while the honey is hot.

HOW TO SELL THE BOTTLED GOODS.

Now, then, we are ready to sell. Tug on a bit; for if you will notice you will see that all successful sales are well dressed and well groomed. Take a sample jar of each kind, and go to your grocer. If he is busy, see if he has any honey in sight. Don't attempt to sell to him while he is busy. If he is not, tell him you have a fine article of honey, fine flavor, and good body; that the crop of honey is very short this year, and you will not have very much to sell. If you tell him you have five tons he will expect to get it for nothing. Hold your jar to the light; turn it upside down to see how thick it is; talk honey, talk business, and stick right to him. Have one price for everybody. It will pay you to allow a good margin of profit, and he will then try to make more sales than if he made a very small percent of profit. But be sure to have your honey placed where every one can see it on entering the store, as people hardly ever ask for honey unless they see it. Remember, in conclusion, that he who tooteth not his own horn, the same shall not be totaled.

LIQUEFYING-APPARATUS—SEE FIG. 1.

In presenting a photo of my liquefyng-apparatus I have tried to make it conform as nearly as possible to the requirements of the average bee-keeper. Although I usually liquefy on a gasoline range, the cut shows 500 pounds of candied honey liquefying, without interfering with the preparation of meals. Two 60-pound cans are placed in two common wash-boilers, then filled with water, and heated gradually. After all the honey in the can is liquefied it is drawn off into an extractor-can (with the baskets and crank removed), by means of a rubber hose, the can being covered to prevent foreign substances lodging therein. I had a Muth ten-gallon filling-can, but I like the extractor better, as it has a much larger honey-gate, which is very essential in rapid filling. If the honey is cold, the flow can not be cut off a third as fast; therefore with honey at about 140 to 150 degrees Fahr., and a large honey-gate, we attain the maximum of rapidity in filling. Besides, I found, at least in my experience, that, in filling with cold honey, a large number of air-bubbles formed, thus preventing our getting the desired amount in the bottles. It would also run over the sides when heated to the right degree. Of course, no one would attempt to seal until the
bubbles had risen to the surface, which they will do in a few minutes with hot honey. If the honey is then sealed, and either dipped or corks sunk, and any kind of good sealing wax applied, and hermetically sealed, the honey contracts when it gets cold, thus causing the much-talked-of vacuum, especially if a tinfoil cap is properly applied, making it absolutely air-tight.

I found, only the other day [February], 2-pound Muth jars which had been waxed, that candided, while others on the same shelf, sold to the grocer the same day (Oct. 5, 1900), were nice and clear on account of the tinfoil cap. I find that if, after sealing, the jars are left in a warm room, thus preventing the too sudden cooling of the wax on the corks, we shall have no cracks. If one-half paraffine is added to the wax it will not crack nearly as easily, besides being much cheaper.

**WASHING THE BOTTLES WITH SHOT.**

In regard to the washing of bottles, I had a good laugh over the little boy punching the little pieces of glass out of the bottles, especially new ones. I used to do the same thing. But how much nicer, and far more easy, and quicker, to take about 3 or 4 oz. of No. 6 shot, and the bottle half full of warm soft water! Few shakes, turn the bottle, then pass to helper, who rinses in clean cold water, and we have a clear sparkling jar which is then set upside down in a large tray to drain.

If using jars like the No. 25 and the No. 100, where it is impossible to get the top with wax, I now pour into each a large tablespoonful of beeswax and paraffine, right on top of the heated honey, which, when cooled, effects the air-tight sealing. This is an additional inducement to my patrons, who, I know, see a nice piece of wax to slick up their iron's for laundry work; while, if put on the cork, it prevents the cork from breaking to pieces while being drawn out the first time.

If I am compelled to reliquify any bottles of honey (whew! here's always got left jars by the combs melting, the honey drooping many bees and causing them to be robbed. I have heard of no other loss in the country, and some of the best bee-men have told me it was for the want of water.

I would say in conclusion to those readers who have no honey to bottle, better order a few cans of extracted, and a barrel of the No. 100 or No. 25 jars, and canvass your nearest town. You will be surprised how easy it is to sell a barrel put up in this neat, useful, and attractive package. It pays to work up a trade in a bad season, for, if you sell no honey in a season, you can make notes you expect to sell three or four tons when you have not previously worked up a foundation for the disposal of your coming crop?—Gleanings in Bee Culture.

**Do Bees Use Water to Cool the Hive?**

BY J. A. GERELD.

JULY 6 was the hot day in Uvalde County, Texas—106 degrees in the shade—and I had a heavy loss of bees on that day by the combs melting, the honey drooping many bees and causing them to be robbed. I have heard of no other loss in the country, and some of the best bee-men have told me it was for the want of water.

I would like to state the particulars of the case in the American Bee Journal, and have the opinion of others on the subject.

I had been running about 200 colonies in one yard until last winter, when I concluded they would do better divided into two apilaries, so, finding a suitable location about 2 miles from the old yard, I cleared the brush off of a piece of ground 150x200 feet. The brush is thick all around, and six or eight feet high. I drilled a well and found water. Then I moved 100 colonies and placed them in two rows, seven feet apart, running north and south along the east side of the clearing, up close to the brush, leaving a space near the middle of the rows for a honey-house. I built the house so that I can pass through it with the wheelbarrow, and all the time be in between the rows of hives and at the back end of them, as one row fronts east and one west.

The hives are of the lock-corner 10-frame style, some having flat and some gable covers; 70 colonies are on the north of the honey-house and 30 on the south, and 60 of the 70 melted, and I lost 30 of them, while only eight fell of the 30, and I lost four of them, making a loss of 40 colonies, except that I hived the largest swarm I ever saw.

Most of the summer breeze here is from the southeast, so the brush and honey-house kept it from the ones north of the house.

I watered the bees in the yard by letting the water drip from a barrel into a flat trough. The barrel would take about two days to leak dry. I left the apilary July 2, to spend the “4th” in town; I know the bees would be out of water before I returned, but thought it would make no difference, as they had nothing else to do but carry water from the old apiary, which is about 1½ miles on a line from the new one.

I returned July 8, to see a sight I had never dreamed of seeing; the trouble was easily seen. I walked into the honey-house, lit the smoker and put on my veil, and then took a good look before venturing out. The air was so full of bees I could hardly see across the yard. I expected they would drive me off the place, but I stepped out and walked boldly along between the rows. Looking over in front I could see where the little lakes of honey had been the day before. I began to count the wet spots in front, but when I counted ten in succession I concluded all was lost. I looked all about, not knowing what to do. Well, what could I do? To my surprise, the bees offered no objections to my presence, in fact, they did not seem to know I was there. There was a great honey-flow on, and they did not care what I did with them. But what could I do but let them alone?

I looked into four or five hives where the most bees were going in and out; they were so nearly cleaned out that I let them finish the job. Near by I saw about an ordinary wash-tub full of bees settled on a bush near the ground. I thought to hve them, but I went at it just as in swarming-time, only I prepared three boxes instead of one. I put nine combs each in two of them, and an empty one on top for air, and room. They hived nicely. I shaded them well, and left them until the next day, when I gave them about ten pounds of honey in the top box. They seem to be contented now (July 27). That was all I did in that yard for 10 days, when I started in to do my part of the cleaning up.

I was surprised to find honey in some of the robbed

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**FIG. 3.—LABELING AND TINFOILING WITH A CAPPING STRAP (TINFOILING SHOWN AT LEFT).**
ones, and no bees about them. I could look into the hives with the air in without smoke or veil, leave the top off, and other bees would not go about them. What was the matter? Were they tired, ashamed of themselves, or disgusted with the size of the job? Even now (30 days after) they would see the bees rob in a healthy yard. I think because the weather is so dry and hot. There hasn’t been a blossom of any kind for nearly two months.

The hives in the old apiary are the same as in the new one—arranged in the same way, two rows running north and south, and in front of the house. In the north end of the rows, with a clean, open ground south and east of them; but no comb melted that I know of.

Now will G. M. Doolittle, Dr. C. C. Miller, Prof. Cook or any others, tell me if the result would have been different had the bees in the new yard been supplied with water July 10th. It was the first time that any hives were taken from the old apiary; they knew where it was. I think the surroundings had more to do with it than the water.

Uvalde Co., Tex., July 27.

The In-breeding of Bees.

BY GEO. SHIBER.

NOTICING the editorial on page 355 on the subject of in-breeding, and also having read in the other bee journals what has been printed on the same subject, prompts me to add a word on the subject.

I have wondered in the years past, since I have been interested in bees, that it has never received consideration by bee-keeping writers, I suppose, has not, for I have never read anything of it until lately.

For instance, a leading queen-breeders advertised, a year or so ago, that his drones were not akin to his queen-mothers; that new, selected stock was added from time to time to furnish drones. You see, he was constantly selecting choice queen-mothers, and selecting choice drone-mothers, but not akin. A breeder can make some progress in this way, but it seems to me it’s mighty uncertain. Breeding for the breed, and to breed the same breed, coming in contact (though of the same breed) produce a stock that tends to stamp out the desirable quality—the bloods do not harmonize where coming in contact.

I have a rule to follow. The bees, queens whose bees are long-tongue, (admitting for argument’s sake that long tongues increase the honey crop); choose one for drone-mother, the other for queen-mother. Now, when the queens and drones meet, there will be some that will be as good as their parents, but I should think not a few. Further, if the standpoint of other stock breeders, it would be making progress backward. I would give twice as much for queens reared from a long-tongue mother, and have said queens mated to her sons. Further, if the stock were reared by good bee-keepers, their parents, some would be better, sure—no doubt about that.

Perhaps my bee-keeping friends will think I am speculating too much. Not at all.

Let me call your attention to another kind of stock that I have bred for years as a sort of hobby. I refer to homing pigeons. The great aim with these ”couriers of the air” is to breed for speed and long distance. A bird that can fly 500 miles a day is a prize. Do they in-breed? Well, yes! Father and son, brother and sister, grandfather and granddaughter, and so on. Are they weak and scrawny from such in-breeding? Pick up a bird of mine from Maryland, which flies 500 miles a day, start him from home, Md., a distance of over 250 miles, air line to the home loft here; released at 9 a.m., he was back in the loft (home) at 4 p.m. Some days, when he is picked up he feels hard—“hard as nails,” as the fanciers say. How was he bred? Why, from a brother and sister. Mind you, this is a hard fly, as he had to come over the Allegheny mountains, diagonally across the State of Pennsylvania. Most of the leading pigeon fliers in-breed; of course this can not be carried over too far, or rather we breed, it is a fine breed.

In-breeding, you see, tends to harmonize and intensify the two bloods. It is an old saying, if you in-breed stock it will soon decline and weaken. It is no doubt true; but the breeder unmercifully suffers his stock. Say one season breed drones and queens together from the same mother; the next season use the same mother for queens. For drones use one of her daughters; she mated to good stock in a different yard. Then her daughter mated to a drone from the first mother of the previous year. Then you have a small fraction of new blood added, that will tend to give your stock added vigor, and will not affect the desirable qualities of the strain you are building.

I am aware of the fact that this mating of queens is hard to control, but the only thing that can be done is to make the effort towards that end, until mating of queens in confinement is an assured fact. But not much headway will be gained by the “direct cross” spoken of by some breeders. Why, if they were not for in-breeding we never would have had White Leghorn, Plymouth Rock, Wyandotte hens, or other breeds of “made” stock, so well known by everybody. Take the Buff Leghorn—a new breed which was produced by in-breeding, and selection and in-breeding. There are hundreds of other illustrations.

I think this matter would best be left to queen-breeders. I have—and I suppose others have—a dozen or more different strains of Italian blood, in my apiary, but I expect to make more of an effort to rear drones from the same mother I rear queens from.

Cattaragus Co., N. Y.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, 111.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Keeping Chickens from Bees—Italians.

1. I have some bees about four rods from the chicken-house. If I clip the queens’ wings, would the chickens eat them, when they swarm? They walk around the hive a good deal. I would like to know.

2. If I can’t do this, what other method would you advise, to keep swarms from going away?

3. My bees have five yellow bands on them, but to stand far away and look at them they look pretty black. What kind do you think they are?

MINNESOTA.

ANSWERS.—1. It is not likely that there would be any trouble.

2. If you should find that the queens were endangered by the chickens, it would be an easy thing to fence the chickens out from the bees, or rather to fence in the bees from the chickens. A fence around the bees, of poultry netting 18 inches high, over which you could easily step, would fence the chickens out. You cannot fence chickens in with such fences, they will just fly under, or crawl. There is always a little flowery beds, and not a chicken would cross it.

3. However dark they may look, the five yellow bands indicate Italian blood.

Two Ways of Putting on Supers.

There are two methods of manipulating supers during a honey flow in common use, as follows:

First, by raising the supers when partially filled with comb honey, and putting the empty super underneath and directly upon the brood-chamber.

Second, by placing the empty supers on top of the partial supersed super or supersed, with additional sections needed.

Which of the above methods do you use? and why?

“OUT WEST.”

ANSWER.—Both. When a strong flow is on and there is every reason to expect it will continue as long as the first is half filled. If the bees seem crowded for room it may be given the first super is half filled. It is put under the first super, because that will obligate the bees to occupy it promptly, for they can not enter the upper without at least passing through the empty one. If the room seems still to be needed, a third super may be given before either of the first two are finished, and I have had as high as five or six on at a time, and not one of them finished, the last one put on always being the lowest. But it is a risky business to have so many unfinished sections on at a time, for if the flow suddenly stops,
there you are, with the cold chills running down your back at the thought of a big lot of honey on the hives and none of it in marketable condition. If, however, the flow will be accommodating enough to continue till all are finished, there may be decided gains in having on so many sections, for the bees will have more room to work, and will do the better for it. But never get on so many at a time that all will not be crowded with bees. On the other hand, there is a loss of two or three supers because the bees are enough to crowd two or three supers and only one is on.

Toward the close of the harvest, or at any time when it is doubtful about much more being done, it is often difficult to decide whether or not a supers should be given or not. At such times it is better to put the empty supers on top, for the bees will not crowd up into it unless they really need it.

**A Glucose Question.**

Among other ideas I have had this one: that one reason why bee-keepers oppose the use of glucose is that it is unwholesome, if not injurious, as an article of food.

Dr. Howard Miller, editor of The Inglenskoy, says in the June 15th issue of his magazine, in answer to the question, "Is glucose unhealthy?" asked by one of his readers:

"No, I think it is. It is not as sweet as the sugar it usually takes the place of."

Now, as the editor of The Inglenskoy is pre-eminent a scholar, and you are in addition a practical bee-keeper, and have reason to be thoroughly acquainted with all the properties of glucose, I would like very much to know what you consider it. MISSOURI.

**Answer.—**Chimically pure glucose is one thing, and the commercial article quite another. However correct the scholarly editor may be in thinking that chimically pure glucose is a wholesome article of diet, if he should get a swast of some supers of commercial article, he would be likely, after vainly trying to get the taste out of his mouth, to decide that it was neither fit for man nor bee.

**An Amateur's Bunch of Questions.**

1. When the honey-flow is plentiful, why do some apiarists place two, and often super between the brood-chamber and a filled super?

2. I have my colonies on treestils, made of 2x3 stuff nailed together in stretcher form, with legs nailed so the hives are about 12 inches from the ground, placing three colonies in a group. What objections is there to this plan? Why?

3. I use a common white table-cloth with smooth or glazed surface on top of sections as a sort of cover or blanket. Do you think this has been used before? What objections can be offered to such use? Why?

4. Does the queen ever leave the hive except at swarming-time?

5. When (at what age) does the virgin queen leave the hive, and how long from the time she mates does she produce eggs?

6. Why do we find more drones in some colonies than in others, although apparently about equal in numbers?

7. Is it possible that a colony will carry over one or more drones during winter?

8. If two colonies with brood-chambers well filled with honey, and supers containing sections with starters, were given 50 pounds of extracted honey, how much would be stored in the sections?

9. How can honey be made more liquid, or thinner, or gravity lessened?

10. What is honey-dew? INDIANA.

**Answers.—**To give room for the bees to store more honey, I think this is possible, perhaps you mean to ask why they put the empty super under the one partly filled instead of putting it over. Because the bees will begin work in it sooner if the empty super is under instead of over; and because the bees in a filled super may be wrapped a little whiter when raised up. Perhaps, however, you mean to ask why the empty super is put on at all before the other is finished and taken off. Because after the sections are all filled the bees take some time to finish up the sealing at the outer parts, and it would be a waste of time to wait till the first super can be taken off.

2. In the height of the honey-flow the bees often fail to the ground in front of the hive as they come from the fields heavily laden, and they must rest quite a little time before they can rise and fly to the entrance. With the hive on a stand near the ground they can crawl in at once without waiting to fly in.

3. I formerly used enamelled cloth over the sections, and the bees not only prop on it. In the angle where the oil-cloth rested on the sections, but crowded it under the oil-cloth and on the sections. I find the sections less daubed since there is nothing over them but the board cover with a beespace between. There are no other-isms.

4. No, not after she begins laying.

5. She makes her bridal trip when about five to eight days old, and begins laying about three days later.

6. In a colony hives there is little or no drone-cob, so of course few or no drones will be reared, while in other hives a large amount of drone-cob gives opportunity for many drones. A colony with a young queen is not likely to have as many drones as one with an old queen.

7. I don't know. Some say they can get 3, if it in sections, others say not more than 4.

8. Add water to it.

9. The secret of plant or scale lice, and also, according to some authorities, an extra-nectarine secretion of plants without the presence of plant or scale lice.

**Superseding Queens by Rule.**

Procrustes kept a nice lodging-house—leastwise he had an iron bed with chopping-off arrangement and power stretchers attached. Every bodger had to be made to fit the bed, no matter what cost of blood, bone, and grens. Distant cousins of Procrustes are those brethren who supersede every queen at the same exact and early date of her life. She may be good for a month yet, or may be good for three years yet—all he same. Chop goes the Procrustean bed, who knows but what the long legs and winged bees in the country have their line terminated by that chop? Mr. Doolittle's way of giving a protected cell, and letting the bees decide whether they want the young queen or the old one, seems to be much the wiser way. Bees show more practical sagacity in such matters than to most of us seems possible. Page 467.

**PEAR-BLIGHT AND THE BEES.**

It is evidently quite a "peck of bushels" our cause is getting into California about the pear-blight. If the fruit-men not only have assurance that the saint might have stolen the horse, but that testimony that the horse won't let dinners ride him under no circumstances, why then the case begins to look a little dark for the saint. Ernest Root is evidently sound, that there must be more evidence than one scientist as to the impossibility of blight traveling on the wind. The fact that extensive pear orchards which have never bloomed yet are as badly infected as any is a tower of strength to us which we should make the most of. I'll venture the guess that the smallest size of bark-house-eating is nothing of the kind. The infected crack them off from the roots, and leaving some wherever they go in search of little insects. Prof. Cook's opinion, expressed on page 516, is important. He feels sure that there will be plenty of means where arsenic is used after the removal of the bee—and without calling on the wind, either. Leastwise let us not "get off the earth" with any needless haste. Possibly a little silent inertia will do us good—let the other fellow do nine-tenths of the talking, and most of the acting. Perchance most of this is merely a cloud, and it is the tendency of clouds to roll by. Page 468.

**Queen Suppersions and Linden Blood.**

Three-quarters of all supersessions within three weeks of the close of the linden. I wonder how widely that is true in other yards than Mr. Doolittle's. Perhaps there where is no linden the last strong flow of the season would be its equivalent. In my yard I kind of think that more than the remaining one-quarter occur in swarming-time just before the linden. I may be quite wrong—only go by my guess as to how many prime swarms have virgin queens. I suppose the general principle is that when bees are rearing little brood,
The Home Circle.

Conducted by Prof. A. J. Cook, Claremont, Calif.

OUR SOCIAL LIFE.

The Good Book is well named—The Bible—which means "the book." It is the book. The other name—the Gospel—means "good news." And it is good news, indeed. It always advises us rightly and so, of course, wisely. How good to have a friend who can tell you by word of advice, whether the bees are in a body actually do stay put, or whether a large fraction of them return to the old stand. Not unwise to hold the thing as an experiment until many brethren have continued success in making all the bees stay.

The dear, old Bible may be just such a treasured friend to every one. It, like its author, is too wise to err, too good to be unknown. This dear old volume says that he that neglects those of his own household is worse than an infidel. It is suggested that a good friend in the蜜蜂 colony is an old know. Whether or not a social function, if such already exists, will then it will never cease in our love to keep it all to itself. It will so touch life with the spirit of sweet helpfulness that all in the home will reach out to bless and help those of other households.

It was my good fortune to be in Columbus, Ohio, when our beloved and martyred president, James A. Garfield, was elected to the United States Senate. I heard his speech as he responded to the congratulations of his great, good fortune. He said, in short, that it had given him pleasure, when he had so fortunate as to act in a way to meet the approval of his countrymen the country over. It brought a deeper gratification to know that his policies and the interests of his own State and Ohio. He was you more pleased at the applause of those of his own district and were stirred more among the guests of those of his own home—his very neighbors. A still keener relish greeted the approval of the dear ones of his own world—his own home life—when he wholly pleased James A. Garfield. I suppose it is the best satisfaction, when our own consciences say without let or hindrance, "Well done."
To Our Shippers:

We were obliged to notify you a few weeks ago that one Joseph M. McCaul had leased our old quarters at Nos. 120-122 West Broadway, New York City, and had there started up business under the name "Hildreth, McCaul Co.," and had distributed a multitude of circulars so worded as to create the impression that his business was a successor to or a branch of the business of Hildreth & Segelken.

For the protection of our shippers and ourselves, we at once instructed our attorney to commence action to enjoin the said McCaul from using the name HILDRETH in any manner whatsoever in connection with his business. On the 10th day of July, 1901, Hon. David McAdam, Justice of the Supreme Court of the State of New York, after a full argument upon the merits, issued a peremptory injunction, of which the following is an extract:

"And it appearing that the plaintiffs have for a long time been and now are carrying on business under the style of 'Hildreth & Segelken,' and that the defendant has recently opened a business at 120-122 West Broadway, in the Borough of Manhattan, City of New York, and is carrying on the same under the style of 'Hildreth, McCaul Co.,' and that such act is in violation of the plaintiffs' rights, and that the commission or continuance thereof, during the pendency of this action will produce irreparable injury to the plaintiffs; it is

ORDERED that the defendant (Joseph M. McCaul) and each of his agents, servants and employees and all other persons acting under his authority and direction be, and he and they are here-by restrained and enjoined from showing, displaying or otherwise using during the pendency of this action in or upon any papers, devices, sign or signs, or otherwise, in the business conducted by the defendant at No. 120-122 West Broadway, in the Borough of Manhattan, City of New York, or elsewhere the name of "Hildreth" separately or conjunctively with any other name, designation or description."

Outside of our desire in our own interests to protect the name which we have built by years of satisfactory dealings with our customers, we hastened to procure this injunction as soon as possible, to prevent our shippers from being misled into sending their goods to one who would make an attempt to gain their trade by such a trick and device.

With thanks for the many expressions of good-will we have received from our shippers concerning this attempt to trade under our name, we are,

Sincerely yours,

HILDRETH & SEGELEKESKEN,
265-267 Greenwich Street, NEW YORK, N. Y.
Bee-Keeping in British Columbia.

It may interest some of the readers of the American Bee Journal to know I have initiated the successful keeping of bees in this section of the country. I know of no other bee-keeper in this whole district—certainly there are no bee-keepers nearer than 40 miles, that is, at Nelson, and I do not know of any there.

I was told that bees would not do here. A Mr. Powers brought some here a few years ago, and they could not find food, and he assured me I would fail. But I am a man "wonderfully wedded to my own opinions," and my present success is not going to make me have less faith in my own ideas.

I bought a colony of hybrid-Halians in Vancouver last spring, and they have given me three swarms, the first of which is doing remarkably well. They have two supers over a 10-frame Langstroth hive filled with honey already. That means between 60 and 70 pounds of honey for me, and it is 25 cents a section here. The original colony is not doing so well. They will not take to the supers, and appear lazy. Yesterday I tried to stir them to activity by taking a frame of honey from the brood-chamber and replacing it with an empty one.

The other two colonies are doing pretty well, and have their winter supply, but nothing so far for me.

I think that when Mr. Powers first brought bees here there may have been no proper food for bees, but since then the town site has been cleared off, and the white clover is occupying the ground.

While writing this letter I have had a visitor from Nelson, who tells me he has bees there.


The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

GEORGE W. YORK & CO.,
144 & 146 Erie Street,
CHICAGO, ILL.

Extracted Honey For Sale

ALL IN 60-POUND TIN CANS.

Alfalfa Honey.

This is the famous White Clover Honey gathered in the great Alfalfa regions of the Central West. This honey is extremely rare, and nearly everybody has solved the problem of a successful and pure honey at all can't get enough of the Alfalfa extracted.

Prices of Alfalfa or Basswood Honey:

A sample of either, by mail, 10 cents, to pay for package and postage. By freight—two 60-pound cans of Alfalfa, 8 cents per pound: four or more cans, 7½ cents per pound. Basswood Honey, ½ cent more per pound than Alfalfa price. Cash must accompany each order. You can order half of each kind of honey, if you so desire. The cans are boxed. This is all ABSOLUTELY PURE HONEY

Read Dr. Miller's Testimony on Alfalfa honey:

I've just sampled the honey you sent, and it's prime. Thank you. I feel that I'm something of a heretic, to sell several thousand pounds of honey of my own production and then buy honey of you for my own use. But however loyal one ought to be to the honey of his own region, there's no denying the fact that for any kind of hot drinks, where one prefers the more wholesome honey to sugar, the very excellent quality of alfalfa honey I have received from you is better suited than the honey of any other marked flavor, according to my taste.

C. C. MILLER.

Order the Above Honey and then Sell it.

We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money and get this honey and work up a demand for it almost anywhere.

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

Farm Wagon Economy.

The economy of this proposition is not all found in the very substantial price of the wagon itself, but in the great amount of labor it will save, and its great durability. The Electric Wagon Co., who make this Electric Handy Wagon and the now famous Electric Wheels, having a certain degree of experience with bees, have over 400 fine Queens, and can fill orders on the same day I receive them. We have five sales a day. This advertisement will not appear again. Remit by post-office money order.

DANIEL WURTH,
Cost Creek, Anderson Co., Tennessee.

[Mr. Wurth is perfectly reliable.—Editor.]

SUPERIOR

Red Clover Queens.

We have obtained, this season, 150 pounds of comely honey per colony, one-third red clover honey. Untested, 75 cents; doz., $4.00. Tested, $1.00; 1½ oz., $5.50.

LEININGER BROS., Ft., Jennings, O.
34 E. Def. Please mention the Bee Journal.

QUEENS! QUEENS!

From honey-gathering stock. Tested, $1.00; untested, 75 cents. "SHADY NOOK APIARY." JAMES WARREN SHERMAN, 240 W. 22nd St., New York.

ALBINO QUEENS. If you want the most prolific Queens—If you want the gentlest Bees—If you want the best honey-gatherers you ever saw—try my Albino, Untested Queens in April. $1.00. Tested, $1.50. J. D. GIVENS, Liberal, Kansas.

California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

The Pacific Rural Press, The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

PACIFIC RURAL PRESS, 130 Market Street, San Francisco, Cal.
Bees that Have a Record

(See page 499 American Bee Journal)

Have longest tongues, handsome, gentle, great hustlers for honey, all tested queens, and sold at rate of $2 per dozen. By return mail.

HENRY ALLEY, Wenham, Mass.

We will pay 25c. cash, per lb. for pure, bright yellow beeswax, and 20c. cash, per lb. for pure, dark beeswax delivered here, Charles A. Rorer, MACHINING CO., Des Moines, Iowa.

Please mention the American Bee Journal.

TENNESSEE QUEENS....

Fine lot of Choice Tested Queens reared last season, daughters of select imported and select golden queens, reared 3/4 miles apart, and mated to select drones, $1.00 each; Untested Warranted Queens, from same breeders, either strain, 75 each, No bees owned nearer than 3/4 miles. None impure within 3, and but few within 5 miles. 25 years experience. Discount on large orders.

JOHN M. DAVIS,
SPRING HILL, TENN.
Please mention Bee Journal when writing.

WANTED

Parties to make PATENT COMB FOUNDATION on 3 by 3 inside, also lots of bees for sale (on L frame), at 85c each.

H. VOGELER, New Castle, Calif.

Please mention the American Bee Journal.

UNTESTED

ITALIAN QUEENS FREE

BY RETURN MAIL.

For sending us One New Subscriber for one year, to the American Bee Journal, with $1.00, we will send, by return mail, a fine Untested Italian Queen free. This offer is made only to our present regular subscribers.

GEORGE W. YORK & CO.
144 & 146 Erie St., CHICAGO, ILL.

We will mail one of the above queens alone for 75 cents; or 3 for $2.10.

Please do not conflict the above offer with the one on another page which refers to Red Clover Queens. For sending us one new subscriber at $1.00, and 25 cts., we will mail you free an Untested Red Clover Italian Queen.

GEORGE W. YORK & CO.
144 & 146 Erie St., CHICAGO, ILL.

and he is the only bee-keeper in that locality. He beats me, for he has had five swarms from one colony, making six in all, and they are doing well.

I have only to add that he and I are both beginners, and I value highly the hints I get from the American Bee Journal.

British Columbia, July 24.

H. BEER.

The Honey Market In California.

The honey season is ended for this year in this locality. Our honey is in packages, and the most difficult problem for the bee-keeper is upon us—disposing of our honey at a price that will give us honest remuneration for the labor expended and capital invested.

I have heard some say the market is deplorable; I do not consider it so. A demoralized market is one where the product is thrown on the market and sold for what it will bring, and where there are more sellers than buyers.

I am pleased to note that such is not the case in Southern California at present. There is very little honey moving, not because there are no buyers, but because the buyers are not offering what the producers think they are entitled to.

While there is no organization or general understanding amongst bee-keepers, yet there seems to be a general feeling that we ought to have, and will get, 5 cents a pound for this year's crop of extracted honey, and they are almost all living up to their feelings, and holding their honey; and I think if they hold on for 60 days longer they will realize their expectations.

Every little lot that is sold at the price the buyers are offering, the report of that sale is hawked all over the country, and made the most of to scare holders.

J. W. GROUSE.

An Experience and a Question.

I am not one of those lucky bee-keepers who get large yields of honey, yet I get fair yields. I keep a record of every colony, and the date of swarming, etc. My hives are all numbered. If they have prolific queens it is so marked on the book, and those that are extra honey-gatherers are also marked. I started in the spring with nine colonies, and now I have 26, and have taken off 200 pounds of comb honey. I will give the record of one colony, and then ask a question for Dr. Miller to answer:

May 20 I bought a colony of bees in a two-story hive for $2.00. When I got them home I examined them, and found the upper story full of brood. June 10 they cast a swarm; it was very large, and when they had filled it a 10-frame hive apparently full. The hive of this old or parent colony is No. 21. The new swarm was hived in No. 15. In nine days after the first swarm No. 21 cast a second swarm, which was hived in No. 11. About five days after this, when I was absent from home, my son-in-law saw a swarm of bees in flight, but could not discover what hive they came out of. They clustered, and he hived them; it was a very small bunch. There was a space of about six inches between hive No. 15 and No. 11. A day or two after this little swarm was cast, I saw bees going on the alighting-board from No. 11 to 15, and on looking into No. 11 I found some comb, but no bees. On the 18th-24 days after the

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Langstroth on...

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swarm was blived in No. 15—they cast a large swarm, and also had 28 sections nearly full, which they soon finished, and I took it off and gave them 28 empty sections, which they now have nearly filled. The old colony, after casting two swarms, filled the upper story with honey, and I extracted 25 pounds from them. I now have 9 colonies of bees and 64 pounds of honey, and more to take off, from my $2.00. Now here is my question for Dr. Miller: If it takes 21 days from the laying of the egg to mature a bee, and a few days to make comb for a queen to lay in, how do you account for the large amount of bees in No. 15, so that they cast a large swarm in 25 days after being left alone, nearly filling 28 sections; and yet, after casting a swarm they continued to work in the boxes without any apparent loss of bees? The second swarm in No. 11 was almost as large as a prime swarm. Did a part of them swarm out, making the little swarm I have mentioned? If so, what became of the balance? Would they be reduced into No. 15?

S. B. SMITH, Millilacs Co., Minn., Aug. 5.

An Amateur Transfer of Bees.

Having purchased a colony of bees in a box-hive the fall of 188S, and failing to secure any surplus in honey or swarms in 1889 and 1890, I decided to transfer this colony, win or lose. I read much on transferring, and sought to put into practice, at least.

About May 1 (apple blooming) I made preparations. A box eight inches deep and the same size as the bottom of the box-hive was made. An 8-frame dovetailed hive was gotten ready in this style: Four frames filled with comb were taken from four other hives (one from each hive), the outer frame being taken. No attention was given as to sections of frames. They contained in part some honey, empty cells, and perhaps eggs or cocoons.

BARNES' FOOT POWER MACHINERY

Read what J. L. Parent, of Charlotte, N. Y., says: "We cast the one of your Combined Machines, last winter, 50 satchel hives with 75,000 cap, 100 honey racks, 550 brood-frames, 2,000 honey boxes, and a great deal of other work. This winter we have doubled the amount of bees, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

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GEORGE W. YORK & CO., 144 & 146 Erie St., CHICAGO, ILL.
brood. These four frames were placed in the center of the new hive, and two others with starters were placed on top of this brood-nest. With a blanket, smoker, cold chisel, and hatchet, we went to destroy and to build. The blanket was spread, and the old hive was placed on it, the new hive occupying about the same place as the old, while the old hive was placed about three feet and at right angles to the new hive. After smoke came the battle. I now turned the old hive bottom end up, and placed the box aforesaid on top, after removing the bottom-board. Then more smoke and hammering on the box to get the bees to move upward into it.

After ten minutes of such coaxing I lifted the box to see the catch. A surprise—about a good, big handful only. These were dumped out on a blanket in front of the new hive. Part started into the new hive while part went in the air. I sighed, and wondered how long it would take to get this colony moved into their new home-to-be at this rate.

I unred myself, as it were, and proceeded on my own "hook." The old hive was returned bottom side down, less the bottom-board, and cold chisel, hatchet, and man soon removed two sides and laid bare the comb and bees. I cut out those old combs, rusty and crusty. The combs, when out, one by one, were given a jar at the front of the new hive, and clinging bees were soon off. The third comb removed had the queen—she went in like a lady.

When all combs were removed I found I had a plenty—I think enough to fill 20 Hoff- man frames. It was old, perhaps containing comb that had been built 20 years, as the hive had been made of yellow poplar that now was so weather beaten and checked as to be thrown in the plow.

While queen and workers were surveying the new quarters, I arranged a supper with the fence separators, leaving out the sections. I now took up the comb pile and cut out all sealed worker-brood into strips of no particular length, but four inches wide, and put it in place of the sections. I put this in the brood-chamber, spread over the top a woolen blanket, put on the cover, and let them go at that. In a half hour from the time of beginning all was complete, and house-cleaning was in full progress.

The honey in the old comb was unfit for table use, so it was placed in three or four shallow pans about the yard, and the five combs that soon had the honey home. About two pounds of beeswax was rendered from all the combs after they were cleaned by the bees.

Twenty-one days later I examined the new home, and found most of the sealed brood hatched. I removed the old strips and put on a super filled with sections containing starters. There was no trouble, except that few on each of this colony 24 full sections of well-capped white honey, and gave another super. July 15 I took this super with the same results as before, making in all 45 pounds for this colony, besides a full house below, and lots of bees.

The rainy season closes about the middle of July. We have had the best honey-year since 1898—an abundance of white clover till the drouth began. Our prime swarm, cast June 3, has done as much as this transferred colony. I feel that I have been successful in this transfer, and would like to know if such a way would always be successful, say in a poor honey-year.

T. F. WEAV.
Fountain Co., Ind., Aug. 3.

A Pretty State of Things.
Mr. Editor will remember my new hive, that I was at so much pains to make. Twenty frames and painted a gentle clover green! Well, what do you think? About two weeks ago I gazed into its inwardsness and beheld what could be not less than 50 pounds of luscious honey in those combs.

One morning, this week, I noticed that quite a lot of bees seemed aimlessly flying before the entrance, neither bringing in stores nor flying to the fields for supplies. I thought appearances strange, and forthwith inspected that colony again. I raised some of the most attractive frames, and, lo! they were remarkably light, just heavy enough to account for the wax they contained. I tried another with the same results. Now, why is this thusly? In handling all the frames I found but few with a little brood, and not three pounds of honey to that colony. Ha! ha! I have the secret. Robbers! But how can that occur with a pretty strong colony and a small—three-inch—opening to guard !

But presently I saw the cause of the whole trouble. I thought I had made the hive-cover perfectly tight, but the thing had warped, and one corner failed to connect, leaving a space quite large enough to admit several bees at once, and then my conclusions were reversed and rapidly.

I transferred that colony into a 10-frame hive at once, before the little honey that was left could entirely disappear, closed up half the entrance, and saw to it that no more-

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We shall be glad to furnish our Seed in several quantities, and to discuss prices with you, W. M. HUNT & Son, Bel Branch, Wayne Co., Mich.

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HONEY AN BEE-SWAX 
MARKET QUOTATIONS.

CHICAGO, Aug. 22.—White comb brings 15c per pound for the choice grades, with other prices at grade No. 1 selling at 14c, light amber and dark 10c, and dull 6c. East demand at 95c for white, and 85c for amber. Roots for yellow is 30c for choice yellow. R. A. BURNETT & Co.

CINCINNATI, Aug. 10.—The honey market is rather dull on account of the warm weather. Extracted sells out quite as rapidly as before, and prices are stiff. Better grades alfalfa water-white from 55c for 50 pounds. Fancy white clover honey sells from 15c. C. H. W. WEBER.

BOSTON, Aug. 19.—Our market to-day is about the same as yesterday. The demand for honey is still very weak, but prices hold firm. B. F. MOUNT & Co.

ALBANY, N. Y., Aug. 20.—We quote: Fancy white comb honey, 10c, 15c, 20c, 25c, 30c, 35c, 40c, 45c, 50c, 55c, 60c, 65c, 70c, 75c, 80c, 85c, 90c, 95c, 100c. R. E. SPENCER & Co.

OMAHA, Aug. 8.—New comb honey is arriving by express in small quantities from Iowa and Colorado, and selling at $3.50 per case in a retail trade. California, Colorado, and Utah have offered carlots at 45c/44c per pound, f.o.b. California shipping-points, but we have not heard of any sales having been made. The production of extracted honey seems to be quite large this year in Colorado, Utah, and California. PECKY BROS.

NEW YORK, Aug. 7.—There is some demand for new crop of comb honey and receipts are quite numerous for this time of the year. Prices have been principally from the South, but we have now beginning to receive shipments from New York State and near-by. We quote: Fancy white, 15c, No. 1 white, $1.00; No. 2 yellow, 45c. No new buckwheat is on the market as yet, and we do not expect any before next month. Extracted is decided to be good this year. Plenty of offerings, with only a limited demand, and quotations are rather nominal. We are receiving many lots of grade, according to quality, and Sothorn in barrels at 55c per gallon, 75c per gallon, dull and declining; for the present we quote 75c. 78c.

BILDRETH & SEEGREN.

DES MOINES, Aug. 7.—There is very little demand for any class of honey, although receipts of lots of near-by produced comb honey are on the market and selling in a retail way at $3.50 to $3.75 per case. We do not look for any large trade in this line before Sept. 1. Our market does not consume a great deal of the extracted honey. PECKY BROS. & CHANEY.

DETROIT, Aug. 12.—Fancy white comb honey, 14c/15c, No. 1, 13c/14c; no dark to quote. Extracted, white, 60c/65c. H. H. HUNT & Son. 79c.

BUFFALO, Aug. 10.—Quite a good demand for fancy honey, 16c/17c; No. 2, 15c/16c; No. 3, 14c/15c; old neglected. Advise moderate shipments only of new as yet. BATTERSON & Co.

SAN FRANCISCO, Aug. 14.—White comb, 11c, 12c, 15c; amber, 14c, 10c; 12c, 8c. Extracted, white, 55c—1 light amber, 4c/5c; and 6c/7c. BASKIN & CO.

Market continues quiet, with apiculturists, as a rule, unwilling to unload at prices generally named by wholesalers, except when the market is fairly represent as nearly as possible the values ruling at this date for several months. This market, being young, could not probably be effected at full figures, while, on the other hand, higher prices than quoted are being realized in the selling of some small orders.

KANSAS CITY, Aug. 6.—Some very fine Mis- souri honey is on the market, selling at 160c per pound for fancy white comb. Colo- rado and Utah white honey is dull and selling at 100c. Eastern states, both extracted and comb honey in cartons for first half of August, shipment at 8c per pound for No. 1, and 8c per pound for No. 2, f.o.b. shipping-point. The market for ex- tracted honey is as yet rather unsettled, asking prices ranging from 45c to 60c, and 75c for shipping-point. Buyers, however, seem to be in no hurry to make contracts. PECKY BROS.
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and has filled seven frames with brood two weeks from the
day she arrived, which is better than the combined efforts of three
"yellow" queens purchased two years ago. I believe she is going
to be the counterpart of the queen purchased of you in 1896, in
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Yours Fraternally, EVAN E. EDWARDS.

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The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.

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HONEYVILLE, O.

(THE CUT IS THE FULL SIZE OF THE KNIFE.)

Your Name on the Knife—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

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How appropriate this knife is for a present! What more lasting momento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $2.50, or give it as a Premium to the one sending us 25 New Subscribers to the Bee Journal (with $5.00). We club the Novelty Knife and the Bee Journal for one year, both for $5.00.

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Free!
Glucose Not a Wholesome Sweet.—Dr. J. H. Kellogg, of the Good Health Publishing Company, and widely known as an authority on health foods, answers the question, "Is glucose a wholesome sweet?" in this way:

No. The glucose of commerce is manufactured by fermenting other starchy substances by boiling them with sulphuric acid. This form of sugar is quite unlike the sugar formed by the digestive processes. There is no doubt that the large use of glucose, or grape-sugar, in the form of candy, syrups, adulterated honey, and various other meretricious products which have been put upon the market, is responsible for a large number of cases of disease—a disease which is rapidly increasing.

We are often asked concerning the advisability of feeding glucose to bees for winter stores, or to keep them going during a drought. Our answer is, invariably, Don't. A certain bee-keeper who numbers his colonies by the hundreds, experimented in this matter last fall, by trying to feed something like a ton of glucose to his bees. He won't do so any more. We have been trying to get him to write out the results of the experiment for publication, but so far has failed to get him at it. We imagine that he is trying to forget his mistake as soon as possible.

In our opinion, bee-keepers can't get and stay away too far from the whole glucose business.

Big Money in Bees.—In the American Bee-Keeper, F. G. Herman does his full share toward inducing a venture into bee-keeping. He began with one colony and now has 60. He says:

It has been my experience and that of bee-keepers generally that there are fewer risks and larger profits in comparison to the amount of capital invested in bee-keeping than in any other business. Of course, emergencies do arise, but if they are met by ordinary foresight and common sense, they are not likely to result disastrously.

Now, that's encouraging. One prefers a safe business, even if the profits are less; and there are fewer risks in bee-keeping than in any other business. But it is cheering to know that in bee-keeping we are not confined to small profits, for there are larger profits upon the capital invested than in any other business.

If J. Pierpont Morgan had only had the foresight to invest his money in bees, he might to-day have been a rich man!

Without any desire whatever to harbor any doubts as to bee-keeping being the business of fewest risks and largest profits, one still has a secret longing for definite figures. There is comfort in looking them over and making estimates for the future. Fortunately Mr. Herman has given us just what we want. He says:

It is a conservative estimate of the bee-keepers generally, however, that each colony should bring in at least five dollars a year; and as each colony also throws off a swarm annually, it is easy to see how a little capital invested in bees will grow and multiply, besides yielding a very fair percent of profit.

Let us figure upon this basis, and see what Mr. Herman's income should be five years from now. As the number of colonies doubles each year, his present 60 colonies will in five years increase to 1,920, and as each of these "should bring in at least five dollars a year, his income will be $9,600, and in 10 years from now it will be $807,200. Note this that this is not the wild vision of a dreamer, but the estimate of bee-keepers generally. Note, too, that it is a conservative estimate. Each colony should bring at least five dollars. That's in the poorest years. There are good years when the income is ten, twenty, fifty times as much as in one of the poorest years. Let us continue to be conservative, and say the income will be only ten times as much. That will make the income in ten years from now a round three millions, with $72,000 left for loose change.

The only wonder is, that with all this there is such careful concealment of the names of all the millionaire bee-keepers.

Wild Statements About Bees are often made in the general press, and sometimes are copied unchallenged in bee-journals. The following paragraph occurs in the Pacific Bee Journal:

It is interesting to note in a northern California paper, in an article on fruit-growing, "having with a six-horse team a million or more bees "to fertilize them in his orchards to aid in fertilizing the fruit-bearing trees."

If each colony contains 50,000 bees, a billion of bees would make 20,000 colonies! Estimating the weight of each colony at 50 pounds, the whole weight would be 500 tons. Unless the six-horse team would make more than one trip a day, it would take the biggest part of the year to do the handling.

Extracting-supers.—"Loyaltoine," of whom the Australian Bee-Keepers' Review says he is a practical apiculturist, all of whose writings are well worth reading, differs in some of his views from many if not most of the bee-keepers on this side the globe. He advises a paint the use of shallow frames in extracting-supers, saying, "Full-depth frames pay best, as they hold more honey and require less handling." He also objects to barring the queen out of extracting-supers, because if the queen is allowed full range the bees will work better and not be so likely to swarm.

The editor of the same journal doubts very much that it requires less brains to work for extracted than for comb honey.

Hive-Covers.—A good cover is a very important part of a hive. At the present time the most popular cover is probably the plain board cover. Editor Hutchinson thinks there is nothing better for the North, and finds it hard to believe it is not the best anywhere. To this the editor of the Rocky Mountain Bee Journal replies:

Editor Hutchinson says in the July Review, that for hive-covers, "in the northern part of the United States, there is nothing better than a plain board of white pine, thoroughly cleated and painted; and it is hard to believe that this cover is not the best cover in any climate." That sort of a cover may be all right in the rain-belt, but if Mr. H. will come out here we will show him hundreds of such covers so full of checks that they afford little more protection than a sieve. We have experimented quite largely with covers for this climate, and have concluded that a plain, flat cover made of rough boards and covered with "Neopsonet Red Roofing," is about as good as can be devised. This fabric, when painted white, is a very poor conductor of heat; and if a new hive is started in spring, will remain water-proof indefinitely. Another merit it possesses is cheapness, costing only about 30 cents per 10-frame cover.

However well satisfied Editor Hutchinson may be with the plain board cover, it is not alone in the trying climate of Colorado that murmurs are beginning to arise against it. The plain board cover has its advantages. It is not expensive. No quilts or sheets are needed with it, and it is light to handle. When new, it makes a close fit, leaving nothing to be desired. But it will not always stay new. With time it will curl up at the edges, allowing cracks large enough for cold to enter, and sometimes large enough for robbers to get in. Still worse, it will twist so that it will not lie flat. Making the cover of several pieces (although it takes it out of the list of plain covers), and beveling the edges, will help against the warping that makes the edges curl up, but it will not prevent twisting. The bee-keeper who has thrown his bungling telescoping cover with its quilt is greatly pleased with the simpler plain cover, but he can not resist a yearning for the greater warmth of the discarded cover in cool weather, and when the sections melt down in his supers because the hot sun shines upon the plain board covers, he remembers that he
September 27, 1901.

never had any trouble of that kind in the olden time.

Some have expressed a desire for, or have already used, a cover approaching the plain house cover in lightness and convenience without its objections. It is a cover made of two surfaces with an all-space between. The upper surface is 3, inch stuff with the grain running lengthwise, and a lower surface of the same stuff with the grain running crosswise, have between them an air-space made by strips of 3, inch stuff between the margins. In other words, a shallow box closed top and bottom with an all-space between the box being 's, inch stuff. Of course it must be covered by tin or some cheaper material. The grain of the two surfaces running in opposite directions makes all warping and twisting impossible. The dead-air space is a good non-conductor, making the cover warm in cold weather, and cool in hot weather. Each cover may possibly be the coming cover to be what Editor Hutchinson believes the plain cover already is, "the best cover in any climate."

Deep-Tubed Honey Plants.—Until lately it is probable that most bee-keepers have thought of the red clover as the only honey-plant with tubes too deep for the reach of ordinary bee-tongues. Red clover is far from being the only one. Editor Root says this in Gleanings in Bee-Culture:

In addition to the great honey-plants, red clover, buffalo clover, and sorrel, in Texas, that have long corolla-tubes, I can now add to the list the mountain sages of California, especially the white sage. This last has quite deep corolla-tubes; and I was told, while on the coast, that unless these corolla-tubes are very full the bees do not get Much honey from this source. This is exactly the case with red clover. So it appears that long-tongued bees, if good in the North, will be in Texas that have these sages throughout Central and Southern California, as well as throughout all those states that grow red clover; and I have been surprised to find so much of it in the West. It appears, then, that if long-tongued bees are an advantage on red clover, it will be equal advantage in the case of all the other honey-plants I have named.

Everything was in as neat condition as possible. The apiary is at the rear of the dwelling house, in a beautiful flower-garden, except that around the hives there was not a flower, weed, or blade of grass. All was clear, and each hive easy of access.

Mrs. York accompanied us on this little trip. We spent a lot of time with Mr. Clarke and his parents, with whom he lives. They are about 70 years of age. Mr. Chas. Clarke is the only "child" at home. Of course he is quite an old "child" himself. He has never taken unto himself that which would make him to be the "besser half." We suppose his good mother could hardly spare him, as he is as handy about the house as most daughters would be.

Mr. John W. Clarke, his father, has a justice court in that part of the city where he lives. He has been "handing out" justice for nearly 30 years, and, we believe, has never had one of his decisions reversed. When he "decided" that "Mr. Clarke" was not in the bee-business, it was a wise piece of "justice," as he has been clearly proven by the good crops of honey the bees have gathered for him.

More on the First 1000.—Still they come. We mean members of the National Bee-Keeper's Association. During the past week we have received the following names with $1.00 each:

B. H. Beecham, A. L. Jenks,
Richard Chinn, W. A. Frank,
W. M. A. Taylor, O. P. Hendrix,
F. Z. Drexler.

DR. C. C. Miller, of McHenry Co., Ill., wrote us Aug. 27, as follows:

"After the terrible drought which nearly or quite stopped the rearing of brood in July, it seems a great blessing to have a steady and fairly good fall flow which will leave the colonies with plenty of young bees for winter. I have also taken advantage of it to make some new colonies."

Mr. C. H. Lake, residing near Baltimore, Md., wrote us Aug. 27:

"Bees did poorly here this season, except in one pasture where I had raised my crop of honey for three seasons past."

Mr. Geo. A. Ohmert and Flaley, of Dubuque Co., Iowa, are shown in our front-page illustration this week. When sending the photograph, Mr. Ohmert enclosed the following:

Friend York:—I started in the spring of 1901 with 18 fairly strong colonies, and 10 very weak ones. They built up through April and May, but for the rest of the month I lost white clover cause, which was very abundant, and the bees began to swar. There would be from three to five swarms of the same time, all mixed together. We would have a great time dividing them, but we finally got them settled down.

We harvested about 900 pounds of white clover honey. The basswood flow lasted only about four days, and then our great drouth was on, and the honey-flow stopped.

We had 400 well-filled sections, leaving all the partly filled ones on, and the most of it was carried down during the drouth.

We have had three colonies, with plenty of honey, providing we get any kind of a fall flow, which I think we will, as the drouth was broken to-day (July 28) with a very heavy rain.

I was expecting to go to Buffalo this fall at the bees' expense, but we lost our raspberries and blackberries, so the bee-money must have to go to making up that loss. We have a picture of a part of our apiary. We could not get it all in. The little boy up towards the house is my main assistant. Mrs. Wimert is sitting on a chair under a tree. Our youngest is standing by me. We have one more little girl in the picture, and the rest are neighbors' children.

In front you will see my home-made extractor. It works all right, and is away better than the small extractors I own. The cost, outside of the work, was $8.25. I can extract partly filled sections very rapidly.

Geo. A. Ohmert.

Mr. F. Danzenbaker wrote us Aug. 29, that the severe illness of his wife makes it impossible for him to attend the Buffalo convention. We trust she may soon recover. It will doubtless be quite a trial to Mr. D. to be deprived of being at the convention, for he enjoys such gatherings.

Mr. Tros. Dougery, of Bureau Co., Ill., called at our office last week. He has been keeping bees, off and on, for 40 years. He now has 25 colonies, and reports a good season. Mr. D. says he can get one or two cents per pound more for honey in the tall 4x3 sections than for honey in the square sections, in his local market.

Hon. Eugene Secor is on the program of the 21st annual session of the Farmers' National Congress, to be held at Sioux Falls, S. Dak., Oct. 1 to 10, 1901. His subject is: "Some Problems Confronting the American Farmer." Surely, he has an extensive text, and one that permits of considerable latitude in its discussion.

The Apiary of Louis C. Koehler (see page 555) is situated in Manitowoc Co., Wis., and contains 185 colonies of bees, all in 10-frame Langstroth hives, except a few which have been for experimental purposes. This apiary was started 20 years ago with five colonies of bees, and it has proved to be a success, although there have been set-backs and poor seasons. His father calls it the "big circus," and their farm he calls the "side-show."

The apiary is run entirely for extracted honey, which is all disposed of in the home market, being sold at cost to the consumer. The white clover and the basswood honey are sold at 10 cents per pound, and the goldenrod at 9 cents. In the neighboring cities he has disposed of about three-fourths of a pound per capita on an average; he thinks this a pretty high average, and would like to hear of anyone who has done better. Mr. Koehler has a honey-house 10x28 feet floor-space, and 12 feet high. The lower floor is divided into two rooms; one is the extracting-room, 10x16 feet, and the other is the honey-storage-room, 12x16 feet. The second floor is used as a store-room for empty boxes, frames, etc., and as a paint-shop. He uses extractors on his father's own invention.

Mr. F. Wilcox, of Juneau Co., Wis., dropped in to see us Sept. 2, when on his way East to attend the Buffalo convention, and visit that part of the country. He reports the fall honey crop a failure in his region, but the yield from clover was good, especially aliske clover. There being several days of cool weather just at basswood bloom, the yield from that source was not very good.

Weekly Budget.

Mr. Charles Clarke is a bee-keeper. He is a bee-keeper of not many years' experience, but he is good bee-keeper. He knows how to produce honey. He knows how to handle brood, too.

We made our second visit to Mr. Clarke's apiary Thursday afternoon, Aug. 22. He lives about 12 miles south of Chicago, in a splendid sweet clover district. He began last spring with about 30 colonies, has increased to nearly 60 colonies, besides taking off, something like 4000 pounds of as fine comb honey as we ever saw, and will likely have 10000 more pounds.

Mr. Clarke has just completed a new honey-house, in which he had the honey all tiered up on shelves made of planks on edge and 2x2 inch stuff on top of them. It was a splendid arrangement for the very best curing possible before being put into cases for market.
Contributed Articles.

Transferring Worker-Comb for Drone-Comb.

BY C. P. DADANT.

In reply to a question on this subject, I would say that it is indispensable for the novice to learn how to transfer combs properly, for many reasons. First, he may have bees in old boxes, swarms hived in haste, in any kind of a receptacle—a dry goods box, a cracker box, a keg, or perhaps even a hollow tree, though the latter are getting scarce when compared to 35 years ago.

Then, there is the exchanging of drone-comb for worker-comb, as mentioned in the query. It is also sometimes necessary to straighten combs, or even to take them out entirely, if not built true in the center of the frames; for a movable-frame hive deserves its name only when each comb hangs true on a separate frame. Before the invention of comb foundation, it was much more difficult to secure straight combs, and apiarists had recourse to all sorts of devices to compel the bees to follow the straight line. These devices were more or less successful, and for that reason the handling of the frames in the management of the apiary was more difficult than today.

It must be borne in mind that drone-comb may be removed with the best results when the combs are dry, and so the time for this work is early in the spring or during a dearth of honey.

When examining the frames, set aside all that have more drone-comb than worker-comb, and cut out every-other thing. This will give you a number of pieces of good worker-comb to use. The frames that have been thus emptied can be supplied with either a strip or a full sheet of foundation, and placed in a hive in which a swarm is to be hived.

It does not matter how small a piece of worker-comb you may have, do not destroy it, unless it is absolutely too old and dirty or crooked. Small pieces may be used as well as large ones. I remember that my father, when I was yet a boy, used to transfer into our hives the combs of small boxes in which we had received imported queens from Italy. At that time the exporters put up the queens for shipment in small boxes with two frames of comb, each about 3 x 4 1/2 inches. My father would make a very decent frame of comb with some 16 of those pieces arranged symmetrically in the frame, four in the length and four in the height of the frame. With a little labor from the bees, we had a very good comb with no drone-cells, except an occasional one at the seams, and it is certain that those combs could still be found in our hives, showing plainly the suture or seam made by the bees. I may say that at one time we imported as many as 300 queens annually from Italy.

To hold the combs in place, we use a light wire, say No. 16, of about the height of the frame, and with both ends bent at right angles, so the wire may be driven into the wood at the top and bottom. It is well to punch a small hole previously, with an awl, for it helps in driving the wire into the wood. A number of these are put on one side of the frame, and the frame is laid on the table with the wires on the underside, then the piece of comb is fitted, and more wires nailed on top of it.

To fit a piece of worker-comb into a gap from which a drone-comb had been removed, lay your spare piece of worker-comb on the table, then put the frame down upon it with the empty space of the comb, you can thus mark the exact size and shape of the piece to be cut. This is marked with a sharp knife. If the cut is made exact and the combs are rather old, the fit will be so good that no support will be needed, and the bees will have them fastened together before there is any danger of the patch coming to pieces.

In putting in small pieces shorter wires may be used. (See engraving.)

There is no need of leaving the wires on after the combs have been repaired by the bees. If you leave them, it will spoil a row of cells all the way up and down along each wire. Usually a week is amply sufficient to have the combs patched and in good order, unless the colony is weak and the weather is not favorable.

If transferring is to be tried during a honey-flow, it is necessary to extract the honey out of the combs first. Under no circumstances would a good apiarist transfer combs during a hot spell of weather, especially if there is a good honey, unless the combs to be handled were old and tough.

Never destroy good worker-combs, unless they are so exceedingly dirty that it is evident that the queen would not, or could not, lay eggs in them. That is usually the case with the lower edge of the combs of a very old hive. But if the combs are clean, age makes no difference; we have combs over 40 years old that I would not exchange for the same area of foundation.

Some writers will tell you that bees can build combs so fast, and so cheaply, that a swarm hived on empty frames will succeed as well as one hived on combs already built; but you must class them with the farmers who tell you that land without manure can be kept as productive as land that is well manured. Such talk makes a diversion, it causes discussions, and breaks the monotony by causing the heads to warm up; but in the long run, all the fine-spin theories give way to plain facts. Hancock Co., Ill.

Hiving Two Swarms in One Hive.

BY C. DAVENPORT.

LAST year I wrote an article for the American Bee Journal, in which I stated the fact, and endeavored to explain why a good deal more surplus when two swarms could be obtained here if two swarms were hived together in one hive than could be if each were given a separate hive. In commenting on this in his inimitable way, Mr. Hasty compared it to Hamlet with Hamlet left out, and from what he further said I infer that he has had, or thinks there would be, trouble on account of the queens being balled.

But in the hundreds of natural swarms I have hived in this way I do not remember a single instance when any trouble on account of one or the other was ever taken to prevent it; that is, when both swarms issued at or about the same time. It would be of interest to me, if Mr. Hasty would say whether he ever had any trouble of this kind, or only thought there might be.

Of course, with artificial swarms, or when two natural swarms that issue on different days are hived in one hive, precautions have to be taken to prevent the bees from fighting, but this is not done with any special regard to prevent the queens being balled.

What leads me to say more on this subject is that soon after what I wrote last year was published, a friend of mine, who keeps bees in a small way, came to my place and wanted to know much more in regard to the matter that I had explained, and was much pleased to find out that natural swarms that issued a few days apart could be put together so they would work as well as they would when they both swarmed the same day; when this occurred he had trouble in getting both swarms to work properly together in one hive, in which case he knew from his own
experience that nearly as much again white honey could be secured. The swarms are our friends.

It is a simple and easy matter to unite successfully swarms that come out within three or four days of each other. All that is necessary is to have the swarm that issues last in a separate hive, and leave it in this till evening. Then, if there is any honey in it, or the bee-keepers are soldiers, there is a chance that it is desired to unite it with the bees of this swarm, that issued first. Now, smoked enough so they will thorougly fill themselves with honey; or the plan will work if there is no honey in the hive for them to fill up on. If they are smoked again, some of the soldiers are induced to go with them.

The swarms are now all shaken, in any way most handy, down on the ground in front of their hive. Then the bees of the last swarm are dumped on top of them and all allowed to crawl into the hive together. The whole operation need not take more than a half hour, and the bees are then left to work for themselves. The bees of the last swarm need no smoke if they are united the same day they swarm, but the plan will also work just as well as if the second swarm is left until the swarm comes in which they would need to be well smoked, and, of course, the hive that contained one swarm would, the first day, have to be set close beside the other, or the bees from the swarm moved would return to the location and place where their hive was first set. If there is a laying queen with each swarm, and no hive have I no particular preference as to which survives, no attention is paid to them. Of course, one is always killed, and this is probably inevitable done the first morning. When a queen is separated by other means, settled by royalty itself, I am not able to say, but my opinion is that the bees are not guilty, for I have often noticed these queen that would have found dead in front of the hive this month. There are not many in this way, but quite a few, and the queen's bodies was not gnawed or marred up, which, so far as I have observed, is usually the case when a queen is balled and worried to death by the bees. However this may be, I never knew one queen to fall to survive, though when one queen was larger than the others, and the young hives were the virgin queen in the last of the virgin queen is the swarms. The importance, in my opinion, is that there were nearly three full swarms in it. Of course it was carelessness, and might have been prevented.

The hiving of two swarms together is very profitable with ordinary bee-keepers. Others do not meet with the same success; we can not obtain the same results with the same plan. For instance, in the American Bee Journal for May 24, 1900, is an extract from the Canadian Bee Journal in which Mr. L. M. is quoted as saying that the largest and most successful bee-keepers—so quotes are:

"We hived every swarm on half comb and half foundation, full sheets of foundation (four sheets to the pound), placing the old colonies alongside the new swarm; six or seven days after we shook the old comb, and regathered them in front of the new comb, making it very strong, and took the brood away and hived a swarm on it. There were no eggs and little or no nectar long. Every swarm of bees that started for Comb, except a few that were started for itself, went to work; we carried that out throughout the season. We started with 290 colonies of bees and we finished with 212, and we took 25,000 pound honey.

Previous to what I have quoted he said that this was comb honey. I was much impressed with this plan, and the results obtained from it, and last season I tried it in quite a large way, but the whole thing was practically a failure. The honey was too soft, and the combs were not readily worked, in other ways, and it would not seem to be to much interest of many if others who tried the plan last season would report results. I do not mean that the plan may not be all right—

I only wish to insinuate in a mild way that an expert did not enough to make the method a success. I have, with me, swarms would in some cases refuse to stay on those combs containing, as they did, and must when this plan is practiced; a great deal should be done. I would often, instead of a guard or clipped queen, they did not work with anything like the vim and energy that a swarm hived on starters would, and the results in section work with swarms, either natural or artificial ones, if, as is the case with me, sections filled with white honey is the object sought, regardless of increase or store in the brood-chamber, is to have a large force, in one hive with small starters in the brood-chamber, and use full sheets in the second section. If, with a good one, it will occupy most of the comb below as fast as it is built, so the honey must be in store in the sections; and, what is of more importance, the bees under this system work with great energy from the start to the end of the fall.

There are some disadvantages about this plan, such as pollin in sections some seasons, and all seasons a good deal of drone-comb below. Southern Minnesota.

Bee-Keeping on the Island of Sicily.

BY F. GREINER.

The peasants of Sicily, in particular those living along the Southern coast of the island, have followed bee-keeping as a business for a great many years. The movable comb and the divisable brood-chamber have been in use among them for centuries. Indeed, it would be difficult to frame any description of the countries' origin, or originators of their hives and methods were.

The bee-knowledge these people possess has been transmitted to them by the Greeks and Romans, and, according to some recent ideas on this subject, from a single, ancient honey tree. The idea is that the bees, with the help of the natural climate, can make sufficient pollen in Sicily, and that in the island grows a tree, the resin and gums of which are used by the bees for a part of their materials. In this tree, the long idea hive has its origin.

The peculiarity of the hive is, that the frames form the hive. Nothing more simple could be thought of in the shape of a frame hive. Of course the frames must all be of exact size; they are fastened one to the other by small wooden pins. As many as 42 such frames are thus united, and all the interstices and joints are filled and covered with a mixture of clay and fresh droppings in order to exclude water. Only two small entrances at one end are provided for this 5-foot tunnel.

The method of managing these hives is as unique as are the hives themselves. It is a well known fact that the brood-nest in a hive is generally located near its entrance, there being no building done far from it. If honey is wanted, a part of the frames at the front of the entrance are separated, and empty ones are substituted; if increase of bees is desired, a part of the frames at the front are separated, and thus the division is made.

The dead-air spaces in the frame material, as well as the covering above mentioned, seem to be sufficient protection to prevent bees eating down as fast as in hot a climate as Sicily.

By O. C. N. Y.

P. S.—The above information was gained from an article written by V. Rauschenfels, in Imkerzeitschriften, by F. G.

Rearing Queens—Help for Those Who Fail.

BY G. M. DOITLEET.

A CORRESPONDENT writes as follows: "I have attempted, the past summer, to rear queens as given in your book, but the bees lowest your directions. Where does the fault lie, me or the bees?"

It seems a little strange that about one in 100 who try the plan of rearing queens as given in my book make a partial or entire failure of it. Of the other 99 who try, ninety report a perfect success, while the other nine are puzzled and perplexed over not being able to do better than to secure from three to five perfect queens out of every lot.
good queens at any time of the year these conditions should be brought about as nearly as possible.

Of late years in the trial of comb and fall rearing, I slip a sheet of perforated zinc down into the hive so as to confine the queen to one side of the same, when queens are reared in the other side, or the side not having the queen, the same as in upper stories. This can be done when there are not enough bees to fill properly two stories so as to rear queens to the best advantage.

Onondaga Co., N. Y.

Questions and Answers.

[CONDUCTED BY]

DR. C. C. MILLER, Marengo, III.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail—E. R. R.)

Transferring Bees from Box-Hives.

1. I have several colonies of bees in box-hives that I wish to transfer to movable-frame hives. They have each considerable honey in the brood-chamber, and I suppose brood also. Would it be as well, or better, to do it now (Aug. 3) or wait till September? If it is done September it is to be done in the same way as doing successes do: if not another make the same success in Ohio, providing he did exactly the same thing.

As 60 out of 100 make a success with the plan, it would look as if those who make a partial or entire failure in the matter, failed, in some respect, to work in all the ministrations of the matter, in the same way the successful ones do.

As I mistrust that more fail in the matter of transferring the larva than anywhere else, I am constrained to give the fullest possible directions in this matter.

To those who have not succeeded as they desire, I would say, make a colony queenless and then wait three days till queen-cells are formed having plenty of royal jelly in them, and, after having removed the larvae occupying these cells from the royal jelly, transfer larvae from your select breeding queen to the royal jelly, left just as you removed the original larva from it, making the cells worked upon by some other worker. You will find about half all the trip above every cell thus gathered, when you will return the combs to the bees. If this is a success you may know that there is no trouble on your part in the transferring process; but if it fails you may make up your mind that you killed the larvae in some way in manipulating them, for with me every one is accepted under such circumstances.

If you succeed here, try the same way again, only set the frame having larvae transferred to the cell built by the bees, in the upper story of a tiered-up colony; and, if I am not greatly mistaken, you will succeed here also, unless your trial is made in early spring or late in the fall. If you succeed in this trial, and artifices upon the successful ones do, when you may know that there is some mistake in your manipulation of the royal jelly, or else the wax used in forming the cell-forming is offensive to the bees, or not fashionable. Should you find one of these reasons, or any from these is the cause of failure, instead of using royal jelly, transfer the larvae to the cell-forming by the Willey Atchley plan of removing cocoons—larae and all to the cell-cups. If you now succeed you may know that the trouble was in manipulating the jelly. If you do not, then the cups are at fault.

If you have made no success with any of your trials till you transferred the larvae by means of the cocoons, then you probably have failed at the artifices upon the successful ones do, in such a way that you killed the same, and here is where you are to look for the trouble. If you know that you failed in handling the larvae, allow a few suggestions:

Make the point of the quill used in transferring very thin and three-thirty-second broad, rounding the extreme point. Have this done, give the jelly is coming in from soaking it in water for some time and then pressing it, while soft, on the thumb-nail till it will fit the bottom of worker-cells nicely, when it should be laid away for 24 hours.

Now, before trying to transfer the first larva, dip the point in royal jelly till it is thoroughly moistened with the same, when you will note that, as you pass it under the larva, said larva is floated up on this royal jelly adhering to point, and then you will not have quill sticking to the quill at all, so can not be injured if you use any care in setting it down in the royal jelly in the cell-cups. If you are bothered about seeing, shave the piece of comb containing the larvae, or throw the larva or nest, or base of the cells, when no one should have any difficulty in seeing perfectly who can read the print of these pages.

But perhaps you tried the plan of queen-rearing too early in the spring, or during cool weather in September or October. Or perhaps you did not feed the colony when house fields, or did not, have unseamed brood in the upper story; any or all of which would tend toward a failure.

If the weather is cool and no honey coming in from the fields, the bees should be fed till they are all alive and active, the same as they are when honey is coming in from the fields and at swarming-time; for, if we would rear...
enough of the upper part to make a sung fit in the frame. If, however, there is drone-comb at the lower part and none above, of course you will discard the lower part.

3. There is as much danger of robbing at three rods apart as three feet.

5. You will need great care, especially if done late in the season. If the hives stand close together the danger will be less.

6. Your idea is all right, only moving at night will not be any different from moving in daytime. You can’t fool the bees by that trick. But you may shut up at night the hive to be moved, keeping it shut up for 24 hours (look out you don’t mistreat them). Then open it the next day about once at once, or any time within the 24 hours, and pound on the hive so as to stir them up thoroughly before opening.

7. It is never too late to build comb if it is needed, and the reason your bees build none is without doubt because they need none. Even if you take a comb right out of the middle of the brood-nest, the capacity will be allowed to remain if they have so much room elsewhere that they are not desirous of more.

8. No, in rare cases where there is special reason for it, they may build comb in winter.

9. Almost any time at your own convenience. If you use wire, it will move them themselves, although it will be a help to them if you find it convenient to remove it. If you use fine wire, it will do no harm if you leave it for weeks, so you can remove it any time you happen to have an opportunity. Either wire or string may be removed just as soon as the bees have fastened the combs in the frames just a little. In the working season, this will be in a day or two. It is a good plan to look at the work in a day or two for sometimes the combs will not be located centrally in the frame and you can easily crowd it into place before they are too firmly fastened in.

10. Yes, and no. The part of the comb that is used for brood-rearing will be about the same when turned upside down, but the deep cells in the upper part of the frame that are used for storing honey will be found to be slanted so much that the downward slant will be objectionable when reversed. It will also give the bees some trouble to cut down these deep cells to the proper depth for brood-rearing, and if it will well to try to make the combs right side up, but if it makes such inconvenience to do so as put them in any way that comes handy.

11. As already mentioned, if you shut up the bees for 24 hours it will greatly help to make them stay in the new place. If you wish to make them quiet a day or two before moving, they will stay better in the new place. When the change is made, make the old spot look as unlike home as possible by taking away the stand, and perhaps making other changes. One way may be nearly the reverse of this. Leave on the old stand a hive with a frame of comb for any returning bees to cluster on, and in the evening return them to the new place. You will not need to repeat this many evenings.

"The Hum of the Bees" in the Apple-Tree Bloom is the name of the finest bee-keeper’s song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "Hummer," furnishing a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at $1.00.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions. From which ways we offer valuable premiums in sending every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.

THE AFTERTHUGHT

The "Old Reliable" seen through New and Unreliable Glasses.

By E. E. HASTY, Sta. B Rural, Toledo, O.

TRYING TO CORRECT POPULAR TERMINOLOGY.

No, Prof. Cook, it’s entirely a waste of energy to try to make the general public quit saying "worms" and "bugs" for larvae and beetles. To give up the effort is the only sensible thing that can be done—excepting of course in distinctly scientific papers. The people have worn in many such cases with special interest, being on the side 100 to 1. The people love short, smoothly-sounding words and "larva" is "out of court" to begin with, by its un-English look and sound. Worse than all, many folks take a revengeful delight in using words that they know scientists "frath the month" about, to pay them up for the jaw-crackers they have made us, and which we all have to mouth because there is no alternative word. Deep and penalent reform will have to begin with the Solons themselves before the people will seriously think of reforming. Page 470.

MOVING BEES TO BUCKWHEAT FIELDS.

F. Greiner has a decided "method" in getting bees to the buckwheat fields. Or, rather, I should say he is trying to think it. It would run off the track at the same point, and be less satisfactory than the old "just move 'em" method; but his assurance that he finds it an improvement, and can recommend it to others, should make a good word. He encloses cans of empty comb, reuniting later or not reuniting later (according to circumstances, and according to one’s desires in regard to increase.) Page 484.

HIGH VALUE OF QUEENS DEPENDS ON THE OWNER.

As to the $200 queen racket, I guess I won’t say much—just stand by and laugh. O yes, there’s one thing I will say. The real cash value of an extra queen depends most of all on who has her. Page 484.

THE BLACK BEE AND CAREFUL BREEDING.

Black bee never coddled, and fused with, and "bred" as the Italian bee has been. You’re right about that, Mr. Thaddeus Smith. If somebody would breed out their miserável habit of running down and dropping in little bunches from the comb, the black bee would be an admirable and desirable variety. Spect the real gains of bee-breeding are mostly in the future (if it’s to be), and may be the black bee will get an even chance yet. Page 486.

BEES TOO LONG QUEENLESS.

So the circumstances may be such that bees left too long queenless before giving a cell got so excited and lunatic on the subject that they will all take their young queens and go when said queens do emerge. We will do well to make a note of it. I doubt somewhat whether they waited for wedding-night, as Dr. Miller suggests, as they may be quite wrong; and anyway that is not important. Page 488.

MULBERRY HONEY.

Fruit honey has a dreadful reputation for killing bees in winter; nevertheless a fruit 87 percent sugars, and affecting the human palate as a pure sweet, may deserve further trial. Would have to go it pretty strong in raising mulberries else the birds would eat them. Further, I tell them by try them in Southern California, where there is no wintering problem except to ward off starvation. Destroy the brush surrounding the bee-ranch and cover the hillside with mulberry bushes. Then when a famine year comes tell the bees to go harvest for themselves. Page 493.

SOME "HOT" POETRY REVIEWED.

If it were a youth publishing a poem for the first time I’d have mercy, but (having a little of the David and Goliath spirit) I’m going to go for Eugene Secor as he stands on page 514.

"And flowers to yield the dainty drop
When heat and drought have caused to dry up."

That is not doggerel; it’s prose. The writer should have taken timely warning from the fate of Stenog, whose sin was smaller than this one. Usually false rhyme and lame metre and reckless changes of form go in company with emptiness
of thought and substance; but it is not so in this case. The thoughts are not all above criticism, but there is a good supply of them, some of them gather up poetry. The trouble seems to be that he was too mortally lazy (probably on account of some hot July days) to correct the metre of a few lines.

"Is praying in animal language for rain?"
is a nice amphibrachic line—but, as there isn't another one in the poem, it rather jars us when as rocking back and forth in iambics we unexpectedly come upon it. The time has entirely gone by when one could afford to be "slightly" in the techy of his published poetry.—We thought one else would "straighten out" this matter, so we let the "poem" appear just as it was written. Hot weather is often responsible for over-heated brains—and some other things. —Boston).  

COLONY AND PRIME SWARM "REPEATERS."

On page 493, C. H. Harlan contributes an extreme case of the repeating of both prime swarm and old colony. One year in the long ago (not very far from 35 years) we had the same sort of swarming here. It was a warm and showery summer; and the crop that year was not very large. I have no records going back so far as that, and so can not tell whether his bees made better time than ours or not.

* * *  

The Home Circle.  

Conducted by Prof. A. J. Cook, Claremont, Calif.

THE BIBLE.

To our friends—all the American Bee Journal home circles I count as my friends—we enjoy to talk of those we love, of what we love. A man of old who had visions of truth said, "Out of the abundance of the heart the mouth speaketh." What more fills our hearts than our real, true friends. We must talk of them. What will make the genuine American patriot light up with gladness and enthusiasm? The mere mention of such names as Washington and Lincoln. They were—ever will be—glorious friends of us all. How our eyes brighten, and how our faces kindle at thought or mention of them. How our tongues are loosened as we speak of the nobility and grandeur of their lives. They were friends whose blessings acts touch each and every one of us with blessings that ever grow with the ages. We ought, we must, we will, always sound forth their praises with most hearty accents and with fullest accord. It is good for us and the world that we are all ever ready to voice their incomparable virtues.

And so our friends in all the walks and relations of life must be in our words, as they are in our hearts. We must voice the praises of our country, our State, our neighborhood, the dear ones of the home circle. Why will the coming reunion of bee-keepers at Buffalo be such a glad occasion? Why will all be so enlivened, and why will all who that stay at home lose so much? Only because we love our work, and we love to talk of its needs, its successes, its projects. To talk of these to those who are so fondly enlisted as we are, gives new impetus to our life and work.

I love my new home in Southern California. If we may judge from its rich gifts, it loves me. Ought I then to tire in singing its well-merited praises?—my visit to the home circles last week. I referred to a friend who, like its Author, is "too wise to err; too good to be unkind." Who next to its Author is our very best friend. Who with its Author is ever coveting for us the best gifts, and ever urging us to such life and action as will as surely bring such gifts, as will the breathing of pure air bring life and vigor to our bodies? I hardly need say that I refer to "The book of books"—the blessed Bible—for there is no other such friend.

Few of the blessings of my childhood and early youth rank at all in my esteem with the fact that daily I heard my dear old father read from God's Word. To-day the very accents and the oft-repeated comments on various passages are among my most treasured memories. Had my very busy father neglected this opportunity, how much of richest value and blessing would have been omitted from my life. Thus early I learned to love the grand old volume. In all my college life it was my daily companion, and ever urged me to my best work. Later, as I came to California, it came with me as my dearest friend; and as I went to teach, away up in the mountains, in a rude mining town, where there was no church and no profession of Christianity, its aid stayed by me.

As I started a Sunday-school, and gathered the dear, eager children together, it was from choice my first and best, and most excellent, assistant. There were great temptations in these days. But there were two precious friends ever close, to sound in my ear the ringing word, "Don't!" Need I say that these were the mother-love and the blessed Word? I am glad that later my own home repeated the good habit of my father's home; that my children, like his, daily heard the blessed word of truth. I rejoice that my own children, who now have their own homes, and their own special temptations, continue the habit. This, of course, takes them to the Sunday-school, and makes them its earnest supporter.

Oh, it is a good and a blessed thing for all our children to receive into their hearts and lives the blessed truths of this most blessed of books. I wish I might be so happy as to say the magic word that would open its pages, and speak its saving messages in every home circle of our land! What a power this would become, to check untruth, to stay dishonesty, to snatch away the victims of idleness and the horrid saloons; to weed out the foulest blot of all on our history's pages—the sin of impurity and the blasting social evil.

How certain is it that the authors of this grand book spoke as they were moved by the Spirit of God, else we would not have had the oft-repeated invitations to what all experience proves to be the highest virtues—would not have seen urged over and over, to a life that all experience shows will bring happiness; would not have been warned, almost on every page, against those evils and sins which surely imperil the soul. How black is untruth and dishonesty; how thick the Bible warnings to thrust them wholly from our lives and thoughts. How blasting and full of menace is intemperance and lust, and how over and over the dear old Book points the warning finger, and says, Touch not.

Oh! I would not only read it, but with the children I would learn so we could often repeat the Ten Commandments, the many grand passages from Isaiah, such Psalms as the 1st, 5th, 19th, 23rd, 24th, 121st, etc. Such portions of the New Testament as the Beatitudes, yea, most of the Sermon on the Mount, the 12th Chapter of Romans, and 13th of 1st Corinthians. "For if these be in us and abound, they would make us that we could not be barren or unfruitful."

That grand chapter from Paul's great heart—the 13th of 1st Corinthians—is almost enough in itself to guide us in all life's perplexities. Learned aright, and we can not go astray. I like to repeat it often together about the morning table. It is easy, by use of such transcendent passages as these, to show our dear children the glories of this the very Word of God, that they will hunger to know more of its divine truth, which, if well and rightly learned, will make us all "wise unto salvation."
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(See page 459 American Bee Journal.)

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Bee’s Did Better This Year.

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RICHARD CHINN.

DIXON CO., NEBR., AUG. 26.

Working on Buckwheat.

Bees are working on buckwheat and queen-of-the-meadow present. I have taken off nearly 40 pounds of honey per colony, so far. C. F. CARR, M. D. AND H. HOUSE.

Omeida Co., N. Y., Aug. 21.

Horsemint.

I send a flower that grows here on the sand hills. The bushes are just covered with bees from morning till night. It gives considerable honey, although a light amber.

HENRY ROGERS.

Coke Co., Ill., Aug. 19.

Cook Co., Ill., Aug. 19.

(The plant in question is the horsemint—Monarda punctata—and belongs to the large and important mint family, the members of which are usually aromatic and honey-producing. A goodly number of these plants bloom from July to November in sandy fields and dry banks, and furnish a rich supply of nectar for the bees during the drouth season. C. L. WATSON.)

Continued Drought.

No rain yet. We never experienced such a drought. Bees may gather in a month or two. E. T. FLAHOAN.

ST. CLAIR CO., Ill., Aug. 30.

Season in North Carolina—Dollar Queens.

This has been the wettest and driest season I ever saw. Up till July 1 it rained nearly all of the time. Then there was a drouth for nearly five weeks, so we have had a short honey season. The linden blossom commenced to open about July 4, and was very rich in nectar for about 15 or 20 days, then the buckwheat commenced to yield nectar, and was never better, until the rain cut it off, two weeks ago. It has rained nearly every day since. Some bees are in very good condition. I never saw better prospects for a full crop of honey, the fields and woodlands being covered with honey-yielding weeds. I have taken only about 100 pounds of fine honey up to date, mostly extracted. I will take more in September, if the weather is favorable.

I want to say a few words in regard to "dollar queens." In my opinion nothing else has done as much harm to the bee business as the sale of the dollar queen. The beekeepers are reared for the trade, not for business. A queen ought not only to be tested for purity, but for business in age and weight, and the queen sent with the bee hives. The queen-gatherers, before she is offered to the public for business. If each queen had a good guaranty for egg-laying, her bees would be for sale. They are needed in the east and west for honey-making, and the extra hardness for wintering. It would improve the bee business more than any other one thing. I say it in my opinion. Let us hear from some of our big beekeepers.

Langstroth on
The Honey-Bee

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guns in this respect. Don’t understand me to mean that there are no good queens—there is about one good one in 50, according to my experience. I have bought more than that number, and only one was of any value worth mentioning. Bees in a state of nature don’t have their queen bees but one season, for they fall by the wayside the first winter, as the limit-survive.

I have seen the bee-business for 25 years, and have learned some things, but there is much to learn yet. A. J. McRaito.

Watauga Co., N. C.

Too Dry for Honey-Production.

I think the American Bee Journal is splendid, and I don’t think I could do without it. We have but little honey in north Texas this year, as it has been too dry. I have 20 colonies, and will have to feed some of them.

Dallas Co., Tex., Aug. 28.

Mulberry Pulp for Bees.

Yes, as Dr. Miller says, page 550, “I would probably take a good deal to make old bee-keepers believe that bees could store good honey from the pulp of any fruit.”

Then, again, some of them would be sufficiently industrious and investigating, when, lo! they may learn that pulp from white mulberries, containing, as they do, 7% percent sugar, would reveal mysteries in honey-gathering that would astonish them!

We live in an age check full of surprises, and old bee-keepers may as well wake up to the fact before their children urge it upon their attention.

And as the experiment of planting a hundred cuttings of wild mulberry would be hardly a dollar, would not such a beloved seer in bee-lore—our esteemed Dr. Miller—do a worthy act to employ his benign influence in encouraging his readers at least to attempt a venture that at its worst would leave bee-keepers in possession of delightful shade-trees, serviceable timber, and delicious fruit?

I know that the best impulses of his good heart strongly tend in this direction, but years of observation have compelled sober discretion, even to timidity and distrust, I fear.

But let courage and hope reawake, faith also, lead on to untried but reasonable measures, trusting, thereby, to develop resources hitherto unknown. If this spirit possessing these qualities we owe most beneficent discoveries.

Dr. Piero.

Against Zine Honey-Boards.

It is not very often that I give my views on the methods of manipulating bees, but as each bee-man plods along the dusty road to fortune, if he sees, or thinks he sees, something in the shape of a mote in his brother’s eye, he forthwith proceeds to pluck it out, or at least feels he ought to do so.

I do not use honey-boxes. The queen has the liberty of the hive. I do not use them because they are in the way of the workers.

The field bee comes in heavily loaded, tired

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Where the Nectar Comes From.

Prof. B. Shmelk says in Home and Flowers:
The nectar-glands are extremely variable in form, size, color, etc. In phlox it is the inner most surface of the slighly swelling at the very base of the tube of the corolla, in the columbine it is the surface of the innermost base of the spur on each of the five petals; in the larkspur, violet and Passiflora it is a part of the inner surface of the spur; in the barberry there are two orange-colored glands at the base of each of the inner petals, etc. In some cases the nectar is produced in such quantities that it can readily be tasted. Nectar-glands, however, are not always conspicuous, indeed as a rule they are more or less concealed, and other means must be employed first to secure the attention of the insect. This is most commonly done by special odors and by color. Very often both color and odor attract insects, as in roses, lilac, etc., but the buckthorn, mignonette and other inconspicuous flowers secure recognition chiefly by their color.

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Rocky Mountain Bee-Plant Seed! (Cleanse intestines...) FREE as a PREMIUM.

The A B C of Bee-Culture says it: "This is beefed, or the plant it grows in the garden, and says nothing of the honey it produces. It grows from the same seed as clover, and clusters large, clusters of bright pink flowers. It grows naturally on the Rocky Mountains, and in Colorado, and it is also valuable for honey." We have a few pounds of this Chinone seed, and offer to mail a 1-pound package as a PREMIUM for sending as ONENEW subscriber to the American Bee Journal, with $1.00 or $5 pound by mail for 40 cents.

Please mention Bee Journal when writing advertisers.

FREE as a Premium

A Foster Stylographic Pen....
alent of five frames of brood and bees. Four or five days later put on an upper story on each alternative hive of the class of colonies from which you removed a queen, alternating the frames of brood and bees, both in the lower and upper story, and there will be no fighting. If your hives are standing close in pairs, nearly all your swarms will remain until you put them. At this time I would introduce a young laying queen to each of these double colonies. Let them thus remain until most of the brood is hatched. When the time for swarms arrives contract the brood-chamber to five frames, and use the frames of brood and weak colonies in filling up such spaces. Such colonies will do well in working up the season.

But to return to the second weaker colonies from which we drew our batch of brood. This class of colonies has each a second-class queen, a little patch of brood, and some field-bees. What shall we do with them? Let them alone until the time you expect your best colonies to swarm. At this time I would draw frames of brood from each colony likely to swarm, contract the brood-chamber to five frames, and use the frames of brood and weak colonies in filling up such spaces. Such colonies will do well in working up the season.

SWEET CLOVER
And Several Other Clover Seeds.
We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

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Prices subject to market changes.
Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and pack.
Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO., 144 & 146 Erie Street, CHICAGO, ILL.

HONEY AND BEESWAX
MARKET QUOTATIONS.

CHICAGO, Aug. 22.—White comb brings 15¢ per pound for the choice grades, with other lines of comb fetching 10¢. Clover honey at 15¢; dark, 10¢. Extracted, fair dinner honey at 15¢; dark, 10¢. Extracted, fancy dinner honey at 20¢—good, 26¢; choice, 30¢. Beehives steady at 30¢ for choice yellow. R. A. BURNETT & CO.

CINCINNATI, Aug. 10.—The honey market is running dull on account of many hives having been torn and removed. Extracted sells only to manufacturers from September grades, 60¢ per pound; dark, 65¢; white, 60¢; white clover honey from 80¢ to 85¢. Fancy white clover hives from 90¢ to 1.00.

R. C. WEBER.

BOSTON, Aug. 19.—Our market to-day is about 1600¢ for fancy; A No. 1, 150¢; A No. 1, 140¢. Honeys, light, 75¢; dark, 80¢.

Several lots of new Vermont honey in carlots have thus far been received, meeting a ready sale at 15¢, although of comparatively fair quality. The trade generally seems disposed to hold off, if at all, for larger receipts. R. J. Foster.

OMAHA, Aug. 8.—New comb honey is arriving by express in small quantities from Iowa and Colorado, and selling at 25¢ per case in a retail way. California extractors and dealers are offering carlots at 45¢ per pound, f.o.b. Cal.-Iowa, and are quoting 50¢ per pound. Further shipments of any sales having been made thus far. The demand for and price of clover comb are steady in this market, large this year in Colorado, Utah and California.

PICKY BROS.

NEW YORK, Aug. 7.—There is some demand for new crop of comb honey, and prices are quite numerous for this time of the year. They are generally 55¢, 60¢ and 65¢ per pound, f.o.b. New York, and prices are now beginning to receive shipments from New York State and other states. Fancy: honey, white, 15¢; No. 1 white, 130–140¢; amber, 110–120¢. No new buckwheat is on the market as yet, and sales do not expect any before next month. Prices are steady.

EXTRACTED is decidedly dull. Plenty offerings, with a limited demand. Although the prices are rather nominal. We are selling at 75¢ per pound. We quote fancy, white, at 15¢, dark, 10¢. We quote California, 90¢ per pound. We are selling fancy at 85¢ per pound. Beehives dull declining; for the present we quote 25¢.

PICKER BROS.

DES MOINES, Aug. 7.—There is very little doing here in new crop of honey. Some small lots are now being produced comb honey on the market, and selling in a retail way at $3.50 per pound. We do not look for much trade in this region for the future. We quote: comb honey, 80¢, 90¢ and 100¢ as a rule.

BUFFALO, Aug. 10.—Quite a good demand for fancy honey, 160¢, and lower grades, 120¢; old neglected. Advise moderate shipments only of fancy, as $1.00 as a rule. We advise manufacturers to hold on to their stock as long as possible.

SAN FRANCISCO, Aug. 14.—White comb, 115–125 cents; amber, 88–90 cents; dark, 60–70c. Extracted, white, 55–60¢; light amber, 45–50¢; amber, 60–70¢; dark, 55–60¢. Market continues quiet, with apiculturists, as a rule, unwilling to admit at prices generally named by wholesale operators. Quotations represent as nearly as possible the prices in the market at this date for round lots, although free sales could not probably be effected at full figures, while the other hives as a rule are not quoted but are being realized in the filling of some small orders.

KANSAS CITY, Aug. 6.—Some very fine Missouri honey is now on the market, selling at 100c per pound for white flower comb honey, and Utah shippers are offering new comb honey in carlots for first half of August, shipment to take place in carlots on No. 2, f.o.b. shipping-point. The market for extracted honey is yet rather unsettled, as prices ranging from 94–95¢, f.o.b. shipping-point, seem to be rather a matter to make contracts. PICKER BROS.

QUEENS
Now ready to supply by return mail. STOCK IN U.S. EXCLUDED.
Bred under the SUPERSEDING CONDITION of the market.
GOLDEN ITALIANS, the GREAT HONEY-GATHERERS. They have no SUPERIOR and far fewer.
RED CLOVER QUEENS, the LONG-TONGUED QUEENS, which do not RECORDS behind in GATHERING HONEY, $1 each; 6 for $4. SAFE ARRIVAL GUARANTEED.
C. H. WEBER & CO., 246 & 248 Central Ave., CINCINNATI, OHIO.
Headquarters for Root's Goods. At Root's Prices. Catalog free; send for same.

The Emerson Binder
This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for 25¢. or we will send it with the Bee Journal for one year—both for only 40¢. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.
GEORGE W. YORK & CO., 144 & 146 Erie Street, CHICAGO, ILL.

Illinois Day at the Pan-American Exposition.
The Nickel Plate Road will sell tickets for that occasion at rate as low as $10.50 for the round trip, good Sept. 14 and 15, and returning to and including Sept. 19, and for any day in between.

Queen-Clipping Device Free...
The Monette Queen-Clipping Device is a fine thing for use in collections of large numbers of queens, as it will clip 100 queens in 10 minutes. We mail it for 25¢; or 25 for $5.00. FREE for sending as ONE NEW subscriber to Bee Journal for a year at $1.00; or for $3.00 we will mail the Bee Journal one year and the Clipping-devise gratis.

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GEORGE W. YORK & COMPANY, Chicago, ILL.

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WANTED—Honey
Car Lots or others to will pay highest market price for fancy and choice quality, and price desired at your station. Will send return to highest bid. Please send to THOS. C. STANLEY & SON, 324 Fair Lawn, FAIRFAX, ILL.

WANTED—Comb and Extracted Honeys.
State price, kind and quantity. R. A. BURNETT & CO., 199 Water St., Chicago, ILL.

WANTED—Honey
Car Lots or others to will pay highest market price for fancy and choice quality, and price desired at your station. Will send return to highest bid. Please send to THOS. C. STANLEY & SON, 324 Fair Lawn, FAIRFAX, ILL.

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Our Falcon Sections and New Process Founda-
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FULL ALL ORDERS
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Un tested, 75 cents: Tested, $1.00: Select Tested,
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—By—
PROF. A. J. COOK.

460 Pages—16th (1899) Edition—18th Thou-
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A description of the book here is quite unneces-
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We guarantee
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What more can anybody do? BEAUTY, 
PURITY, FIRMNESS, No SAGGING, No
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Why does it sell
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Because it has always given better satis-
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Because it has not been any complaints, but thousands of compli-
ments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs
for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.25, by mail.

Beeswax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., III.

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ANOTHER ENDORSEMENT
FOR Root's Red Clover Queens

ALEXANDRIA, IND., Aug. 1, 1901.

THE A. I. ROOT CO., Medina, Ohio.

Dear Friends:—The tested clover queen came in good condi-
tion and has filled seven frames with brood two weeks from
the day she arrived, which is better than the combined efforts of three
"yellow" queens purchased two years ago. I believe she is going
to be the counterpart of the queen purchased of you in 1896, in
which case money could not buy her.

Yours Fraternally,
EVAN E. EDWARDS.

PRICES OF RED CLOVER QUEENS:

Gleanings in Bee-Culture one year and Untested Queen ....$2.00
" " " " " " Tested Queen ...... 4.00
" " " " " " Select Tested Queen. 6.00

If you want something good you can not do better than to order one of these queens. All orders are filled promptly. No extra postage on these to foreign countries.

THE A. I. ROOT CO., Medina, Ohio.

GEORGE W. YORK & CO. 144 & 146 Erie Street,
CHICAGO, I11.

are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO.
Send to them for their free Catalog.
25 cents Cash paid for Beeswax.

The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.

This is a good time to send in your Beeswax. We are paying 25 cents a pound—CASH—for best yellow, upon its receipt, or 27 cents in trade. Impure wax not taken at any price.

Address as follows, very plainly,

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

H. M. MELBEE, HONEYVILLE, O.

This is the full size of the knife.

Your Name on the knife. —When ordering, be sure to say just what name and address you wish put on the knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-stone, and we warrant every blade. The moulds are made of German silver, and will never rust or corrode. The rivets are hand-forged German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel; and the finish of the handle as described above. It will last a lifetime, with proper wear.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return; otherwise it cannot destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your Pocket-Knife will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to get this Valuable Knife. — We send it postpaid for $1.25, or give it as a Premium to the one sending us three New Subscribers to the Bee Journal (with $1.90). We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

GEORGE W. YORK & CO.
St. Chicago, Ill.

#* Please allow about two weeks for your order to be filled.
Discouragings and Encouragements in Queen-Rearing.—Never before was so much said and taught about improvement of stock, and as a consequence about queen-rearing. In probably the great majority of cases little or nothing is done to control in any way the actions of the bees in the rearing of queens, beyond the occasional introduction of a queen from elsewhere, with the hope of improvement.

Even those who are willing to do all in their power to make improvement are hand-rapped as in no other line of breeding, by the lack of control of the sire in mating. The man who attempts to breed a good horse or cow can do just as much toward controlling the sire as the dam, while the bee-keeper may take all the pains possible to select the dam and then have her meet a mate of the poorest sort from some colony two miles away. To be sure, he may succeed to a degree by having his young queens fly out to mate at a time of day when drones in general are not flying, or he may go to the expense of having a Davit cage, but even then the control is only partial, for instead of a single drone being selected, a hundred or more will be on the scene of action.

But with all the discouragements there is much to encourage, and a man with the smallest allowance of ability and experience could do something, if not to improve his stock, at least to keep it from becoming worse. For, left entirely to itself, the greatest amount of increase coming from colonies most given to swarming and least given to storing, the chances are more in favor of deterioration than improvement. By purchasing a single queen for Italian blood, the owner of black bees may, inside of two months, have all his workers changed at least to half-bloods. No such rapid change can be made in any other kind of stock, so, in spite of discouragements, in this one respect the bee-keeper has the advantage over breeders of other stock.

While the discouraging fact is emphasized constantly that inferior drones within two miles or more may make trouble, the converse of this should not be forgotten. If for the inferior drones of a neighbor lower one's chances for improvement, it is also true that one's own superior drones will steadily be raising the grade of the neighbor's bees, so that as the years go by the damage from outside drones will be less and less.

Locality or Kind of Bees?—Those who write for beginners in bee-culture need not expect that their writings will be scouted only by those without experience. Witness some of the following questions:

Some of the teachings of J. D. Gehring, when considered in the light of my own experience, are somewhat puzzling. An instance occurs on page 356. The first item given in the line of winter preparation is to look in the hives about the middle of October to ascertain the fact that the colony has a queen. Rap sharply a few times on the outside of the hive, to make sure that there are no bees within to fill themselves, then take off cover, give a little smoke, and then proceed with the search for the queen. Now in my experience I should expect a rather long search after treating the bees in that way. In the first place, there is no question about the first thing I should do after rapping sharply a few times on the outside of the hive would be to take to my heels if I didn't want a lot of cross bees about my ears. Perhaps, however, Mr. Gehring smokes before he runs. He doesn't say. In any case, if I should rap on the hive enough to make the bees fill themselves and then should give a little smoke, my bees would be ready to run like a flock of sheep, making the chance for finding a queen about as great as some would ask, Is there a difference in bees that makes Mr. Gehring's bees hold still when mine would be sure to run?

Also, what is the object of finding the queen, seeing that it makes no difference in the treatment? For he doesn't say a word about doing anything different with a colony if the queen should not be found.

OLD ENGLISH.

There is a good deal of difference in bees in their deportment under the same kind of treatment. An amount of smoke or jarring that would have very little effect upon some bees would make others run so that the task of finding a queen would be difficult, if not impossible. The object of ascertaining the presence of a queen is no doubt so that a queen may be furnished where needed, or the queenless colony united with another. It is doubtful, however, that the practice of beekeepers in general would agree with that of Mr. Gehring. When looking for a queen it is of first importance that the bees should be smoked or disturbed in any way as little as possible. Once the bees get to running it is better to give up the search till another time.

A single puff at the entrance, before opening the hive, and a very little smoke over the tops of the frames after the cover is removed, will be sufficient to keep the bees from flying out at the operator, and that is all that is required. Indeed, with some bees no smoke at all is necessary, and all jarring of the hive should be carefully avoided.

Probably few beekeepers make a practice of looking through the hives for queens in the fall. If there is young brood in the hive the presence of the queen is known without seeing her. If no brood is present, which is often the case, the bees may be for and very hard to find. Not finding her is by no means positive proof that there is no queen: so if no queen is found, and another queen is given, there is a fair chance that a queen is thereby wasted. On the whole, it is not likely that many would consider it advisable to make the search.

Getting Bees Off the Comb is rated by Editor Hutchinson as the most disagreeable part of producing extracted honey. He gives the practice of Mr. Miller, a Canadian, as follows:

Give the bees a good smoking, which drives down most of them, then get the super down near the entrance, when the rest of the bees will leave the super for the hive. When most or all of the bees are taken off, use the escape. Mr. Hutchinson says he uses the same plan in removing surplus comb honey.

Dr. C. C. Miller uses somewhat the same plan. He writes:

"When a super of sections is to be removed from the hive, the plan of procedure depends upon whether the robbing tendency is not. During the height of the season, and until the flow wanes, there is usually no trouble from robbers, and super or sections may often be left exposed for an hour or more without any danger. Still, there is always a possible danger, and a close watch must be kept if after the cover is replaced the super is set endwise upon it, well forward, with one edge of the super projecting over a little. After a time the bees will start a line of march from this projecting part down to the entrance of the hive, and not many bees will be left. It is possible that there would be an advantage in setting the super close down against the entrance, but when it is on the top of the hive it is easy to keep watch of it from any part of the apiary, as so to see the first attempt at robbing, whereas a land-office business might be going on unseen if a super stood on the ground.

"After the bees are mostly out of the super, they are stacked up in a pile until the pile contains perhaps a dozen, a robber-cloth escape being used to cover the pile from the time it is started. This escape is simply a robber-cloth having in its center a very
large core escape of wire-cloth. It ought hardly to be called a core escape, for instead of being a cone it is a pyramid, each side of the pyramid being an equilateral triangle, and each side of the triangle measuring 10 or 11 inches. This allows the light on top to pass through, but the remaining bees make their way out with no danger of robbers entering. If robbers are troublesome, then the supers are taken immediately from the hive (a little more smoke being used than usual), and put directly on the pile under the escape. The robbers may be in thick clusters at the base of the escape, but they do not seem to know enough to enter at the top. And yet, after second thought, we felt it was an opportunity for us to enlighten him in a kindly manner, which we felt sure he would appreciate, for even editor's have much to learn, especially young ones.

Now, after having said that much, we will go further, and say that we wish the Rocky Mountain Bee Journal all kinds of success in the very difficult field in which it has chosen to enter.

But we would also like to suggest, that sometimes it is better to write privately to a supposedly offending brother, and see if with his help a rather ridiculous side-show of one's self can not be avoided.

Rather Serious Accusations against the editor of the American Bee Journal are contained in the following paragraph from the Rocky Mountain Bee Journal:

Under the head of "Contributed Articles" the American Bee Journal recently published Mr. W. L. Porter's paper on "Co-operation," which appeared originally in the June issue of the Rocky Mountain Bee Journal.

As Porter's article was not credited to the R. M. B. J., and appeared as original correspondence to the same, we may say that this is the republication of articles from the R. M. B. J., but we do insist most strenuously that proper credit be given to the editor. Porter has never mentioned the existence of the R. M. B. J., and it would seem that to carry his policy of unfriendliness toward Western bee-journals to the extreme limit.

Editor York deems it legitimate to take from their columns and mention in his paper without giving credit. Whatever may be the motive, this is a species of piracy rounded coincidently by all reputable journalists, and we are sorry to see it indulged by a member of the apiarian press. All we ask is, treat us fairly, Mr. York, or hands off, please.

We haven't read anything in a long time that has amused us so much as the above. And yet we do feel a bit sorry for our new brother editor. He didn't notice that right at the head of the article in question we had this credit:

"Read at the Longmont meeting of the Colorado State Bee-keepers' Association, April 30, 1901, by W. L. Porter."

You see, we did not publish it "as original correspondence in the A. B. J.," as he charges. No other credit than what we gave was needed. Of course, our good brother editor didn't know that anything read at a convention is public property—even the report of discussions is also, unless the journal publishing it has paid for such report, as we have done for that of the National Bee-Keepers' Association.

So it is clearly seen that Mr. Porter's article wasn't even written originally for the Rocky Mountain Bee Journal, but for the Colorado State convention. If it had been written especially for that paper, why was it necessary to read it at head these words when appearing there also?

"A paper read at the Longmont meeting of the Colorado State Bee-keepers' Ass'n., April 30, 1901:"

Again, our worthy fellow editor says this:

"So far as we are aware, the A. B. J. has never mentioned the existence of the R. M. B. J. etc.

Of course, again he wasn't "aware," for he evidently did not know of the following notice, which we printed on page 212 of this journal for April 4, 1901:

"The Rocky Mountain Bee Journal is the name of the latest claimant to the patronage of the bee-keeping public. It purports to be published "For Colorado and the Great Inter-Mountain Region." It is to be issued monthly, is neatly printed, and presents a good general appearance."

Our first inclination, upon reading the accusations made by our fellow editor was to remove them entirely, as they deserved to be treated. And yet, after second thought, we felt it was an opportunity for us to enlighten him in a kindly manner, which we felt sure he would appreciate, for even editor's have much to learn, especially young ones.

W. Z. Hutcinson.

THE EXECUTIVE COMMITTEE OF THE NATIONAL BEE-KEEPERS' ASSOCIATION FOR 1902, ELECTED AT BUFFALO LAST WEEK, ARE AS FOLLOWS:

President—W. Z. Hutchinson, of Michigan.
Vice-President—O. L. Hershiser, of New York.
Secretary—Dr. A. R. Mason, of Ohio.

THE ROOF-APIARY OF AUGUST ASMUSSEN, of Pottawattamie Co., Iowa, helps us out our first page this month, and that's what he wrote about himself and his bees:

Editor American Bee Journal:—Ten years ago I started with one colony of bees, and, finding it both pleasant and profitable, I have kept bees ever since.

I am a harness-maker by trade, and since last spring have lived on the main street next to my shop. In order to care for the bees properly I decided to keep them on the roof, and I was forced to move them at night, as the citizens strongly objected to keeping them in town.

If it were not for the swarming habit of the bee, no one would have known the bees were there. I have prevented the escape of good swarming, to a great extent, by giving them plenty of room, and controlling them by clipping the queen's wings. The bees did well during the month of June, but on account of lack of rain during July they decreased in number increased, judging by the hive on the scales.

AUGUST ASMUSSEN.

Mr. W. D. DUNGAN, of Dupage Co., Ill., began in the spring with 10 colonies, now has 15, and will likely harvest 100 pounds of comb honey per colony, spring and fall, and will have a hive in each region. Mr. Dungan combines bee-keeping with the office of Justice of the Peace, and it seems to be a good arrangement.

We had the pleasure of visiting Mr. Duncan and his apiary, Aug. 29. He lives 17 miles southwest of Chicago, in a fairly good sweet clover district, so his honey is mainly from that source. He will have no difficulty in selling all he can take off the hives at $3.50 a frame. He is the Danzenbaker hive, but expects hereafter to use the regular Langstroth 10-frame brood-chamber with Danzenbaker super. Some other bee-keepers find such a combination all right for the production of comb honey. One great advantage is that in buying or selling bees, there is no difficulty about free-handled and willer-wender frames. As the Langstroth size is practically standard. And, then, a few Danzenbaker frame is too shallow for safe wintering of bees in a cold climate.

Mr. Duncan has a very neat apiary. But, then, if you knew the man you would expect that. He lives in a neat and pretty town. It is a pleasant town, too. He has not had a case on his court docket for months. Very likely one cause of this happy condition of affairs is "no saloon." The people in that beautiful Chicago suburb have better sense than to tolerate the presence of that pest-hole.

Mr. Duncan took us to see several other near-by apiaries, in one of which (the elder Mr. Schramm's) was a colony in a straw-skep—the first occupied skep that we had ever seen. Mr. S. said he got nothing but swarms from it, but this year he has not had even that from it, though it was a powerful colony. It is a novel and interesting sight.

About 3 p.m. Mr. D. ordered up a good horse and buggy, and took Mrs. Duncan along, to visit Mr. G. W. Stephenson's apiary, about three miles away. We found Mr. S., at home with his nearly 40 colonies of bees. He also gets a skep to house an average of 150 pounds of comb honey per colony, spring count which was 60 colonies. Mr. Stephenson only knows of one that produces a good crop of honey every year, but all the sections are always uniformly filled. Perhaps one reason why he secures such good results is because he has strong colonies in 10-frame Langstroth hives, and only 24 bee-way sections in the regular 8-frame section. The super, leaving a large open space at each side to be filled with bees. In this way the outside rows of sections are sometimes sealed over first, and all are as evenly filled as could be desired. To hold the sections in the super he has a 31-inch follower board, and, as the space at the opposite end also. Mr. Stephenson is well satisfied with this arrangement, as he well may be, for with its use he gets the results he wants.

W. Z. HUTCHINSON.
Contributed Articles.

A Bee-Keeper's Vacation Spent in Wisconsin.

BY C. P. DADANT.

T is a nice thing to take a vacation if one can find the time and opportunity, but one must feel that nothing left behind will suffer from his absence, and that the trip would not be absolutely needed for some indispensable purpose. When you can combine these requirements, it is easy to figure, on the other hand, how much health and prolongation of life you can secure by a short absence from the daily routine.

My father is subject to hay-fever—a dreaded complaint with which probably a number of my readers are acquainted. This disease, it is a sort of asthma or catarrh, caused mainly by the pollen of the ragweed. The hay-fever sufferers of the United States are not quantitatively the stubbles, together with the knot-weed, and Spanish-nedles, (which by the way, yield considerable honey), most of the growth of those weeds taking place after harvest. But in the vicinity of the Great Lakes, up in northern Wisconśnie, the small grains—wheat, oats, rye and barley—grow so slowly, and ripen so late, that there is not time for any plant like these to grow, bloom, and ripen their seed, after harvest. So Sturgeon Bay is immune, and it is that point to which I have selected for my annual anti-hay-fever. For 14 years he has regularly spent six or seven weeks there, in August and September, returning home by the end of the latter month.

If the reader will hunt up the map of Wisconsin, I will point to him the pretty spot of which I am about to speak. I do not enjoy reading of a place unless I can "place" it on the map, and I take it that others are like me in this respect.

If you have the map, start with your finger on Lake Michigan, from Chicago northward. You will soon come to the peninsula which forms Door County, Wis., and which separates the waters of Lake Michigan from those of Green Bay. About half way along this peninsula you will notice a narrow neck of land, with a little bay indenting the shore of Green Bay. This is Sturgeon Bay. At this point the neck of land is only 1 1/2 miles in width and a deep canal has been cut in the land, joining the two lakes, so that the boats that go from Chicago to Green Bay can enter Marinette, Menominee, and Escanaba, are no longer compelled to go up to the point and run down again, passing at the north end, through what is called "Death's Door," (an ugly name), but you run from Lake Michigan through the Sturgeon Bay canal into Green Bay, and vice versa, saving an extra trip of a hundred miles or so, and the peninsula has practically become an island.

The city of Sturgeon Bay, on the bay of the same name, is supplied by water Lake Michigan, the side and Green Bay on the other. The air is pure and cool, always refreshed by lake breezes coming from either side, and our Illinois, Iowa and Missouri friends must really read and get a treat of what that pure air can do to the parched, dusty plains and overheated fields, roasted by the August sun, and reach an oasis where everything is green and fresh, where mosses and ferns grow all over the forest and form a green carpet under your feet; where the water is enough, and when no one is considered high when it reaches 80 degrees in the shade.

Well, business was dull at home, the bees were idle, the small clover honey crop harvested, and our boys were willing to undertake to do all that had to be done, and take from our shoulders the home responsibilities. So wife and I accompanied "Grandpa" Dadant on his usual trip.

The city of Sturgeon Bay is not a fashionable resort. It is a plain, every-day looking little town of 3,000 inhabi-

tants, with plenty of grit and lots of "go." The folks are not spoiled by rich tourists, and are willing to accept reasonable sums for entertaining the confiding visitor whose pockets are not overflowing with dollars. Fish is plenty, and the water is clear; yes, as clear as that of Lake Genuva, Switzerland; but we miss the snow-capped peaks that form the back-ground in that beautiful spot.

I found four bee-keepers, two of whom are subscribers of the American Bee Journal, and all seemed well pleased with their bees and the crops they harvest. One of them lives right in the city, and has an apiary of 59 colonies. He is employed as a skilled mechanic in one of the large sawmills of the town, but was unoccupied just at the time, as the mill had closed for a few days. We visited him one evening and found that he follows our plan of running the bees for extracted honey, with large benefit.

"This is the only way in which I can keep bees and make it pay, and still continue at my work," said he. "I could not expect to run a large apiary and leave to my wife the care of harvesting the swarms, and following the bees in the harvest of a crop of comb honey, while, by using extracting supers, I can be away from home all day and feel sure that the swarms will be few, and that the bees are supplied with plenty of room; and it takes but a short time to harvest the crop, when the bees are through with honey-gathering. This is certainly the best method of bee-keeping for a man who is away from his home most of the time."

The honey resources seem to be very similar to ours. White clover is the main crop, but it seems to come later, as wheat does. When we were there, the crop was just over, and but little more honey was expected, and this only from fall bloom which, they say, rather irregular. Yet there is an abundance of weeds, and the climate seems mild enough to keep moisture in the ground at all times, for the woods are full of ferns, mosses, and plants that can only live in moist ground. But it seems so queer to us Illinois farmers, to see the amount of labor involved in clearing a piece of ground. After the brush has been either grubbed off or burned off, the big stumps from the ancient pines have still to be extirpated, and, after that, the stones must be carried out. These are usually made into fences, as in New England, and when one of them is too large to be removed, others are piled up on top of it, and stone heaps like this loom up in every direction. Many Swedes and Norwegians have settled here, and have very neat farms, and the women work out-of-doors about as regularly as the men.

At the point of land formed by the junction of Green Bay with Sturgeon Bay, the United States government has established a lighthouse on the edge of a fine grove, and near to the finest fishing grounds in the country. This spot is called "Idlewild," and on the shore of Green Bay almost under the light-house is a projecting ledge of rock, called, "Lover's Leap." I do not know whether or not this name is connected with any Indian adventure. There are so many "Lover's Leaps" in the country that this may not have any very authentic legend, but it is a romantic spot.

Together with a half dozen friends, we visited this spot and...
implant his good qualities in his offspring, but because of his speed.

If I were a queen-breed I would promptly send $25 for a queen whose bees had a tongue-reach of 21 100 of an inch; nor would I be afraid of any one applying a $10 "pressure" to the head of a bee from a 18 queen to make the latter a $25 queen.

Her very good, as at least three of our bee-editors are friends. I wish they were all friendly enough not to "spat" so much. Unless a better feeling is cultivated, our co-operative efforts will never amount to a "row of pins."

Farmers' organizations go to pieces because they doubt each other. Bee-keepers' organizations would do better if they did not accuse each other of misrepresentation and deceptive practice.

After having said all of this, I know of no three gentlemen that I have more confidence in than E. K. Root, G. M. Doolittle, and H. E. Hill, Massac Co., Ill.

(Continued on page 505.)


WITH the permission of the editor I wish to consider the criticisms by Wm. M. Whitney (page 405) of my article on page 311.

I stated therein that, judging from her rule of action, the honey-bee could not rule by the "beef and mutton" system. Instead, her ways were harsh and unyielding, and that she is never turned from her given course by that most beautiful qualification-love. It will be remembered that this was said in connection with a plan given for the introduction of "love-bees," as Mrs. Root says, because she had a great belief of the correctness of this deduction; for if the bees do have love for one another their love is of such form as to necessitate its being called by another name from that which makes men and women divest the cold, heartless methods — the iron methods — of a colony of bees, with the principles of true love as revealed in Christ, or with the basic principles of truly christian government, he assumed a wonderful stretch of all that he did to make extremes meet.

Mr. Whitney was pleased to call particular attention to the fact that "Christian governments provide for the unfortunate and infirm," and then says further, "but the time was when such persons were disposed of in the most contemptuous manner possible, and without the slightest regard for the good of the majority," just as the bees do now.

If it be true that the honey-bee "knows from instinct" how to manage her affairs, then why need any one expect to see her decrees mingled with mercy for the needy and the afflicted, if their requirements run counter to those interests or conditions that give the greatest freedom to perpetuate the existence of the colony?"

But, the love of country is selfishness, pure and simple, for the bee well knows that she can not exist alone in the world. This is possible for her only in swarms, and is best in large swarms; hence is her "devotion" and "patriotism" laid bare.

The real complexion of the honey-bee's nature must be admired and accepted by us, as it stands squarely at the facts, and note that all her acts of kindness are directed to that end which tends to promote the greatest individual security through the strength of the colony; also, upon the other hand, that the honey-bee invariably follows the sordid routine of utter disregard of the sufferings of the worthy though afflicted members of the colony, is it not a logical conclusion that no ties of love or bonds of sympathy exist between or among them?"

The fact that the honey-bee tenderly cares for her young simply argues nothing to the point Mr. Whitney seeks to gain. If it were love and not avarice that prompts her to do this, then in time of famine she would not keep back the hard won honey from those who were her "true friends" — that is, those who would not starve. But, if she would tear them from the cells and consume them. In more prosperous times we catch another view of the bee's "devotional" nature. The larval bee that is cared for so tenderly till it emerges from the cell is at once banished

Co-operative Effort Among Bee-Keeper. By W. T. Stephenson.

TRUSTS are the order of the day. Almost every line of industry, except farming and bee-keeping, is beingtrusted. Why not these?

Not long since some one writing on this subject gave the exact reason why farmers' organizations did not succeed, that each farmer, even on the very best of farms, are afraid to risk their commodities in the hands of a representative, even though they would get a higher price. Let us, as bee-keepers, be careful lest we join their grousing; for the result of our actions may be to make extremes meet.

So much for a preamble; now to the point.

I was greatly surprised when I read the article by Mr. G. M. Doolittle in a recent issue of the American Bee Journal. I was not so much surprised at the stand he took, as at the manner in which it was written. He says he is going to call a halt, and proceeds to accuse E. K. Root — the man who holds the highest and most responsible position among American bee-keepers — of misrepresentation, instead of in the ranks of the long-tongue advocates, as Mr. D. has done.

If Mr. Doolittle had been the fortunate possessor of that $290 queen, it is more than likely that that article would not have appeared, as it would have been to his interest to keep mum.

We are led to think that Mr. Doolittle hasn't been reading the bee-paper very yet; or he would know that he was not "first" to call a "halt." The editor of the American Bee-keeper thinks it deceptive to value an extraordinary breeding-queen at $50, $100, or $200, and to sell her daughters at $10, $15 and $25. Remember, Mr. Hill, that the fact that the queen is an alluring or an assassination, suppose you had a quantity of very deep jells filled with apples; wouldn't you be willing to pay a fancy price for boys with arms of extra length, if all of the apples they could reach were yours?

He asks if any one knows of an instance where fine stock sold for twenty times the price of the very best common stock. Not long since I read of a race-horse ("Flying Fox") selling for $40,000. It was not because he could
into outer darkness, if some physical defect unfit it for duty—a queen kind of love, indeed.

In the fourth paragraph Mr. Whitney virtually denies the correctness of his position by saying that the honey-bee is "governed by a law in Nature that means simply the survival of the fittest." Now what does the survival of the fittest mean in Nature but that the strong shall oppress the weak? This is exactly what I said was the rule of action with the honey-bee—that it's impelling power was greed and not love.

Mr. Whitney’s idea of love becomes “amusing” when he tells us to look to the bees for the “highest type of love and patriotism.”

Do Mr. Whitney favor a return to those primorval customs for the betterment of social conditions? We will be “gracious” enough to suppose that he does not.

There is at least a shadow of inconsistency in the exceptions Mr. W. has taken to those statements of mine. Referring as he says he does, that the honey-bee is governed by the law of survival, he seems to think otherwise. He has, for example, found that the queen-bee should be reared before the worker bees. Mr. Whitney seeks to ridicule my instructions for introducing a queen-bee by a method that is in perfect harmony with the law which he says governs the honey-bees. This he does not understand. He has no plan but to have a "experiment," and a "misfortune" to any who would dare to put it in practice.

Now the truth of the whole matter is, Mr. Whitney knows not where he is going, and is in serious doubt as to any credence to the practicality of introducing a queen-bee by running her in at the entrance of the hive as quickly as possible after taking her from the combs of another colony, but wishes to pursue the old-fogy method of caging the queen when introducing the stranger bees. This caging of the queen takes from her the bloom which is her greatest safe-guard in the midst of stranger bees.

The method I here advise using is so free from fussiness that I cannot see why any one should want to bother with a cage when introducing a queen-bee. All that is required to make it a success is, to take away the reigning queen and then thoroughly frighten the colony immediately and as quickly as possible. The honey-bee then will rise up, but let the colony realize for a moment that it is queenless, but get the stranger queens into its hive before she, too, realizes what is being done. Smoking the colony while pounding upon the hive to drive with some object is the most practical way of frightening the bees. This does not pervert the sense of smell so much as it diverts the attention of the bees till the queen has time to reach the combs. Then when the Misses Bees have wiped their mouths and turned about, Mrs. Bee is “at home” to them upon their own combs; and they don’t care a tinker what she smells like.

I do not advise introducing laying-queens into colonies having capped queen-cells. The queen can be introduced all right, Mr. Whitney notwithstanding; but too often the young queen is not able to hold her own and a laying queen has no chance in a fight with a virgin.

Let those who wish to try the method, use their more inferior queens first, till they become conversant with the realities. You can then introduce a stronger queen, and how much smoke and how much pounding upon the hive is necessary to insure the queen’s safety.

I believe that the readers of the American Bee Journal will not be long in learning the practical beauty of this quicker and better way of introducing a queen-bee.

Scioto Co., Ohio.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this Journal. You can aid much by sending in the names and addresses when writing us on other matters.
silkworm can not now exist without the aid of man, and if the canary bird is turned loose in its native country it perishes; for it is not adapted to the climate. It lived on a different plant here in Colorado. Then it traveled and took to potatoes, and now it is called the Colorado potato bug and no longer lives on its original food.

Mr. Pattee—I have one colony of pretty black stock. I knew the queen was changed three times by swarming. Yet the colony now is as black as it ever was. I have thought that perhaps the queens of this colony mated with their own drones.

II. Rauchfuss—I think that occurs very seldom. I once requeened a yard of 40 colonies with queens from one queen, and used that queen to furnish drones. Those drones should have been pure. But not more than one out of twenty of those queens were used, and there were not few colonies in the neighborhood, either, and they were not close by.

Pres. Aikin—To sum it up, select the best colonies, displaying vigor and other good qualities, and breed from them. This is the way Mr. Collins recommends. I have practiced the method of unqueening for years with hundreds of colonies, on whole apiaries at once, so that it made no difference about the bees mixing. The colonies retained their normal strength 21 days, and then they went down, and it only took three or four weeks for them to be materially reduced.

Mr. Gill—That may apply to whole apiaries, and yet a few individual colonies may be longer lived than others.

Mr. Harris—I offer the following resolution:

Resolved, That the Colorado State Bee-Keepers' Association recommends to its members, in buying queens, to buy only of queen-breeders who furnish pedigreed queens, mated by pedigreed drones.

Mr. Honnent—I am opposed to that resolution, not on account of the good it may do, but I know of so much as a registry for pure-bred queens. It may be a good thing for experiment purposes, but not common people into the hands of sharpers, who will advertise pedigreed queens, when there is no way to pedigree them.

Mr. Harris—You might change the phraseology and do good.

Mr. Pattee—Pedigrees of stock are brought up to higher excellence in that way.

Mr. Lyte—No one here has spoken of the National Queen-Breeders' Association. Any competent and honest queen-brededr can furnish the information. No one can be a member of the National Queen-Breeders' Association and be dishonest. I believe the resolution is in the right direction. I think we can get a pedigree of drones. I second the motion to adopt the resolution.

Rauchfuss—You can control fertilization. There are plenty of places here in Colorado where it can be controlled as surely as on an island. A man could go out a hundred miles on the prairie, and he absolutely sure that there were no colonies within reach but his own. Of course, he could not produce queens for a dollar a piece. He would have to feed.

Mr. Honnent—I am in favor of improving the breed. The question has been discussed by eminent breeders, and they agreed it was impossible to keep queens pure within a certain distance. But it won't be 30 days after you pass this resolution before you will see advertisements of pedigreed queens.

Mr. Large—We don't all practice what we preach.

Pres. Aikin—The resolution does not bind, it only recommends. The resolution was adopted.

THE RIGHTFUL SHARE IN BEE-KEEPING.

Question.—In working bees on shares, what shall the owner furnish, and what shall be the share of each—comb honey, extracted honey, and increase?

Mr. Harris—There is a great variation in the share one should have, owing to different conditions. The parties should fix that between themselves.

Mr. Foster—I have had a little experience in that line that was not altogether satisfactory. A year ago I gave 10 pound colonies each, or one colony for each person, to the owner. When the colony was above the average I gave $2.50 per pound. Last year I shared half and half all through, expenses and profits, and when I figured it up I found that I had paid the owner $20 per colony, and it was now my turn to cry over the swarms I had to buy.

Mrs. Brock—I have always leased on halves, and received half the honey and half the bees. It is a question with me how the honey should be divided. Should the lessee take his share as a plugger, or should both parties be there? The bees.

Mr. Dods—I have been leasing bees, and my custom is to stack the honey in a pile, and, if we do not sell together, give the owner the choice of what he wants for his half, say every other case. I furnish my own hive for my increase and he has my artificial swarm, and in one of mine doesn't build up, I lose it; if one of his does not, he loses it.

Mr. Collins—I have offered the first 20 books from each colony, just such as comes.

Mr. Pattee—I have had half of the honey and half of the increase, the owners furnishing their own hives. We divide the honey.

Mr. Dodds—If I think Mr. Collins' is the most desirable plan, there is another plan which I believe will do everything and own everything. There is then no choice for the owner to say that increase has been made with discrimination. The apiarist does the work and gets half the honey.

He simply puts his weight against the capital.

Mr. Pattee—I agree that we must give $11 off of 17 colonies, spring count. It took 2500 pounds of honey.

F. Rauchfuss—Now, let us hear a few bad reports.

Mr. Honnent—I started with 110 colonies, spring count, and I lost 35 colonies, which is $3500. I drove the bees to my apiary late, and I was not able to control the bees or the drones.

Mr. Brock—In my early experience I bought 40 colonies of a man who was to run them on shares. They increased to 66. Next spring I had three left and was $500 out.

Mr. Honnent—I endorse that plan of the owner furnishing everything. Then there is no clashing about swarms. The hives offset the swarms and fixtures. It is very equitable.

F. Rauchfuss—The most satisfactory way is for both parties to rent on a cash basis. Say there are 100 colonies. I pay $1 a year apiece, cash rental, and have an impartial person examine them on the first of October, to see that I return bees, supers, hives and fixtures in exactly the same shape that I left them. The lessee ought to be expected to furnish a bond or security. Of course, common law will protect the owner if damage is done. By this plan all increase goes to the lessee.

Mr. Harris—I in 1898 I put into winter quarters 85 colonies. The next spring I had 35 colonies, and got 800 pounds of surplus honey.

Mr. Collins—By my plan, if there is not much honey, you are out and there are no bees to divide. I would not follow Rauchfuss' plan for one year alone, if there is a little brood in the neighborhood, for it might appear in the apiary the next year, and I be held liable for introducing it.

F. Rauchfuss—Circumstances alter cases.

Mr. Honnent—In my locality I catch at least as many swarms from outside as come from my bees, and there would be a chance for a clash there.

Mr. Collins—I would have that covered by the agreement.

FAULTS THAT JUSTIFY REQUEENING.

Mr. Martin—A colony with a drone-laying queen should be requeened, providing it is populous. Otherwise, it should be united with another. If a queen is lost during the flow, the colony is populous, the colony should be requeened. I often requeen a colony soon after it has swarmed if I find one that has swarmed without my knowing it and cut out the cells at the same time. When I find a colony with an unproductive queen, I sometimes kill her. I also requeen colonies that show inferior traits. When a colony is far or on honey, or in some way are not good workers.

Mr. Collins—Do you not replace the old queens on account of age?

Mr. Martin—Not if they are prolific. Sometimes it is not the fault of the queen if the colony is weak. It is hard to lay down a rule. Then sometimes a colony with a laying worker does not wish to accept a queen. In such a case, I advise doubling to bring up with the natural population. This year I had two colonies whose honey was capped quite differently from that of the others. The combs were of a "washboardy" shape, and did not fill the section. In one hive I had three workers of that honey all capped, but it was all of second grade. Such colonies I would not requeen.

Mr. Kruger—Last May I found a colony with a drone-laying queen. It swarmed in June, and I gave one of the cells to the swarm and left two with the old colony. The swarm didn't, but a queen hatched in the old colony that never laid.

Mr. Sylvester—Queens are sometimes imperfect.

Mr. Harris—When I find laying workers, I move the hive some distance and put in two or three queens. Then I shake off the bees in front of the hive and introduce a queen, which is accepted.

Mr. Collins—I had a colony of laying workers that refused to accept any queen and on one of mine one of mine doesn't build up, I lose it; if one of his does not, he loses it.

Mr. Dudley—I used to move such a colony about 100 feet.
away and then shake off the bees. I think a better way is to put the hive on top of another colony which is not strong enough for the super. In a few days the bees will kill off the laying workers. You can then return the hive to its stand and introduce a queen.

II. Rauchfuss.—That plan is a good one, but one thing was omitted. A sheet of paper with a hole in it should be placed behind the two hives to stop them from fighting. Then the two hives might be left together. Some will say that makes one less colony. But if you want increase, you can raise up some brood into it from below, move it, and introduce a queen.

Mr. Dudley.—I forgot to say that I use the paper in uniting colonies to have two queen cells put out as soon as laying workers are found, that is a lost colony.

Mr. Lytle.—It is wise to supersede every queen that will not give as much profit as the average. It is not wise to supersede any queen that has given satisfactory service. I introduced with tobacco smoke. The way to do is to smoke thoroughly until every bee in the hive has been reached, then open the hive and let them run in. The theory is that the inside bees are stupefied, inquired the old queen, while the new queen is vigorous, and hence overcome her rival when they meet. In one instance I found the old queen lying outside of the entrance a few minutes after the new one was introduced.

Mr. Rauchfuss.—Is there not danger of robbing when this is done outside of the flow?

Mr. Lytle.—There is, and in three cases in which I did so after the flow, I reduced the entrance to a one-bee space.

Mr. Harris.—I tried introducing six queens with tobacco smoke, but all the bees were killed, and gave to the bees vigorous, and let the queens run in. Two or three days afterwards they were not there.

Mr. Kruger.—I use a cloth dipped in peppermint water, and laid over the frames. I have never lost one queen.

Mr. Rhodes.—Has any one tried smoking with cloths soaked in saltpeter water, and dried?

Mr. Rauchfuss.—Yes, that practice is common in Germany, and has long been known. It stupefies the bees so they drop off the cloths. There is another use of those salt-peter rags that I will call attention to, though it is not connected with the subject. They are just the right size to light a smoker with, since they do not go out after being once lighted. A small piece is sufficient to start a fire.

VALUE OF FREQUENT COMMUNICATION BETWEEN BEE-KEEPERS.

Mr. Foster.—I find that I secure my best points in beekeeping by button-holing my bee-keeping acquaintances. It also secures my own good name, especiallepecially when new flow brood is about. In this way I discovered and got rid of a bad case that otherwise would have been a menace to my bees. Free communication with reference to flow brood has such a value that it almost pays one to carry it on as missionary work.

Mr. Martin.—I moved 100 or more colonies into a new locality, where I had no time to look around. I noticed they were gathering honey very early, investigated, and found a neighbor’s colony being robbed that had foul brood. In another case I found a hive set out in which bees had died from foul brood, and bees working on it, though mine had not yet found it. I have had several such experiences, and have, therefore, made it a point to have frequent communication with my neighbors, whether it be welcome or not.

Mr. Collins.—I found a foul-broody colony once in a schoolhouse, where the bees had been for five years.

Mr. Honett.—I then gave two instances, mentioning the name of foul brood being moved into his neighborhood in former years, and added.

Mr. Honett.—This convention also proves the value of free communication, for many of us have ideas that we are not able to express until they are brought out by discussion.

Mr. Foster.—A friend of mine, who is slow to accept new ideas, came to me one day and said he had lost 40 or 50 swarms by absconding. On investigating I found that he had hired his swarms in hives with little ventilation, and set most of them in the hot sun without shade-boards. Those set in the shade above the city, in the green instruction, which communicated was probably of value to him in the future. Annual Report of the Colorado Board of Horticulture, 1899.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.

The Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses.

By E. E. HASTY, Sta. B Rural, Toledo, O.

THE GOLDEN BEES.

It’s a very singular state of things, to say the very least, which Mr. Doolittle narrates on page 501.

A leading breeder of golden bees, he has found on several occasions that they take hold of dirty refuse and break it up as well as soft water. The two are quite different fluids, chemically. Possible that brine may be the better of the two, but the probability looks strongly the other way. Perhaps the salt must be added after the soft water has done its work. Bolling brine

EXTRACTING IN HOT WEATHER.

When it gets to 110 degrees in the shade you must not extract unless combs are wired in for keeps. Arizona contributes this slice of wisdom; and we can believe it very easily. Most of us would prefer the hammock to the extractor at those figures. Page 505.

RELATION BETWEEN SWARMING AND HONEY-FLOW.

I take considerable interest in the experience of Wm. W. Case, page 507, that a heavy run of honey coming on suddenly stops swarming, without the swarming being violent, and stopped very suddenly; but my mind did not connect this with any change in the honey-flow. Perhaps if I had watched the honey-flow more minutely some relation between flow and swarming would have appeared.

A NEW BEE-SOCIETY SUGGESTED.

Mr. Bechly, we shall need a society for preventing cruelty to bees if you do not extend to the same extent of swarms that have been.

Mr. HASTY.—The "Light Brigade" were hardly more worthy of fame than those bees that hung out during the cooler portions of the torrid days, and marched "into the gates of hell," when it got its hottest, to save their brood by watering and fanning—i.e., they did it. Page 508.

HIVING SWARMS WITH WEAK COLONIES.

As to hiving in swarms with weak colonies, I am still undecided as to whether it is worth while or not. Tends towards having all colonies strong," but don’t believe I practice it very much if I was sure of an abundant supply of hives ahead. Saving the queen of the weak colony, and giving her an immediately too-large normal swarm, is a kink which will bear thinking of. If she was to blame for her colony’s being weak, the other colony would better rear their own. In the much more common cases of bad food or bad keeper, it looks good practice—provided experience does not find it originating a second series of swarms. Page 507.

SPLETS VS. WIRE FOR FOUNDATION.

Splits standing in saw-kerbs at top and bottom, oh? Little by little a method gets the additional touches it needs to make it complete. Who knows what wire for staying foundation will eventually take a back seat and let splices see the play from the front row? Page 508.

PAPER SACKS FOR KEEPING HONEY.

I doubt if Mr. Davenport’s tombstones will say anything about his adopting the paper sack to the carriage of honey. The little packages will come to grief at the hands of the hired girl, and not beget the true love of the freight handler, methinks. If everybody read and obeyed directions it might be different. Page 517.

RENDERING WAX WITH BRIMY WATER.

For rendering wax, the inside fitting sieve of Adrian Getaz, to boil the wax into, looks a good thing. And to increase five fold the rising force of wax is quite a brilliant thought. Good boy but! Even a good boy sometimes has a brick back to his head. You should have the hands of the freight handler, methinks. Will the salt be added after the soft water has done its work. Bolling brine
Honey from Mulberry Fruit (?).

If Dr. Peirce has honey that was stored from white mulberry fruit, and it is good, he has done experimental apiculture properly good. But I hope he will pardon the grain of salt slowly melting on our tongues. If we knew he fed a colony at least five pounds in 48 hours—if we knew said colony didn’t get over a pound of nectar meantime—if we knew “the man on the fenceline” found a marked difference in flavor between the honey and the honey in the next hive—I am not asking him these questions. I am only ruminating them. On the whole, I think I have more faith in that currant mulberry jam. Page 524.

Questions and Answers.

Conducted by

DR. C. C. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—Editor.)

Felt Roofing for Doubled-Walled Hives.

Has any one had experience with felt roofing? If so, what satisfaction does it give? I want to build some double-walled hives and try it. Also state whether two or three ply is required.

Michigan.

Answer: I know nothing about the matter from experience, but should expect good results. Can any one tell us anything about it from actual practice?

Keeping Bees on Shares.

I have 10 colonies of bees—11 in dovetail hives. I have winter-cases for 25 colonies, foundation-fasterner, bee escapes, and some other appliances. The colonies are all strong and healthy, as were examined by J. M. Kandeler, at Rockford, Ill. When he visited my place, he having the whole care and all the sales to make.

What share should each one have? Michigan.

Answer: Your conundrum is a tough one. So much depends upon the knowledge and skill of the man who has the bees in charge that about the only thing to do is shut one’s eyes and make a guess. Taking into account what you say of your neighbor in a private note, I should guess that you should be satisfied if he turns over to you one-third the amount of his sales. But mind you, I don’t guarantee my guess; neither do I agree to replace it with a new one in this case should not give satisfaction.

Perhaps No Disease at All.

I send a small piece of brood-comb for your examination. Can you tell me what it is? It does not seem to have the symptoms of foul brood, nor pickled brood, as I think they both are, as I have neither a larve, and you see the bees are perfectly and nearly ready to hatch. I might think it a case of chilled brood, but I had a colony similarly afflicted July 16, and I would not think brood could be chilled at that time. I have two colonies mixed with it on shares to a neighbor, he having the whole care and all the sales to make.

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and hold down the one who may seem to oppose—all tend to break selfishness.

The poor man—the average laboring man—early learns self-denial. He is not pampered, and becomes thoughtful and kindly towards others. He is tried by very circumstance in the way of selfishness. The rich person in the cradle has learned the art of selfishness by unfailing life that the poor man has. Condition of life is what swerves him to the wrong and unfeeling. Hence the words of Shakespeare: "I’th’ rather red a dog and bay the moon such a man." And Christ’s "...and the kingdom of heaven is like a man which gave his servants money, and sent them into the world and said to them, ‘...’.

Are riches, then, worthy the coveting? Are we wise to bend the necks of the rich by envy? The poor man is in best house of character development. With a nation of such are we safe. We may all hope and pray that our people may be all in comfort. We may well work and legislate that few gain extravagant wealth. The laborer gains his ends by wise budget. It is the world’s wealth and blessing. He also has the dignity of position that comes from independent maintenance. The very rich, with few exceptions, either have had their wealth poured into their laps, or else have gained it through questionable methods, and with out giving value received. In either case they are not to be envied, and have not the best citizenship.

That the poor man labors under the burden of a fearful handicap, is shown in the report from one of the iron-mine towns, where the taxes of the mill property were fixed at less than the value. It was the practice of the town to grant this and to any other, and also, and willing—to their shame be it said—to secure this unfair and wickedly inexorable reduction. Can these unfair advantages reduce the war, as thick as pebbles on the beach, ever be stopped? They can and will be. I hope soon. The power to do this will only come through complete cooperation; when the laborers, through the wise management of their trust, ablest, best men, will have their voice and influence with men and capital who employ them. The laborers are so many, and so scattered, and often so ignorant, and so blind to their own best interests, that it will take long to bring this blessed consummation. Complete union with education to make it safe, and its behests right and wise, is what the country and the laborers most need. I believe it was to promote such union that this strike was ordered. If it helps even a little to bring it, it will be worth all its costs. If it was ill advised, and does not hasten the day of fullest cooperation, then it is greatly to be regretted.

I long to have the "other half" in such complete union and accord that they will act as one man. Then they can hold up their heads and can dictate equally with the employers. Then, and not till then, will the laborers cease to have a grievance. Any discontent that hastens education and fosters union is baleful, and should receive our sympathy. A strike that hastens on complete union—at least complete enough that the laborer may have which none in the settlement of all disputed questions—is to be desired, if there is no other way, even though it beases a little of business disasters and commercial interference that may touch our liberties as easily, and far and wide.

It is to be regretted that arbitration rather than strikes can not be used to hasten effective union. The men who inaugurated the strike expected that their action would hasten and strengthen more complete co-operation. But they were not in a position, then they acted wisely, even though the great public is wholly against them. If they judged wrongly, and so delay the day of fullest union and oneness, then their action is greatly to be regretted. The injuries to others, and general suffering, are most unfortunate, but our greatest reforms often mount upward on the stairway of pain and suffering.

Let us all in our homes strive to beget in our children right views and feelings regarding all these great issues.

THE ARMY CANTEEN—PROHIBITION.

I am glad our old friend, A. I. Root, sounds forth such wholesome views regarding the canteen. While I have always voted with the Republican party, and am not ready yet to sever my connection, I have great sympathy with prohibition. If I thought voting prohibition would hasten it, I should hesitate a moment. The production of liquor is the greatest issue before our people. The saloon men always light the canteen in the army, prohibitory laws, local option, every effort to stay the liquor-traffice. If the canteen were favorable to temperance, why would the saloon interests be solid against it? I hope the law against the canteen will hold its grip in our statute books.

[We would like to suggest to Prof. Cook that it is not a question whether voting prohibition will bring prohibition; it is rather how a conscientious Christian man can continue to vote with saloon-keepers, brewers, etc., and still retain a clear Christian conscience, and also see any hope of staying the saloon evil.

A bigger question just now than the saloon question is this: Are the Christian voters of this country going to do their duty—live right up to their church resolutions on the great subject of prohibition, or, are they going to continue to stand before the world as inconsistent people, talking one thing and doing another?

Personally, we are consistently and eternally against the saloon, and intend to continue to use the heaviest possible weapon for its overthrow, namely our vote. We don't have to win in this fight, but we do have to do the right, and our consistent duty.—Enthus.]

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Much Interested in Her Bees.

A queen I sent for came safely to hand last Friday, but was not introduced to the hive in the afternoon. To-day I looked into the hive and found her lying nicely. She is fine looking and healthy, and much pleased with her; I feed them a little syrup every night. I think the queen had been queenless some time. I had been away from home a couple of weeks and found them queenless upon my return, I hope to do well with her another year. This seems to have been the case and I become more and more interested in them.

W. J. HILLMAN.
Richland Co., Wis., Aug. 30.

Best Honey Crop in Two Years.

The honey crop in Kanawha county can be called good this year—the first good crop in two years. The quality of the honey is fine—mostly from clover; white clover, and have bought to the latter two loves, we would have but little surplus if we depended
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(See page 45 American Bee Journal)

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We have obtained, this season, 150 pounds of comb honey per colony, one-third red clover honey. Untested, 75 cents; 1/2 lb., $1.00. Tested, $1.25; 3/4 lb., $1.50.

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on Buffalo Pan-American tickets via Nickel Plate Road. $15.00 for round trip, tickets good 15 days; $16.00 for round trip tickets good 20 days. Three daily trains with vestibuled sleeping-cars and first-class dining-car service on American Club. Meals ranging in price from $3.50 to $21.00. Address, John Y. Calahan, General Agent, 111 Adams St., Chicago.

An Experience in Transferring.

EDITOR YORK:—I recently wrote to know if our club could supply several members of the American Bee Journal, and you kindly sent me a few. Since becoming a subscriber, I find them useful, and every bee-keeper should have one of the Emerson binders to keep from misplacing them as I did.

For instance, to show their usefulness, I wanted to unite, and at the same time transfer two weak colonies from boxes or supers to movable-frame hives, and I readily found advice by looking over some of the back numbers, and went to work. It being my first job, I began about as timidly as a young surgeon would when amputating his first limb from a human being. However, I made a complete success, which I will tell for the benefit of beginners like myself.

I first moved one of the box-hives close beside the other to be united, several days beforehand, for them to get acquainted with all the smells and sounds.

When the proper time arrived I went to work as follows:

First, I prepared a table by placing a wide board over a flour-barrel and folding a crocus sack several times over the table, and on top of it spread a paper, each corner of which I provided myself with all the necessary tools, etc.—a honey-knife, narrow chisel, and the clamps—made by tying two Narrow strips of tin-wood together at one end, and leaving the other two open to be tied after placing them around the comb.

Next, I moved both hives back about two feet and placed a movable-frame hive about half way between the location of the two hives.

I next opened one of the hives and took out a comb and fastened it in a frame of the new hive, having wired the box-frames first, and then cut the combs to fit into the frames the best I could; and then the wire on the underside holding the combs till I could fasten the clamps.

In wiring my frames I placed the wire to one side of the frame, but kept it in the center. This gives room for the comb to rest well in the frame, which I find much better than to have it along both edges.

I took pains to put the brood in the center of the hive. I first used up all the comb of one box-hive, and then brushed all the same preparatory work on the best and fullest combs. Remember, I brushed the bees off of the combs back into the old hive, making a complete transfer, and then getting down the second box-hive and brushing the bees of the combs into the new hive, and by the time I used the last comb of the second hive I had nearly all the bees in the egg-laying stage.

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Not a Hybrid Among Them.

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E. S. MILES
Crawford Co., Iowa, Aug. 22.

Mulberry Growing.

Will Dr. Peirce give answers to the following questions in the American Bee Journal?
1. How large do mulberry trees become as to height and spread?
2. How long from maluable or expressable sapling to fruiting?
3. Is the white variety better than the black? Is there a difference in hardness?
4. Is Russian mulberries right the rightness?
5. Can I find other names of white varieties, but no Russian?
6. Is it kind better adapted to dry places than others?
7. Is it liable to attacks of any pests?
8. Do they grow well on the borders?
9. The American Encyclopedia says it is closely related to the fig. Has it similarly enclosed numerous seeds? Is "fruit" being the literal receptacle? Monterey Co., Calif.

A. NORTON.

Dr. Peirce has kindly replied to Mr. Norton's questions as follows:
1. Black mulberry trees grow to 20 inches in diameter, while the white variety does not attain so large dimensions, to my knowledge. Both spread broadly.
2. They bear fruit in about five years.
3. The white variety is best at honey-producing, being much sweeter than the black. I believe both varieties to be equally hardy.
4. "Russian" is the usually accepted name for the white. It may only be derived from its capacity to withstand extreme cold without material injury.
5. I believe the various kinds are equally hardy in dry localities.
6. I know of no insect that seriously injests the mulberry. It is clean and apparently free from diseases.
7. I do not know that bees work on its minute blossoms. I would not depend upon its possibilities.
8. Yes, the mulberry is not remotely allied to the fig, in general growth, resemblance of leaves, and anecologic features. The flavor of the white mulberry is more like that of fig than the black, though this may not be apparent to all tastes.

Finally, the cheapest way (and it seems to me, the best) is to insert cuttings in places where they will root and remain. This should be done in July or early in August.

Du. Peirce.

Bees and Mathematics.

The construction of geometrical spaces is not only the mathematical operation of creating by hand and mind, a work represented by M. Nettet, who read a very interesting paper on this subject before the Paris Academy of Sciences. The Referee Scientific reports that he brought out the following facts:
1. Not only is the construction of the cells east of mathematical nature, but many operations of the insects also; for instance, the collection of the maximum amount of honey in the minimum time, and the division of the workers among the plants proportionally to the number of plants of the same species. In the hives, the number of bees engaged in ventilation is almost directly proportional to the daily increase of weight of honey, etc. Facts of this order relate to interdependence of plants, while there are others to do with cell-building and two-dimensional geometry.
2. Nettie is of the opinion, however, that this is a show of apparent intelligence on the part of the bees, that "all their movements, without exception, are of the nature of reflexes; that is, performed without conscious action, just as we close our eyes instantly when a strong light comes near them." -Translation made for the Literary Digest.

"Reviewers" from the Beekeepers' Review.

Bee-Escapes should be placed at the corner of the board instead of the center. Mr. John, of St. Louis, this week have hives around the edge of the board in their efforts to escape.

Ontario, Canada, has a good crop of honey this year. I think that 75 pounds of extracted honey per colony would be a safe estimate; although many report a yield of 100 and 125 pounds, and H. G. Hubbard's colony averaged 150 pounds from three yards.

WIRE-CLOTH supports for the combs are used by F. A. Vermillion, in Ontario, in the following manner: A wire cloth is tacked upon frames laid over the metal bottom of the extractor, and then refuse combs laid upon this cloth. The wire cloth catches and holds most of the cocciens, etc., and prevents them from running down in the bowl.

CLIFF HAZL. likes how the bees occupy the same stand year after year; as it is much easier to remember the characteristics of a nest that always stands in the same place. This is one reason why he is particular, when taking the bees off the cellar, to place each colony in it permanently.

Foul Brood can be treated in the season, after brood-rearing has ceased, by shaking the bees off upon sealed combs of honey. But little infected honey they carry with them will all be consumed in a short time—long before brood-rearing will again be
Langstroth on... The Honey-Bee Revisited by Dadant—1900 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son.

Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.25, or club it with the American Bee Journal for one year—both for $1.75; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

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Send for circulars regarding the oldest and most improved original Bingham Bee-Smoker. For 23 YEARS THE BEST ON EARTH.

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$10.50 to Buffalo and Return $10.50 Account, ILLINOIS DAY at Buffalo Pan-American Exposition, on Nickel Plate Limited only in coaches. Tickets on sale Sept. 14 and 15, good returning to and including Sept. 22. Three trains daily, leaving Chicago 8:45 a.m., 3:15 p.m. and 8:45 p.m. Specially low rates, with longer limits, available in sleeping cars, on same dates, through service to New York and Boston. For particulars, call on or address John Y. Calahan, General Agent, 111 Adams St., Chicago. 25—37Alt
CONVENTION NOTICE.

Illinois.—The annual meeting of the Northern Illinois Bee-Keepers’ Association will be held in the Court House in Rockford, III., on Tuesday and Wednesday, Oct. 15 and 16, 1901. All interested in bees are invited to attend.

Rockford, III.

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If you are interested in bees in any way you cannot afford to be without the best Bee Paper published in the United States.

Bee Markets and Sheep

has a hobby which is the sheep-breeder and his industry, first, foremost and all the time.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.

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The Emerson Binder

This Emerson stiff-bound Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this “Emerson” no further binding is necessary.

GEORGE W. YORK & CO.,
144 & 146 Erie St., CHICAGO, ILL.

Illinois Day at the Pan-American Exposition

The Nickel Plate Road will sell tickets for that occasion at rate as low as $10.50 for the round trip, good going Sept. 14 and 15, and returning to and including Sept. 22. For particulars regarding tickets at specially low rates with longer limits, available in sleeping cars, on same dates, call on or address John Y. Calahan, General Agent, 111 Adams St., Chicago. 26—37 AIt.

Please mention Bee Journal when writing advertisers.

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

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<th>Seed</th>
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<td>5 lb.</td>
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<td>Alfalfa Clover</td>
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Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.,
144 & 146 Erie St., CHICAGO, ILL.

WANTED.

Combs and Extracted Honey. Will buy your honey no matter what quantity. Mast sample and make it known you have honey to sell. Combs and honey for highest price expected delivered in Cincinnati. 1-pound combs are sent free upon request. Refer to you from Brighton Green Bank, this city.

E. H. Mathews, 2146-2148 Central Ave., CINCINNATI, OHIO.

Please mention the Bee Journal.

WANTED

To Buy Honey

What have you to offer and at what price?

ED WILKINSON, Winton, Wis.

Please mention Bee Journal when writing.

WANTED

Fancy White Clover Honey in nod-drip cases; also Extracted Honey. State price, delivered. We pay cash. Farm W. Metz Co., Front & Walnut Sts., Cincinnati, Ohio. Reference—German National Bank, Cincinnati.

25 AIt.

Please mention the Bee Journal.

WRITE US

If you have large or small lots of honey, your prices, how put up, kind of honey, price expected, and, if possible, mail sample, we may write you. Reference—Wisconsin National Bank.

E. R. Pahl & Co.,
30 AIt.

MILWAUKEE, WIS.

Please mention Bee Journal when writing.

WANTED

Comb and Extracted Honey!

State price, kind, and quantity.

R. A. BURNETT & CO., 198 Water St., Chicago.

25 AIt.

Please mention the Bee Journal.

WANTED—Honey.

Car Lots or otherwise; will pay highest market price, cash on delivery. Address, stating quantity, and price desired at your station. Will send man to receive if not too far to get to you.

THOS. C. STANLEY & SON, 31 AIt.

FAIRFIELD, ILL.

Please mention Bee Journal when writing.

CHICAGO, Aug. 23.—White comb brings 15c per pound for the choice grades, with other honeys not over 10c per pound. Next highest color, light amber, 12%–15c; dark, 10%–11c. Extracted, fair demand at 15c per pound, dark amber; dark grades, 5c. Bee-steady at 35c for choice yellow.

R. A. BURNETT & Co.

CINCINNATI, Aug. 16.—The honey market is very fast at present. Extracted sells only to manufacturers from 50c; better grades at white, 75c; honey, 65c; white comb honey from 85c–90c. Fancy white comb honey sells from 125c–130c.

C. E. L. W. WEBER.

BOSTON, Aug. 14.—Our market today is about 106c–107c for fancy; A No. 1, 154c–155c; No. 1, 148c–150c. Extracted, full color, 75c–80c. Several lots of new Vermont honey in carlots have thus far been received, meeting a ready sale at 12c, 15c, and 17c a pound, of course in a small way. The trade generally seems disposed to hold off, looking for larger receipts and lower prices. This is somewhat due, of course, to the fact that the demand is still light owing to the warm weather, and cooler weather is expected to give better demand and naturally make a better feeling.

ALBANY, N. Y., Aug. 20.—We quote: Fancy white comb, 116c; No. 1, 115c; No. 2, 130c; mixed, 120c. Extracted, light, 75c–77c; mixed, 55c–60c.

OMAHA, Aug. 8.—New comb honey is arrived in express by small quantities from Iowa and Colorado, and selling at 50c per case in a retail way. California extracted honey has been arriving here in carlots at 45c–49c per pound, f.o.b. California shipping-pole, but we have not heard of any sales having been made thus far. The production of extracted honey in California is so large this year in Colorado, Utah and California.

PEYCE BRO.,

NEW YORK, Septh. 9.—Comb honey is now beginning to arrive in large quantities, and with a rule, quality is fine. The demand is good, and we quote as follows: Fancy white, 140c; No. 1, 130c; No. 2, 125c; and amber, 110c. No buckwheat is being sold at the present time, as we are taking same within a week or so. Extracted is selling very slowly, with plenty of supply, at 54c–56c, acetone value to quality, from 70c to 90c, and white, at from 86c–88c per pound. Beeswax dull at 27c.

C. H. B. & S. DEEBOLE.

DES MOINES, Aug. 7.—There is very little doing here, new crop of honey is not yet in. Some small lots of near-by produced comb honey are on the market, selling for fancy, 100c–115c, and lower grades, 125c–old neglected. Advise moderate shipments only of new as yet. C. H. HENT & SON.

BUFFALO, Aug. 10.—Quite a good demand for fancy honey, 100c–115c, and lower grades, 125c–old neglected. Advise moderate shipments only of new as yet. BATTERSON & Co.

SAN FRANCISCO, Aug. 14.—White comb, 110–115c; amber, 80c–90c; dark, 66c–70c; extracted, white, 55c–60c; light amber, 45c–52c; amber, 44c–50c.

Market continues quiet, with apiculturists, as a rule, granting a range of prices of 2c, 4c and 6c, named by wholesale operators. Quotations represent as nearly as possible the values ruling at the date for round lots, small carlots could not probably be effected at full figures, while on the other hand, higher prices than quoted are being realized in the filling of some small orders.

BETHLEHEM, City, Aug. 6.—Some very fine Missouri honey is now on the market, selling at 105c–110c for fancy white comb. Colorado and Utah honey shipped here in carlots in cartons for first batch of August shipments, 75c–85c per pound, f.o.b. shipping point. For No. 2, f.o.b. shipping-point. The market for extracted honey is as yet not well filled, asking prices ranging from 45c–64c, f.o.b. shipping-point. Buyers, however, seem to be in no hurry to make contracts.

CHICAGO, ILL.

Please mention Bee Journal when writing advertisers.
We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR

Hives, Extractors
OR ANYTHING YOU WANT IN THE BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of THE AMERICAN BEE-KEEPER free. Address, THE W. T. FALGONER MFG. CO., JAMESTOWN, N. Y.

p> P. H. W. M. GERHARDT, East Nottinham, N. H., carries a full line of our goods at catalog prices. Order of him for freight.

Please mention Bee Journal when writing.

River Forest Apiaries! FILL ALL ORDERS

By Return Mail.

Italian Queens Warranted

Untested, 75 cts.; Tested, $1.00; Select Tested, $1.50. Half dozen or larger lots as may be agreed on. Address, RIVER FOREST APIARIES, River Forest, Oak Park Post-Office, Ill. Cook Co., Ill. Please mention Bee Journal when writing.

—THE—

Bee-keeper's Guide

Or, Manual of the Apiary.

By PROF. A. J. COOK.


A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without THE BEE-KEEPERS' GUIDE.

This 16th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting new subscribers for the American Bee Journal.

Given for TWO NEW Subscribers.

The following offer is made to present subscribers only, and no premium is also given to the new subscribers—simply the Bee Journal for one year:

Send us TWO NEW SUBSCRIBERS to the Bee Journal (with $2.00), and we will mail you a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $2.25, or we club it with the Bee Journal for a year—both for only $1.75. But surely anybody can get only TWO new subscribers to the Bee Journal for a year, and thus get the book as a premium. Let every body try for it. Will you have one?

GEORGE W. YORK & CO., 144 & 146 Erie Street, Chicago, Ill.

24th Year Dadant's Foundation. 24th Year

We guarantee satisfaction. ☛ ☛

What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED PROCESS SHEETING.

Why does it sell so well? ☛ ☛

Because it has always given better satisfaction than any other. Because in 23 years there have not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,

The classic in Bee-Culture—Price, $1.25, by mail.

Bee wax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

Please mention Bee Journal when writing.

—RED CLOVER QUEENS—

BLACK ROCK, N. Y., Sept. 3, 1901.

FRIEND ERNEST:—I will try and tell you what you want to know about that queen. I got her of you in 1899 as a premium with GLEANINGS. I never saw a small colony of bees build up as that one did. In the spring of 1900 they came out in fine shape, wintered perfect. I raised them up in May and gave them 8 frames more so the queen would not want for room. I never saw such a colony of bees as they were in June, and they were actually storing honey where other bees in my yard were starving. No! they were not robbing. I never saw such bee colonies of mine trying to rob. THEY CERTAINLY WORK ON RED CLOVER. This is no guesswork, as I have seen them. As you know, the past two seasons have been very poor, and what honey any bees did get in 1900 candied soon after cold weather set in. I packed this colony in a sheet hive and left them out, thinking that such a strong colony would winter perfect. The snow came on the middle of November, and those poor bees never a fly until the last of March or the first of April. When warm weather at last came I thought they were dead, as they did not seem to be flying much, so I did not pay any attention to them until in June. I noticed they were working a little, so I opened up the hive and found them in the upper story. I took the lower story out and left them in the one body. The queen was laying nicely, and I thought they would make a good colony to winter. Along the last of July I noticed that they needed more room. I gave them a super, 31 boxes, and in a few days they had filled. They have made 72 boxes of nice honey as you ever saw, and are drawing out some starters now, Sept. 2.

Very truly yours,

GEORGE R. HOFF.

Prices of Red Clover Queens.

Gleanings in Bee-Culture 1 year and Untested Queen $2.00

" " " " " " Tested Queen 4.00

" " " " " " Select Tested Queen 6.00

If you want something good you can not do better than to order one of these queens. All orders are filled promptly. No extra postage on these to foreign countries.

THE A. I. ROOT CO., Medina, Ohio.

George W. York & Co. 144 & 146 Erie Street, Chicago, Ill.

# Send them for their free Catalog.
Officers of the Texas State Bee-Keepers' Association.

LOUIS SCHOLL, Secretary-Treasurer.
J. B. SAYLER, President.
H. H. HYDE, Vice-President.
The "Barler Ideal" OIL-HEATER....

Saves Its Cost Every Year!

NO ODOR! NO SMOKE! NO ASHES!

Costs only a cent an hour to run it.

The editor of the American Bee Journal is using the "Barler Ideal" Oil Heater, and it is all right in every way. We liked it so well that we wanted our readers to have it too, so we have recently arranged with its manufacturers to fill our orders. The picture shown herewith is the one we recommend for general use. It is a perfect gem of a stove for heating dining-rooms, etc. It hinges back in a substantial way, and is thoroly well made throughout. The urn removes for heating water. The brass fou on or well has a bell, and holds nearly one gallon of kerosene oil. It is just as safe as an ordinary lamp. You wouldn't be without it for twice its cost, after once having one of these stoves. Most oil-stoves emit an offensive odor, but this one doesn't. Its height is 2½ feet, and weighs 20 pounds, or 20 pounds crated ready for shipment, either by freight or express.

Price, f.o.b. Chicago, $6.00; or, combined with a year's subscription to the American Bee Journal—both for only $6.50. P.U.B.L.I.S.H.E.D W. YORK & CO., Chicago, Ill.

No. 1 "Barler Ideal" OIL-HEATER.

The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.

HOWARD M. MELBEE, HONEYVILLE, O.

[This cut is the full size of the knife.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drones, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The husters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife?—In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your Pocket-Knife will serve as an identifer, and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a fair idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be believed. Hive rooms, bee-rooms, and baths-rooms.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or as a Premium to the one sending us TWO NEW SUBSCRIBERS to the Bee Journal (with $1.00). We will club the Novelty Knife and the Bee Journal for one year, both for $1.50.

GEORGE W. YORK & CO.,
St., Chicago, Ill.

For 40c please allow about two weeks for your knife order to be filled.
Bees and Pear-Blight.—The fruit and bee men of California seem to be sensible enough to get along without quarreling and bickering. One of the bremen show an excellent spirit. They have agreed to move their bees away from the pear orchards during the blooming period, so as to help solve the question whether the bees are the chief criminals. The views of some of the scientific men are given in Gleanings in Bee-Culture. Prof. Waite seems inclined to pass judgment against the bees, but at the same time considers them a necessary evil, for he says he has found as the result of an extensive series of experiments "that bees are indispensable to the pollination and setting of most of our pomaceous fruits." Prof. Cook says: "I have little doubt that bees do aid in scattering the virus; but I am far from convinced that their removal will abate the trouble, or is wise and necessary."

Prof. Gillette thinks it will be a considerable time before we can draw any positive conclusions. He thinks that if the bees were the chief operators the late varieties of pears should suffer more from blight than the early ones, and he has not observed this to be the case.

"Honey Without Bees."—Dr. R. H. Strickland, of Perry Co., Tenn., sends us the following, which appeared in an advertisement taken "from a scientific (?) quasi-medical journal:"

**Honey Without Bees.**

This is an age of marvelous discoveries and inventions. Every day brings forth something new, and every year is marked by some astounding discovery which completely upset all preconceived notions in some department of knowledge or industry. Marvelous discoveries have been made in electricity and the uses of steam and the utilization of the various forces of nature, but a discovery which is really more far-reaching in its results, and perhaps capable of immediately benefiting a larger number of persons, is a process worked out by an eminent physician by years of laboratory research, whereby it is possible to make honey directly from wheat and other cereals without the aid of chemicals of any sort, and by a process essentially identical with that by which honey is manufactured by plants ready to be collected and stored by the cunning little feet of the honey-bee.

Malt honey, or molasses, looks like honey, tastes like honey, in chemical composition is essentially the same as honey, and as a food is superior to honey, since it is free from germs, poisons, fragments of flowers, dust, and other foreign matters, and may be eaten without injurious effects, even by most delicate individuals, whereas many persons can not eat honey, even in small quantities, without experiencing ill effects. Malt honey is genuine honey; not an imitation or a substitute, but the real thing, trader from the original source—the plant—but without the assistance of bees, and by a process which renders it absolutely pure and wholesome. It is the only sweet which can be eaten in liberal amounts without injurious effects. [Italics are ours.—Ed.]

We feel a just pride in the perfection of this very remarkable and useful product, after spending some years and thousands of dollars in research for the purpose.

Dr. Strickland says in his letter accompanying the foregoing, "It may not be worth noticing."

Well, it certainly wouldn't be "worth noticing" were it not for the wonderful in which the thing is described and advertised.

If its discoverer doesn't know any more about food products than he does about the way bees gather and store honey, he is truly a fine specimen of ignoramus. Think of bees collecting and storing the nectar of flow-ers. Then think of the honey bee! If that were true, they ought to store about six times as much as they do, as they have six times as much feet as tongue. If this learned (?) food inventor were right, bee-keepers would be breeding for more and longer feet than for longer tongue-reach in their bees.

Well, we secured a sample of the wonderful (?) "molasses" that is said "looks like honey, tastes like honey, and in chemical composition is essentially the same as honey," etc. If honey were like it, we would care for no more honey. It has a taste (to us) almost like sorghum molasses, is thick and cloudy, resembling in appearance a poor quality of glue or mucilage. If we were to put up for the Chicago grocery trade stuff like it, and call it honey, we would expect to kill our trade on the first round among our customers. And yet, the great inventor of "molasses" says it is "genuine honey" and "the real thing." True, he says bees had nothing to do with its manufacture—and we believe him.

Bees wouldn't degrade themselves by turning out a product like "molasses"—not from the blossoms of white clover, bassew, sweet clover, etc. The idea of man claiming he can make honey equal, or superior, to that produced by bees! (Of course we mean the best grade of extracted honey, not honey-dew.)

From the glowing advertisement of "molasses," one might be led to think it is a sort of con¬dum honey. It isn't. It is simply an imitation of extracted honey, and we consider it a fraud one at that.

We do not say that molasses has no valuable food qualities—we know nothing about that part of it. What we object to, is the claim that the stuff is the "same as honey" (bee-honey), "the real thing," etc. Also, the attempt to prejudice the public against genuine bee-honey, by claiming that it contains injurious "germs, poisons, fragments of flowers, dust, and other foreign matters," deserves to be severely condemned. No honorable man or firm would do that.

It's a pretty safe thing to shun people who claim they have "genuine honey" that was produced "without bees!"

Sugar for Bee-Feed.—For years a difference of opinion has prevailed as to the best kind of sugar to use in feeding bees. Those who are supposed to know tell us that granulated sugar made from beets is identical with that made from cane-sugar. But things that are identical from a chemical standpoint are not always the same, as witness the familiar instance of diamond and charcoal; and across the ocean it has been earnestly insisted that sugar from beets was unfit for bees, and that cane-sugar alone should be used. If it were easy to be sure of getting cane-sugar, the safe thing would be to use that alone, but one can not be sure of what granulated sugar is made, and the amount of bee-sugar is all the time on the increase. Since we are in a manner forced to use what is very likely to be bad-sugar, we may take some comfort from the experience of Editor Root, remembering that the proof of the pudding is the eating. He says in Gleanings in Bee-Culture:

Personally I do not have any uneasy feeling about the sugar question. It is not proper for us to boast; but for the last 10 or 12 years we have used beets-sugar for feeding our bees; and if any one can show a higher wintering average than we—one who has used cane-sugar—we should like to have him hold up his hand. Our wintering losses very often do not exceed 2 percent, and the very highest is 15 percent, 1 believe. This covers a period of about 20 years. I suppose a fair average would be between 3 and 4 percent. If Mr. Morrison is correct, the beets-sugar is better than cane. But my honest impression is that, with either sugar, we shall get good results. The trouble from sugar-fed colonies is more because the syrups is fed too late or too thick, and the bees do not have opportunity to ripen it. If it is fed during warm weather, when they can fly, half and half, other things being what they ought to be, I would not give two cents to have the colonies insulated.

A New Honey-Plant is announced every now and then, and at different times there has been a sounding of trumpets over some new plant that was to be kept by the bee and give wondrous yields, as for example the Simpson honey-plant, figwort, and Chapman honey-plant. Acres of ground were planted with these, and at the instigation of bee-men the Government made an appropria-
tion to distribute the seed of one of them, but at the present day little is heard of them, and it is not likely that any one considers it advisable to make a planting of either of them.

It seems pretty well settled that to make it profitable to occupy tillable land with any honey-plant, that plant must have a value aside from its honey-yielding properties. Hopeless, therefore, is the attempt to regard a plant for honey alone, there is always a possibility of the discovery of some plant of value for other purposes which has the additional value of being a honey-yielder. Even the remote possibility of such a thing makes it worth while to experiment with a large number in the hope that out of the many there may be found one that will be profitable.

In the National Stockman and Farmer, the winter or hairy vetch receives high praise as a plant for feeding and other purposes, but no mention is made of its honey-yielding qualities. In a late number of that excellent farm journal J. A. Macdonald speaks upon that point in this wise:

Some months ago I made mention of the winter hairy vetch article in the National Stockman and Farmer, but in mentioning many of its various points of value, as a pasture plant, manure producer, and value, etc., I did not observe that this vetch was a splendid honey-plant, and that clover deed better through a comparison with it, regard, for the reason that the time of bloom of clover is comparatively short beside hairy vetch, and that the red clover which the readers have noticed this new value of this vetch: if they have, they have taken very good care to keep the plant from blooming. You may have a correspondent, Mr. Lightly, and a bee-man, too, has spoken, in your columns, of the marvelous capabilities of hairy vetch, but I, at least, have failed to see any mention by him of the honey-yielding qualities of the plant which you mentioned now ask him to say if he ever noticed this point of value.

First, let me say that there is no more beautiful sight than to look upon a field of hairy vetch in full bloom, and this view presents itself for a very long time, and this is why such a remarkably fine honey-plant, superior to any other that we have seen for weeks. You see this vetch, when sown in spring, is very tardily in maturing seed, but continues to put forth and add to its quantity of bloom all through the warm weather while most of the vetches are exceedingly fond of. On a patch of this vetch sown May 10, I noticed, two weeks ago, about the first week in July, that it was not until three weeks later, or the last week in July, that it appeared in full bloom, and still at this date (August 31) it is in the midst of its brilliant bloom, though pods are maturing on the lower portion of the plants. For the last ten days the plants are literally covered with bees. A few days ago I tried to estimate the number of bees fleeting from bloom to bloom, and so far as I could read there were an average of ten bees to the square yard, that is, in the immediate vicinity of the patch, and I never have seen bees working so greedily. You say there are no more than four or five bees working to the square yard, but no matter what you have to go into this patch (which, by the way, we are cutting for partial sowing of cows and pigs), there are lots of bees and continually.

Hairy vetch is a wonderful plant indeed, so much so that you have seen of it, but it would be considered with at all. As a pasture for swine it is fine, and though I never cure any of it for feed, it is always good for this purpose, too. As a spring crop with me it is ahead of a winter crop, and produces the finest feed and best forage per acre, and lastly it comes its wonderful value as a honey-plant. I wish bee-men everywhere where it would give the bee their honey-yielding qualities; and I would greatly wish to hear from those having the hairy vetch growing to report its value in regard.

Now in the hands of others this plant may or may not be found of value. The probability is that in some localities it will deserve the kind words with which Macdonald speaks of it, but in others it will be of little value. But the possibilities in the case warrant a thorough trial on a small scale. Its long period of bloom, and its continuance in bloom after white clover is done are special points in its favor wherever it is found to be a success.

Has anyone of our readers had any experience with the plant? Has any one any further knowledge of it? If so, let us have all the light possible about it.

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**Weekly Budget.**

President William McKinley—the most widely respected and honored president of the United States in our generation—was also a persistent demon in human form, while he was holding a reception at the Pan-American Exposition at Buffalo, Sept. 6. The terrible wound resulted in his death early Saturday morning, Sept. 14.

Of course, this is no news to the most of our readers, as the daily press has been crowded with typical and column at this awful event. It is almost too sad and terrible to write about. There should be no room for a single anarchist in this "land of the free and home of the brave." We strongly favor the suggestion that all the anarchists in this country be exiled to two high-walled islands of the sea, the men to be assigned to one island, and the women to the other. Give them sufficient to eat as long as they live. After that the "bread" would be at an end.

We have not the slightest sympathy for those who would shoot down any one placed in official position, and the sooner such tardy cowards are hanged and the better disposed of the better for all concerned.

---

**Getting Late for Queen-Orders.**—On account of the season getting late—cool weather, etc.—we wish to announce that we will be unable to accept any more queen-orders to be filled this season. We appreciate very much the queen-patronage that has been extended to us this year, and trust that it may continue next season. We also hope that all the queens received through this firm may prove entirely satisfactory, as we believe they will.

HON. J. M. HAMBURG, writing us from San Diego Co., Calif., Aug. 31, had this to say:

"Thank you, Mr. Hamburgh, for such expressions of kindly feeling and appreciation. Such go far toward resting the tired head and hand that often come so through the incessant efforts necessary to be put forth in order to send out the old American Bee Journal every week in the year. But, after all, it is a pleasant work. And one can keep on doing it, with an honest feeling that he is really doing something—spreading the gospel of knowledge, who want and need just such aid as this journal gives.

To all our increasing thousands of readers we pledge continued effort and devotion, health and strength permitting."

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**Home and Apary of J. W. Adams.**—On page 615 will be found a picture of "Oak Grove Apary, belonging to J. W. Adams, former owner of Mountain Apary, Tex." He took his first lessons in bee-keeping from his grandfather when he was a mere boy, but never kept bees until after he was married. He moved to Texas in 1884, and seeing so many bees there the old desire to keep them was revivified, and so he bought some black ones in brick-hives; these he kept, but with sad results. Last winter he was struck by making a study of the bees, and reading all the books he could secure, he has made a success of the business. He is also a farmer and stock-raiser.

Mr. Adams secured about 100 pounds of comb honey per colony last season (1899), which he sold at $12.50 per pound. He gets 9 and 10 cents per pound for extracted honey, and has no trouble in selling all the honey he can produce, at these prices, and the middle of June he was behind 1000 pounds on his orders. He is the only practical bee-keeper in that locality, but through his efforts some have become interested in bees, and others have begun to save their stock, and adopt the standard hives. In the picture, the little girls to the left are Mr. Adams' daughters, the little one in the buggy is the baby, and the young man in the background is his eldest son, who has charge of his queen-business.

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**Friend York.**—The reliable, old American Bee Journal, born companion to the wide-awakes in the olden time, and always welcome here in this far-away land of the Sunny Pacific Slope, I am afraid there are very few up here who fully appreciate the energy and grit of the Editor who so faithfully compiles and prepares a weekly intellectual feast for its patrons upon topics relating almost exclusively to the honey-bee. Long may the old, faithful American Bee Journal live and prosper under the guidance of our "auld lang syne" friend, George W. York, is our sincere wish.

It seems that fate has placed me at the extreme western limit of Uncle Sam's domain, where I am isolated from the haunts of my early life. Yet I can live with no regrets, and have many reasons to be thankful, chief among which is an added lease upon life. Myself and family have a much better health here than we did in the East. The daily visitations of the cold, invigorating salt-water air, is a panacea for almost every human ill, and hundreds and thousands at this season of the year lie away to the banks of the Pacific, and may be in a much better health here than we did in the East. The daily visitations of the cool, invigorating salt-water air, is a panacea for almost every human ill, and hundreds and thousands at this season of the year lie away to the banks of the Pacific, and may be in a much better health here than we did in the East. The daily visitations of the cool, invigorating salt-water air, is a panacea for almost every human ill, and hundreds and thousands at this season of the year lie away to the banks of the Pacific, and may be in a much better health here than we did in the East.
Contributed Articles.

The Honey Market and Crop in California.

By Geo. W. Brodeick.

We bee-keepers of Southern California have been forced to confront conditions in the marketing of our product this year that we have never been obliged to face before, and I firmly believe that if the majority of our bee-keepers were patrons of our leading bee-suppliers, this state of affairs would exist.

Every season we are informed from outside sources (and sometimes within), that Southern California will have an enormous crop of honey, and it matters not whether the conditions are favorable or not (last year as an illustration), with the consequent result prices are established before the honey is ready for the market and the amount produced is unknown. This year has not been an exception in this respect to the past, but that which has lent additional interest and more than all else to depress the market, has been the production of wax for our own use.

The object, of course, is self-evident, for the circulation of the rumor of a large crop has a depressing influence upon the bee-keeper who is forced to sell, and when the middleman quotes a well-known bee-keeper as authority, lends a vitality, the statement; and as the former has no means at hand to know of the vast quantity of honey that has been shipped to the United States from Cuba, Hawaii, and Puerto Rico, (this information is bought by the buyer or go-between), knowing not whether it is true or false as to state of market, etc., he quietly submits and sells for the price offered.

We all know beyond question, that at the beginning of this season we had less than one-half of the bees to produce a crop with than four years ago, and yet the statement has gone forth that we produced as much, and more, than we did four years ago. I know beyond question that we have many honest buyers, and I know of bee-keepers who have been aiding these men in a legitimate way, but when men from our own ranks circulate statements with the express view of depressing the market, and thereby affording them a profit, I think it is time the California bee-keepers were warned against their practices, and it is this which prompts this article.

While I am not disposed to pose as authority in regard to this year’s crop, information from some of our leading bee-keepers, and other sources, indicates that we have produced about 150 car-loads of honey, all told. Over half of this has been marketed. Comb-honey has been produced in limited quantities, due to unfavorable conditions, and this has nearly all been competition. The remainder of our product is the hands of men who can hold it indefinitely.

Los Angeles, Cal., Sept. 7.

How Do Bees Manage to Survive the Winter?

By “An Observer.”

Bees survive the winter by packing themselves in clusters between combs of waxen cells filled with honey.

The low temperature a cluster of bees so situated can resist and still keep alive is really marvelous, and is only paralleled, in the other extreme, by the degree of heat a beach without sand, and with 70 per cent. humidity, that although some heat must be lost, the loss through the combs may be reckoned as nil. The cluster loses heat around the outer circle, at the periphery; the circumference is the radiating and cooling area. In the case of a cluster of bees, say 10 inches in diameter and ½ inch thick—about the distance between the combs—we find that the cluster would be very nearly 40 cubic inches in volume, and the radiating or cooling area would be 15½ superficial square inches; three cubic inches of bees, therefore, only expose to the cold a little over one square inch of surface. If we take a cluster 5 inches in diameter we find the volume to be 10 cubic inches, and the radiating surface or area 7½ square inches; and, if we take a cluster 4 inches in diameter, the volume would be 6½ cubic inches and the cooling area 6½ square inches. The 10-inch cluster has therefore, three times the advantage of the 4-inch cluster, and, in proportion to volume, three times more heat will be required to keep up the temperature of the smaller cluster.

The calculation of volume to cooling area may be shown thus: It would take the bees contained in four clusters of 4 inches in diameter to make one cluster 8 inches in diameter, and the cooling surface of the 8-inch cluster would be one-half of the cooling area of the total of the four separate 4-inch clusters. The heat required for the larger cluster would require only one-half the heat to keep up their living temperature that they would in the smaller clusters.

If we take a cluster one inch in diameter the volume would be half the 4-inch, say four-fourths of a cubic inch, and the cooling area the half of 3.1416, say 1½ square inches; the cooling area is, therefore, proportionately four times greater than in the 4-inch cluster, and is too large to allow of much fall in temperature with safety to the bees. So small a cluster could not exist in winter, except at the equator or near to it.

The individual bee is very sensitive to cold, but we must remember that a cubic inch exposes 6 square inches of surface to cooling air. If the cluster heats up above 54°F., it will increase as the cube, and the surface as the square. A bee in mass or volume is less than the sixty-fourth of a cubic inch, and its radiating, cooling, or heating surface is more than one-sixty-fourth of a cubic inch. If the temperature of a fourth of a cubic inch to be a cube, its surface would be three-eighths of a square inch. This cube would therefore expose a radiating surface proportionately twenty-four times greater than the cubic inch of a bee.

A well-formed 10-inch cluster, must be afforded over sixty times more protection from cold than it would possess outside the cluster.

The space between the combs is important. We will consider the distance between the combs in reference to the cooling area, and at the same time the supply of food, as these are closely related. The 10-inch cluster, between combs ¼ inch apart, is surrounded by 80 cubic inches of honey—supposing the cells in each cluster to weigh 0½ of a pound there are 4 pounds of honey within reach of the cluster for the bees to feed upon. We will now suppose the combs to be one inch instead of ¼ inch apart; the bees clustering close would occupy only 5½ inches on each side, the corresponding 10-inch cluster would require 60 cubic inches of cooling area, which is too large to remain with 80 cubic inches of honey within reach of the cluster for the bees to feed upon. The space between the combs must at all costs be maintained, and the food must be supplied in such quantities as to remain with the bees during the cold.

When the depth of the combs allows the bees to locate their stores above the brood-cells, they always store the store-cells so as to leave only ½ inch space between the combs. Let us suppose that the bees contain 10 pounds of the finest honey, containing 12 per cent. moisture. Taking the 4-inch cluster between combs ½ inch apart, it would have to extend itself to nearly 5½ inches to remain in the same volume at the ½ inch distance. The cooling area would now, from diminishing the distance—be 4½ square inches. The immediate reach of the bees would be increased, from 2 cubic inches to the cubic inch of bees, to 5 cubic inches to the cubic inch of bees—that is, 150 per cent.

Considering the facts above, I think it is evident that the size of the cluster and the depth of the combs are the essential requisites for wintering, and that, as a general rule, the size of the cluster and depth of combs must increase in size, they must, of course, be diminished in number, and if the construction of the hives should not
admit of the requisite sized combs for the latitude in which they are to be used, the bees will not be able to winter successfully in them.

The fecundity of the queen, so far as we know, does not vary with the latitude and can not, therefore, be brought to bear on the subject in regard to the general area of combs used.

The bees survive through the winter by preserving as well as they possibly can the heat of their clusters; and as the general interior temperature of the hive can only be raised to the loss from these clusters, it follows—paradoxically, as it may appear—that the colder the general interior of the hive the better are the bees wintering, through the preservation of heat in their clusters; and it also follows that upward ventilation, or draught, through the hive is prevented—which draught the bees dread above all things—the entrance to the hive can not be too large.

In the spring, however, when the bees extend from the cluster over their combs, warmth in the general interior of the hive is an advantage; but if great enough to cause the bees to leave the clusters too soon, it might be productive of more harm than benefit.

The controversy concerning the merits and demerits of cold and warm hives by the presentation of the above facts is at an end. The main object to be considered is their construction to admit of combs adapted to the size of bee-clusters required in various latitudes.—British Bee Journal.

No. 2.—A Bee-Keeper's Vacation in Wisconsin.

BY C. P. DADANT.

FRIEND reader, last week I left you after telling you a fish story, yet I have no doubt that you wish you had come along with me when this was caught. But this happy neighborhood has other attractions besides good fishing, for they tell me that there are both deer and bear in the woods around Sturgeon Bay. I was rather inclined to doubt the existence of the latter in a section already wooded, but I can not help the fact of having a acquaintance with the lady who accompanied us showed us the spot where she had been badly frightened by the appearance of a bear while walking along the road. "And," said she, "though I turned to run, the bear was as badly frightened as I was, for he also turned and ran in the other way."

The woods are indeed wild, in spots, more brush than timber, for all the good timber has long ago been cut, and mankind sufficiently powerful at the time our ancestors had not been despoiled by human wastefulness. The thicket is so dense that it is, in some places, almost impossible to get through, and they say that in the deer-hunting season it is not wise to travel about in those woods, not on account of the bears, but on account of the careless hunters who are apt to shoot at anything that they see moving in the thickets, before they have ascertained what sort of game it is.

These woods are in all sorts of evergreens and many deciduous trees, chief among which are the beech and birch. There are also shrubs, blackberries, and the inevitable red raspberry, which I am told exists all over the North, clear up to Alaska and the Klonidke. This is certainly a very nice thing, and the forest fires have destroyed what the raspberry is half as fragrant as the wild berries themselves, it must be delicious. But it may be with this as it is with the early fruit-bloom in Illinois, perhaps the colonists could have saved it from the ax. When the first settlers were made, the main puzzle for the white man was how to get rid of the wood, and we can still see traces of an awful waste of timber that would now be valuable. I saw a small apiary in an enclosure made of trees two to three feet in diameter. Two logs had been rolled side by side, and a third one put on the top of them, making a barrier about four feet high and four feet in diameter at the base. Of course this fence was old, probably 25 years or

more, but it was still sufficient to keep out stock, and stood as a witness of the haste with which people destroyed the forest. May we not, as a nation, be sorry later on, for not having retained at least a part of our countryside.

The pine timber is getting more expensive, and experienced lumber-men predict that within ten years most of the pine will have to be purchased in British America. Already most of the timber on the shores of the big lakes has been cut over, even on the Canadian side, and although many and many a boat-load is seen coming southward towards Chicago and the big centers, yet the quantity is less than formerly. Some saw-mills are cutting only hemlock, such timber as was considered worthless 20 years ago.

But the destruction of the forest does not seem to injure the bee-industry, for if many wild plants are thus destroyed, it is there as in our prairie States, many of the cultivated plants are honey-yielders, and the white clover especially gains a foothold wherever cattle graze. So the prospect is rather for an increase of honey-production than for a decrease. And the Golden Age, in a country "flowing with milk and honey," is certainly more in the prospective future than in the past. In all these hills that have seen the Indian disappear when the white man came.

But, dear reader, it is now time to go home, and our vacation is coming to an end. At ten o'clock, Monday morning, the whistle of the "Chicago" boat announces to us that she is at the dock, waiting for her passengers, and we are leaving for the next adventure, and embark.

"Grandpa" Dadant, who is to stay till the end of September, accompanies us to the boat. In another hour we pass through the Ship Canal, and are afloat on the blue waters of Lake Michigan. We give you here with a view of one of the many sights we encounter—a tug drawing three sailships loaded with lumber, bound for some southern port. This view may be familiar to many of our Chicago friends, but it surely interest our prairie bee-keepers, who have no occasion to visit the lakes.

On the second day of our trip we had a little storm, just enough to give our ladies an idea of seasickness, and its pleasures (?)—but this was soon over, and gave them just that much more appetite for a hearty supper in a Chicago restaurant.

When we arrive in Chicago, the romance is at an end. There is nothing left but noise and bustle, smoke and dust.

No, no, don't talk to me of Chicago! We hurry home as soon as we can, barely taking time to pay a short visit to our worthy friend, Mr. York, the kindly editor of the American Bee Journal. In a few hours, through smoke and dust, we are again at home, resuming the daily duties of life.

Hancock Co., Ill.

"The Hum of the Bees" in the Apple-Tree Bloom is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hammer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at $1.00.
Convention Proceedings.

BY LOUIS SCHOLL, SEC.

The seventh annual meeting of Central Texas Bee-Keepers Association was held at College Station, Tex., July 22 to 26, 1901. It was really a joint meeting of the Central Texas, North Texas or Texas State, and South Texas Bee-Keepers' Associations. The three were consolidated into one, viz: "The Texas Bee-Keepers' Association," with new officers elected, and new constitution and by-laws adopted.

The meeting, in general session assembled, was called to order by Pres. O. F. Hyde, of the Central Texas Association, July 24, at 8 a.m., with Pres. Stachelhausen, of the South Texas, and J. M. Hagood representing the North Texas Association, in the chair; Secretary E. J. Aten, of the South Texas, and Sec-Treas. Louis Scholl of the Central Texas, at the desk. Pres. Hyde spoke briefly on the honey-bee, after which Mr. Aten offered prayer.

The presidents next made their reports, followed by that of the secretaries, each giving an account of the standing of their respective organizations. Next, the election of officers of the Central Texas Association ensued, and resulted in electing, for the ensuing year, J. B. Salyer, president; H. H. Hyde, vice-president; and Louis Scholl re-elected Secretary-Treasurer.

The call for new members was ordered postponed, as a committee appointed by the chairman, on constitution and by-laws, was to make its report at the afternoon session. This committee consisted of Louis Scholl, H. H. Hyde, and F. L. Aten. Then the regular subjects on the program were taken up, E. J. Aten speaking on Bee-Keeping for Farmers.

He hardly knew whether to encourage farmers to keep bees or not. He mentioned some of the things he had seen at a neighbor's, who was a good farmer, trying to keep bees, and making blunders. If they would only keep a few colonies, and produce only enough honey for their own use, it would all be right. When keeping more, and during an extra-good year, they have a surplus, which they rush to a town, lump it off for any old price, and it being mostly honey of an inferior quality, besides their not being informed in regard to the price of honey and the condition of the market, never reading a bee-journal, they run down the price of honey, and are ruinous to the experienced bee-keeper, who is in it to earn his bread and butter; therefore, Mr. Aten said, it should be discouraged.

J. M. Hagood is in a strictly farming district and is a farmer. He said that the farmers ought to encourage the bee-keepers to keep bees for the good purpose of fertilizing the flowers. He has his home-market and sells most of his honey there, so the effect of the farmers' ignorance and inferior honey, containing old, dark combs with pollen and such, has ruined his market and lowered the price.

G. F. Davidson moved that we invite Prof. Mally, State entomologist at the A. and M. College, to speak before the bee-keepers at the afternoon session, in regard to assistance from the bee-keepers in going before the next special session of the legislature in August, asking for an appro-
piation sufficient to help cover the costs of establishing a department for the study of bee-keeping, and the location of an experimental apiary on the grounds. After some discussion concerning the great need and usefulness of such a project, it was decided that the work be attempted, and while accomplished, the motion was unanimously carried, and a special committee appointed, composed of H. H. Hyde, G. F. Davidson and R. C. Knowles, to invite Prof. Mally to come to Minnesota and give a course in bee-keeping. Prof. Mally, and to go to Austin (Texas) before the legislature, was appointed, viz.: G. F. Davidson, Louis Scholl, J. M. Hagood, and E. J. Atchley. The subject under discussion was then resumed. Z. S. Weaver said that bee-keeping must be followed altogether as a business. He does not encourage farmers to keep bees, but many would be here now as bee-keepers if not started on their farms. It just depends whether the farmer is the one who should follow, and course the one not the best paying is turned loose. Some keep bees as a side-issue, become enthusiastic and succeed, while others fail. If the farmers keep a few colonies of bees, for their own use, it is all right; otherwise it is not.

O. P. Hyde makes a whole business out of bee-keeping and keeping bees for the dollars and cents there is in it; he has no objections at all to farmers keeping bees, for if he had 100,000 pounds of honey at his home, not 1000 pounds of it would be sold, and his market in North Texas. Just let farmers keeping bees go on, and the matter will adjust itself some way in the future.

Mr. Atchley objected, as new ones coming in all the time the matter could not adjust itself, but must be done by the experienced bee-keepers discouraging the kind who won't succeed.

There were many who gave their opinion in regard to this matter. Some said it was not a good idea for farmers to be a bee-keeper or a farmer; they cannot be made to harmonize, as the bees need one's whole attention to make them successful, and either the farm or the bees must be neglected some time, especially in the spring. At the time the bees need attention, the farm needs it; and as nobody can be hired to attend to a business as one himself would, something will be neglected. And what is the use of only half attending to each, instead of following the one most suitable? There are many sections most excellent for bees but not for farms; others just the reverse. Then, again, there are men more fit for one than the other. This ought to govern as to which line should be followed.

The discussion ended, that if farmer bee-keepers would keep bees in the same way as a profession, their honey, using the latest methods, putting it up for market rightly, and keep informed in regard to the market price of honey, by reading the bee papers and books to keep up with the times, they would have an excellent business. A bee-keeper, as the more experienced to teach them all this. Encourage such as will succeed and will try to make a success at it. But the others that can't be taught, won't read a bee-paper, won't turn in with their inferior stuff, to lump it off at any old price, should be discouraged in any way possible. Bees really belong on the farm as well as poultry, hogs, cows, and such, and should be kept, but rightly kept.

PRODUCTION OF CHUNK COMB HONEY.

This was next taken up, on which M. M. Faust gave his method of production, and disposing thereof. He wants the strongest colonies for producing all kinds of honey, but more for bulk comb honey. He lets them get strong and gives them proper quarters, adding a super with shallow frames containing foundation starters one-half inch wide. If the bees are slow to go up, he puts on another half-depth super, putting up some frames of honey from another super if necessary. He adds the shallow frames in their stead, until well started, when numbers are readjusted. He used to produce about one-half extracted and one-half of bulk comb, but the past season he has had too much to fill up by comb-honey cans. By giving all frames containing foundation, he has had some trouble by the queens depositing eggs in the supers.

O. P. Hyde followed with a good paper on this same subject. In its different phases, this subject would naturally divide itself into these three parts, viz.:

1. How to produce bulk comb honey.
2. How much more bulk comb can be produced than one-pound sections?
3. Why should we produce bulk comb honey?

On the first part, have all your bees in 10-frame dovetailed hives of standard size; Italian bees, and robbing colonies. Then when the flow begins, he puts on one "Ideal" or 5½-inch-deep super with 5½-inch-deep frames filled with full sheets of extra-thin foundation. By using full sheets of this foundation the bees enter the super once, and it will not be detected in the honey. When the first super is about half full, another is put under it, and so he keeps on tiering-up. He gives plenty of room and sometimes as many as four or five supers on his strongest colonies.

The above size of frame is preferred, as when one is full, it will just make a complete layer in the five-gallon eight-inch-screw-top 60-pound cans, when cut in two in the middle and laid up 2½ inches thick.

The advantage of shallow frames over full-depth frames is that more capped honey can be obtained.

Secondly, he asserts that twice as much bulk-comb can be produced as one-pound sections, believing that he can prove it. The bulk open frames more quickly, work harder, and almost fill two supers as quickly as one section super. Also, the advantage of the extra amount of extracted honey that goes in at comb-honey rate.

Thirdly, the keeping of bees from the dollar-and-cent standpoint, wanting the largest return for the money, the bee-keeper must produce the kind of honey that sells the quickest and gives the best results. If his customers were wholly or mostly for section honey, he would be forced to use one-section supers; if the market is for bulk honey, if extracted, then it would be extracted. As it is the demand that keeps us in the market, we must produce the kind there is a demand for.

He was once an advocate of section honey—the kind that has a thin strip of wood around it, thinking it so nicer that he would not have anything else. He is still an advocate of comb honey, but the kind that is cut from the frames, placed in cans and that delicious, sweet extracted poured all over it. Then you have not only extracted on the inside, but on the outside of the comb also, which makes it more desirable to the taste. When he was for sections, the Northern brothers said he was a practical apiarist, but now he is for bulk-comb, and they say he has retrograded 20 years, which, however, does not matter with him, for he is not for popularity, but for the dollar.

He also gave some figures and some idea of the immense quantity of such bulk comb honey that is in demand here only a year and a half ago.

A question was asked in regard to keeping it over winter, whether it would granulate, and if it could be taken out in layers then. The answer was that this was the only drawback that bulk comb honey had, but the demand for it is greater than the supply, and the price of honey has not been so high as to discourage, hence none is kept over winter to become granulated.

Mr. Davidson seriously criticized Mr. Hyde's paper, saying that he did not want it to be understood that the production of section honey should be as-sailed in any way, and that the production of sections should not be discouraged; besides, the production of fine section honey stands above all others, and is the highest art of producing honey. He intimated that the reason why they were not producing section honey was because they did not know how; and that the day will come when more section honey will be produced than bulk comb, as it is the more wealthy people, anyway, that eat the most honey.

All three grades are good, but fine section honey can not be procured during slow flows, as it takes fast, rushing flows, and a locality with such. There is just as much in dollars and cents to be made with section honey as bulk comb, and the former should be encouraged. O. P. Hyde ended the discussion by saying that he was not as much discouraging the production of section honey; that he is willing to produce only what is in greatest demand, and gives the greatest profits. He is not pushing this, but it is his customers that impose it on him.

Before adjournment, H. H. Hyde moved to appoint a committee of three to judge the bee-keepers exhibits, and these were named: D. C. Milam, W. O. Victor, and Mrs. C. R. West.

Adjourned for dinner, until 2:30 p.m. (Continued next week.)
Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, III.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, who will answer them as far as possible. Please do not ask the Doctor to send answers by mail.—Edtr.)

Combs Melting Down—Swarming Mix-Up Transferring, Etc.

Replying to J. A. Gerald's page 567, I think he has made the right guess in concluding that the combs melted down in his hive because the dense growth surrounding them prevented the free passage of air. I never yet had combs melt down when hives stood in the full blaze of the sun, but one year I had a few cases where the hives were in dense shade all day long. A dense growth of tall corn was on one side of them, and close bushes on the other.

In reply to S. B. Smith (page 573), he has no doubt made a close guess at what transpired. Of course it can only be a guess, but I should put my full guess in this way: The young queen in No. 11 went out on her wedding-trip, accompanied by enough bees to make the small swarm that was hived; the remaining bees of No. 11 then walked over to No. 15, thus making a mass of extraordinary strength. An item that tends to confirm this opinion is the fact that bees were seen going on the alighting-board from No. 11 to No. 15, and it is likely that close observation would show the bees doing that same thing two weeks later. The bees on coming from the field would not go direct to No. 15, but would enter No. 11, and then crawl across until that generation died off; at least a certain number of the bees would go through that performance.

T. E. Weaver (page 574), would like to know whether his plan of transferring would work all right in a poor honey-year. It would likely be all right except the danger of robbing, for if he should do exactly as appears from his description at any time when honey was not freely coming in, he might have a lively time of it.

Dr. Peiró (page 574), lays a very heavy burden on that poor little crack under the cover. You say, Doctor, that after seeing that crack your "conclusions were clear and rapid." Rapid, very likely, but it is somewhat doubtful about the clearness. A reasonably strong colony will not only guard a full-sized entrance in the ordinary place, but also an entrance equally large right under the cover. For a number of years I have been on the file of Agi-Itrim. I allowed, besides the regular entrance, an opening over the frames at the back end of the hive 15 inches by 1/2 to 3/4, and there was no trouble about the bees protecting themselves. If at a time when robbers were about the opening should suddenly be made under the cover, there might be a little danger of trouble, but if the opening were made in a time of plenty, there should be no trouble; and there should be no danger either in scarcity or plenty if the crack were made by the gradual warping of a cover. C. C. MILLER.

Perhaps Larvae of the Bee-Moth—Climbing Brood.

1. On Aug. 3 I made the first "drive" in transferring a colony to a new hive, supplying them with full sheets of foundation, and after they started storing well I gave them an Italian queen. I then felt lightly by putting a small dish of granulated sugar syrup under the frames at night, and removing the empty dish in the morning. At present they have six Danz. frames nearly filled, and two more started, principally from stores they had but a few days in the hive. Now the morning there will be young bees, sometimes to the number of 30 or 40 scattered around the entrance, ranging in color from clear white through all the shades and markings of brown, up to those which will be struggling to free themselves from the dewy entrance-board. What is the cause and cure?

2. Is there danger of chilling the brood by removing it from the hive in the morning of evening of cool days at this time of year?

I can find nothing on these subjects in my books.

I. L. ILLINOIS.

ANSWERS.—1. Looks like worms, or (begging Prof. Cook's pardon) the larvae of the bee-moth. They work their galleries through the cappings, and the larva of one kind work at the bottom of the cell. When very bad, the young bees will be dragged out as you describe. The remedy is to get Italian blood. Possibly, however, a fuller knowledge of the case might suggest some other trouble.

2. No danger when it is warm enough for bees to fly, unless the brood is kept out an unreasonable length of time. Ordinarily there is no need to have a frame of brood in the hands more than a minute at a time.

* * *

The Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses.

By E. E. HASTY, Sta. B Rural, Toledo, O.

NO BLOOD BUT EGGS PRESENT DURING DROUTH.

Dr. Miller's experience in the great July drought—no brood either sealed or unsealed, but eggs always present—adds a crumb to a pertinent and interesting bee-fact which we have to figure with. Page 538.

PURITY IN MARKINGS OF PARENTS.

It sounds to me as if "Texas," on page 520, was after strictly three-handles and drones. Won't get em. Doubtful if they could be called any purer than the present ones if he did. He should remember that nature often differentiates the sexes remarkably. Sometimes it even occurs that the male is a winged creature and the female a crawling worm. Wild birds are our purer; but often the male is brilliant in colors while the female is plain looking.

"BURNING ONE'S OWN SMOKE."

Prof. Cook, on page 521, passes to us some important teaching aid in very pungent words—let us burn all our own smoke. Won't make quite so much smoke if we have the job of burning it in view. And what rent have we paid for our neighbor's eyes and lungs that we should warehouse our smoke in them? Don't forget forgetting that what we try to call entertaining conversation is sometimes the worst smoke we make.

MAKING ROOMS MOUSE-PROOF.

Mr. Foote is on the right track about mouse-proof rooms. Mice first get into the spaces between walls. From that vacuum ground they can make their way to cracks and lay plans to get there—would not so often dodge through doors had they not their minds made up previously that it was a good place to go. And usually, as we know, some little defect in plaster or base-board proves capable of enlargement. And in the process, finding an entry to the side of the building, and studs set on a narrow plank, would keep them out of the wall-spaces to start with, and so mainly prevent after consequences. Page 523.

WORKING HIS "STANDS."

How does he work his stands, Dear Boss? Why, he makes them lift. And if he makes his stand lift about 100 pounds more in August than they do in May, is it not all right? Virgil is praised because he called a bee-hole twelve different names and ever since I read Virgil (if not before) I have had a leaning in that direction—toward an elastic application of terms. True, lack of precision is a bad thing; but if Virgil fully filled his word with things that were too limited—too lean and bald. May we not all be poets to the small extent of having a little versatility to our speech? Let us not groan nor scold even if one comrade does catch a nice string while another catches a nice lot of ladies and another catches a dinner, and another catches a cure for sore eyes. Page 530.

THE LEGISLATION OF THE AUSTRALIANS.

Those Australians are continually solving things the rest of the world failed to solve—or failed to try to solve. We cannot very well legislate the aparian pig to his own end of the territory trough; but we can give him a "bar-basinster" by refusing him membership—and see whether his hide is so tough that he cares nothing for a blow of the nippers. Australians, American societies seem rather too nebulous to hit anybody, even to the small extent of refusing membership. Membership is anybody that happens to come to a meeting—and so few that the proposition to bar people out would seem gro-
tesque—last rose of summer forbidding the pips to bloom. Page 537.

**WRITING** **TT** **THINGS WHILE FRESH IN MIND.**

I also incline to “Amen” the plan of writing up things while they are fresh in the mind. Writer needs the help most even if it was a case of writer versus reader, which it isn’t exactly. Reader’s ears have been dug open by his experiences, and will have wax in them ten months hence. Also, if the would-be writer forgets a thing before it gets in print there is no back number to go to for it. Page 531.

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**The Home Circle.**

Conducted by Prof. A. J. Cook, Claremont, Calif.

**THE TABLE.**

“Ah! but wasn’t that an elegant table?” That was my daughter’s query. We had just broken doughnuts with a good friend—one of those splendid women who is ever dispensing cheer and bonhomie. We all asked, First, the ladies was so entirely immaculate and of such proportions that it just seemed made for that special table. Each marginal inch seemed impressed by gravity just as strongly as every other, for none had reached down nearer the floor than had any other, and none had seemed to aspire to be a piece of art! The plates with accompaniments, each was like a well arranged bouquet. Nothing was crowded, yet there was no wide desert area, and we all said that room was found for a single lovely spray of wild roses. These were sweet over as a piece of art! Men like Gladstone could not have moved the world had any other course been chosen.

**CARPENTERIA.**

The ride on the “Espe” shore line from Ventura to Santa Barbara is charming. I took it to-night by moonlight. On one side the tall hills—beginnings of the Sierra Madre—hug close as if to shut all danger away. On the other, the breakers crashed and spurned the narrow rock ledge with the moonlight to gild all, it seems a fairy scene. Carpenteria—pronounced Car-pen-te-ra—a is a delightful littleburg about midway on this line. The word is said to come from the Spanish Carpenter, but several other explanations for its adoption. I like this one: The red-winged flicker or yellow hammer like the golden-winged of the East, except red replaces gold on the wing-feathers, is thick here, and the Spanish Carpenter, as all cognate to it, are several explanations for its adoption. One church is surely very “holey” because of this bird’s desire of entrance.

If we can trust to appearances at Carpenteria the bird is a Baptist. The worshippers there have been compelled to tie the church steeple, to keep the birds from making their nests. The bird is also a sap-sucker in California. He taps the walnuts, as does the real, genuine sap-suckers the various orchard and forest trees here and elsewhere. He is also unlike his close relative East—a fruit lover, for under any bird that once tasted California fruits would surely change its feast habits, and become frugivorous on the spot.

Like the other flicker, if we take this bird’s eggs away daily, she will lay as many as 90.

**SICK PLANTS.**

Do our plants talk to us? If not, let us get acquainted with them, and then they will. I love the poet Bryant. Isn’t he called the Poet of Nature? The plants in our garden are covered with dark green leaves, with their grace and grateful shade. The brooks sang for him, and to him; and trees, brooks, hills, mountains, sky and air, had their stories to which his ears gave fine attention. He wrote the great “Thanatopsis.” I read it so much to my children, that they learned the poem, and today my daughter loves Bryant most of all our poets. That he had a listening ear for Nature’s finest thoughts appears from the exordium of that masterpiece:

“Tobin who in the love of Nature holds communion with her forms.
She speaks a various language.”

The little child wakes before the day, and awakens our keener anxieties by his little “I’m sick.” As Day draws her curtains, we peer down to the little trundle-bed, and see the pallor that drove away pink and rose, and the “I’m sick” is spoken just as clearly.

My wife is anxious. The great, splendid sword-fen which is the glory of our parlor, tells her it is sick. It speaks in the yellowing tint of the leaves. As in all plant sickness. First, are there any insects? Does grub or caterpillar sap the roots, or scale or aphid the leaves? My wife is too wary to make that probable. We examine very carefully and find nothing.

Next the water. Has there been too little or too much? Work has learned to gauge the water. We decide the water has been right.

Then we add nitrogen, sodium nitrate or Chili saltpetter is excellent, and, all at once, as by magic, new green appears, life brightens, and our plant fairly sings, “I’m well again!”

Plants, like children, must be generously fed.
Standard Belgian Hare Book!

BY M. I. CAPPS.

This book of 175 pages presents a clear and concise treatment of the Belgian Hare industry; its growth, origin and kind; the sanitation and construction of the rabbitary; the rabbitry; selection of breeding stock; care of the young, feeding, diseases and their cures, scoring, marketing, shipping, etc. First edition of 50,000 copies was sold in advance of publication.

Price, in handsome paper cover, 25 cents, post-paid; or with the American Bee Journal one year—both for only $1.00.

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100 Colonies of Leather-Colored Italian Bees For Sale....

From stock which took first premium at the Minnesota State Fair, 1901. All in standard hives, in fine condition, and with abundance of sealed stores for winter.

W. R. ANSELL,
S.W.T.
ST. PAUL, MINN.
Please mention Bee Journal when writing.

Bees Did Well.

My bees have done very well this season, and not much swarming. From one colony I took 100 filled sections of honey. We get very little dark honey.

JOHN GERTHOFER,
Onondaga Co., N. Y., Sept. 9.

From Two Washington Girls.

We have done so well in the bee-business this summer that we thought we would write again. We are going to send a picture of our apiary this fall.

By buying queens and comb foundation we increased from 7 colonies to 21. They have filled 234 sections. We ran out of sections, and so we put on empty supers and boxes. They have them nearly full of honey now. We get 10 cents per section, and could sell all we could produce at that price, even if we had 100 colonies, and that is what we are going to have before we quit. We wish you could see some of our honey. It is white, and of the finest quality.

EDNA AND ALICE YOUNT,

The "Jouner"—Queen-Excluders.

Permit me to join Mr. Davenport in commenting Mr. Martin's "Jouner." Noting reference to it in a recent number of the American Bee Journal, I thought it worth a trial in removing bees from cases of comb honey. The first attempt was so satisfactory that I thought about that "little bit of information was worth several years' subscription to the American Bee Journal, to any bee-keeper whose time is of value." It does not need a heavy jar, but a quick, sharp one such as may be given by a little practice. If Mr. Martin's cloth jar could be placed so as to be joined with the super or case, it seems to me that there would be practically no removing of bees. I use a little smoke before removing the case from the hive: a little
to make own pat. use Splendor Cream Separators, Book "Business Dairying" & Cat. 212 free. W. Chester, Pa.

DESKS FOR GENTLEMEN AND LADIES!

These desks are made of quarter-sawn oak, first-class finish, well put together, and will please every purchaser. They are an ornament to any home, as well as being a useful necessity. Would make a FINE GIFT for father, mother or sister.

The Combination Desk and Book-Case

is just the thing for a farmer or business man of any kind, to keep his private papers in, and for his books, etc. The drawers have locks, and there are a number of pigeon-holes inside each of the desks shown herewith.

The low prices quoted are f.o.b. Chicago. Send for free catalog. Address,

The Royal Star Combination Game-Board Co.,

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Ladies' Desk.

Size, 40 in. high, 25 in. wide, 13/4 in. deep.
Price, $2.85.

[The above firm is entirely reliable.—Editor.]

Please mention Bee Journal when writing.
more at the top when or the mower, so as to drive the bees down, then by giving the case two or three quick jars, the bees are sent down all round, and one is saved hours of labor by this simple operation. Mr. Martin, thanks! I'm free, but I have only a quarter of an hour more to be of less importance to bee-keepers, and in regard to which there seems to be a difference of opinion, which I am unable to settle. It is that of queen-excluders over the brood-frames. I have never used one, neither for cut nor extracted honey. Sometimes the queen has gone into the surplus chamber when run for extracting purposes, but very seldom to a section-excluder as often in the supers. This year, after removing a large number of cases, I have found that the queen has been kept in two but two sections of the hundred taken from the hives.

I attribute this freedom from intrusion of the queen to the use of thin top-bars, which are not sufficiently spaced, so that only a bee-space is left between any two of them. I may be mistaken, but if my impression is correct, what a saving of time, money, and trouble, putting with zinc excluders.

By the way, say to Mr. Baker (page 549) to keep tally of the sections from the colony referred to. I have some long-tongued bees, and shall strive to be at least a "close second" when the season opens.

Kankakee, Ill. WM. M. WHITNEY.

A California Report.

I started the season of 1901, in March, with 210 colonies, increased to 250 colonies, and have taken off $1,200 worth of extracted honey, besides leaving the supers full.

J. A. OWEN.


Fairly Good Season.

The season was good until the drought set in in July, when the excessive hot weather eat the linseed floor short. I secured $900 worth of extracted honey, from 61 colonies, spring count, and increased to 110, which are in good shape for winter. All of my honey is sold in the home market. E. M. DOTY.


The Bee in California.

Bee-keeping in parts of California is not only a success but a real pleasure. The mild, temperate climate does not necessitate the careful housing of the bees, nor is it necessary to find food for them during the winter season. The colony is placed in that honey spot under some tree in the fence-corner. They have shade, and also a wind-break. Here they gather the nectar with which they feed. Men eat what they have eaten, and more eaten, the race would reap a rich benefit. This is no vague theory; it is a scientific truth.

The honey taken late in spring is sometimes the very finest quality. The locust blossom has given a generous contribution, and this is one of the finest honey-producers.

The honey taken in the fall is enriched by the alfalfa blossom, and also from the blossoms of the mullen-weed. This weed does not grow east of the Rockies, and is always close to the ground, and is of a very light-blue color. The honey-gatherers seek out its tiny blossoms with the same diligence that the bee-keepers seek out the abundant honey on the pastures.

Honey retails for 10 cents a pound, or two dollars a box. These boxes contain a pound of honey, which they sell for $2.50 when full. They do not have the frames, and the honey is not in a condition, as is the case with the honey made in frames.

Among the various other sources from which the California rancher may look for an income, he should give attention to bee-culture. He knows and keenly realizes that he can not depend any longer upon wheat at the low price of recent years, and, while he is looking after other sources from which to receive an income, he may do well to remember the bee.

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25 cents Cash paid for Beeswax. **This is a good time to send in your Beeswax. We are paying 25 cents a pound—CASH—for best yellow, upon its receipt, or 27 cents in trade. Impure wax not taken at any price. Address as follows, very plainly,

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Extracted Honey For Sale
ALL IN 60-POUND TIN CANS.

Allalfa Honey

This is the famous White Extracted Honey gathered in the Allalfa regions of the Central West. It is a splendid honey, and everybody who cares to eat honey at all can't get enough of the Allalfa extracted.

Prices of Allalfa or Basswood Honey:
A sample of either, by mail, 10 cents, to pay for package and postage. By freight—two 60-pound cans of Allalfa, 8 cents per pound; four or more cans, 71/2 cents per pound. Basswood Honey, 31/2 cents more per pound than Allalfa prices. Cash must accompany each order. You can order half of each kind of honey, if you so desire. The cans are boxed. This is all

ABSOLUTELY PURE HONEY
The finest of their kinds produced in this country.

Read Dr. Miller's Testimony on Alfalfa Honey:
"I've just sampled the honey you sent, and it's prime. Thank you. I feel that I'm something of a heretic, to sell several thousand pounds of honey of my own production and then buy honey of you for my own use. But however loyal one ought to be to the honey of his own region, there's no denying the fact that for use in any kind of hot drinks where one prefers the more wholesome honey to sugar, the very excellent quality of alfalfa honey I have received from you is better suited than the honey of more marked flavor, according to my taste." C. L. MILLER.
McHenry Co., Ill.

Order the Above Honey and then Sell It.
We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

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The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we sell for but 60 cents; or we will send it with the Bee Journal for one year—for both for only $1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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AMERICAN CHICAGO, or,

This is one of the standard books on bee-culture, and ought to be in the library of every beekeeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son.

Size of Queen-Rearing Nuclei.

Efforts have been made to use as small a number of bees as possible in queen-rearing nuclei from the time the young queen emerges until, but it is possible that the waste of a larger number of bees is not so great as might be supposed. Dr. Miller says in gleanings in Bee Culture:

"The greatest part of the cost of rearing a queen has been considered the time occupied in it. Stir this into the mixture thoroughly by running the extractor for several minutes longer.

In handling the naphthol-beta solution, be

Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.25, or club it with the American Bee Journal for one year—both for $1.75; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

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If you Want Hybrid Bees or Queens of any kind, or to strengthen up weak or queenless colonies, I will send one colony with queen for $1.00; two or more, 75c each; queens, 25c each.

H. H. PORTER, P.O. Box 12, Baraboo, Wis.

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Meet the new Clover. It is a new variety, just introduced, which will doubtless meet with a large favor. It is a very vigorous variety, and the plants grow close together, forming an almost continuous carpet. The flowers are large, and the honey yield is abundant. We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order.

Sweet Clover (white) 50 cts. 1.00 2.00 5.00
Sweet Clover (yellow) 90 cts. 1.50 4.00 7.50
Alsike Clover 90 cts. 1.50 3.75 7.00
White Clover 1.00 2.00 5.00
Alfalfa Clover 80 cts. 1.40 3.25 6.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for carriage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
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HONEY AND BEESWAX
MARKET QUOTATIONS.

Chicago, Sept. 18.—No.1 white honey is selling at 15 cents per pound, with occasionally a little more being obtained for fancy, which is selling at 20 cents per pound. We quote dark honey of the grade 12½c; dark with the lighter amber at 12%-13c; dark honey of the grade 5c higher. We have from California buyers in moderate demand at from 5½c to 6½c for the various grades of whites; some fancy white clover honey bringing 11c; light honey selling from 5½c to 6½c; white clover honey bringing 8½c per pound. We received copyrights from Messrs. S. C. & W. BENT & CO.

Cincinnati, Aug. 10.—The honey market is rather dull on account of the warm weather. Extracted sells only to manufacturers from 6½c, better grades alfalfa water-white at 7½c; white clover from 8½c. Fancy white clover honey sells from 13½c to 14½c.

C. H. W. WERR.

Boston, Sept. 14.—Honey is coming forward in fair quantities and the demand is good, considering the warm weather we are having. Strictly fancy in cartons weak at 11c; A. 11½c, & No. 1 18½c. We have large quantities received.

BLAIR & SCOTT & LEE.

Albany, N. Y., Sept. 15.—We quote: Fancy white comb, No. 1, 15c; No. 2, 11½c; mixed, 13½c; No. 1 backward, 20c. We have large quantities of alfalfa honey. The production of honey seems to be quite large this year in Colorado, Utah and California.

PECKY BROS.

New York, Sept. 10.—Comb honey is now beginning to arrive in large quantities, and, as a rule, is in fair condition. We quote fancy white, 18½c; No. 1, 12½c; No. 2, 10c. Barren wheat is on the market as yet, but we are expecting some in a week or two. Extracted is selling slowly, with plenty of supply, at 5½c, according to quality, and Southern in barrels at from 5½c per gallon. Beeswax dull at 20c.

HILDEBRAND & SZELEKIN.

Des Moines, Aug. 7.—There is very little demand in northern markets for honey, and the lots of nearby produced comb honey are on the market and selling in a retail way at 80c to $2 per case. There are few prospects at present of any large demand in this line before Sept. 1. Our market does not consume a great deal of extracted honey.

PECKY BROS. & CHARTY.

Detroit, Aug. 12.—Fancy white comb honey, 16½c; No. 1, 13½c; no dark to quote. Extracted, white, 66c. Bee supplies small.

M. H. HUNT & SON.

Buffalo, Aug. 18.—Quite a good demand for fancy honey, 10½c, and lower grades, 12½c; old neglected. A fine moderate supply of new as yet.

BATTISON & CO.

San Francisco, Sept. 4.—White comb, 10½ 12 cents; amber, 78c; dark, 68½c. Extracted, white, 21c; amber, 40c. Beeswax, 260@2c.

Amber and white honey are of rather moderate volume, but there is as much or more on market than can be conveniently or advantageously placed. In general, black honey is in good demand, but the custom, prices would have to be shaded in favor of buyers. In a small way for especially desirable lots slightly higher figures than quoted are realized.

KANSAS CITY, Sept. 14.—Up to the present time there is a small lot of honey on the market, and these meet with ready sale. We have been quoted from 7½c for fancy honey and 10½c for black white. For next week heavier receipts are expected and quotations are issued at $1,100@$5.25 per barrel for large lots; the market would be firm at about 14@14½c; the demand being quite brisk. A firm market is anticipated. Extracted are a little more numerous, but large buyers still seem to have their ideas too low, in a small way 5@6c is quoted.

PECKY BROS.

Please mention Bee Journal when writing advertisers.

CONVENTION NOTICES.

Illinois.—The annual meeting of the Northern Illinois Bee-Keepers’ Association will be held in the Chicago Academy of Science, 23rd Street and Sixth Avenue, on Tuesday and Wednesday, Sept. 22 and 23. All interested in bees are invited to attend.

Rockford, Ill. B. KENDEY, Sec.

Utah.—There will be a meeting of the Utah Bee-Keepers Association in the High School Building, Salt Lake City, Utah, Oct. 5, 1901, at 10 a.m., to which all are cordially invited. Kindly inform other bee-keepers and send the addresses of your neighbor bee-keepers. We also desire the address of all county bee-inpectors. A full program is the interest of the industry will be presented. Send information. Among other questions it is desired to consider, is a union of inspectors with the gysting of bee-products at profitable rates. Yours in behalf of the bee-keepers.

E. S. Luster, President. J. R.\n
Salt Lake City. East Mill Creek.

100 Full Swarms

Bees at $1.25

a Swarm.

With good laying queen in shipping box, no hive combs; hive extra. These bees are for feeding up for winter to make colonies, or to strengthen weak colonies, or may be used for breeding in directions given. Orders filled as received. Write for further information regarding these bees. Address


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100 colonies of bees wanted on shares, to be placed in yards of 300 in unoccupied territory. Address

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The best of farm lands can be obtained now in the Chicago, Milwaukee & St. Paul Railway, at a low price and on very favorable terms. Wisconsin is noted for its fine crops, excellent markets and healthy climate. Why rent a farm when you can buy one much cheaper than you can rent, and in a few years it will be your own property. For particulars, address:


WILLIAMSTOWN, Sept. 26, 1901.

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Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of THE AMERICAN BEE-KEEPER free. Address,

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River Forest Apiaries!
FILL ALL ORDERS
By Return Mail.

Italian Queens Warranted

Untested, 75 cts.; Tested, $1.00; Select Tested, $1.50. Half dozen or larger lots as may be agreed on. Address,

RIVER FOREST APIARIES.
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The Bee-Keeper’s Guide
Or, Manual of the Apiary.
—BY—

PROF. A. J. COOK.


A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to
the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without THE BEE-KEEPERS’ GUIDE.

This 16th and latest edition of Prof. Cook’s magnificent book of 480 pages, in neat and substantial cloth binding, we propose to give only to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

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GEORGE W. YORK & CO.,
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RED CLOVER QUEENS

BLACK ROCK, N. Y., Sept. 3, 1901.

FRIEND ERNEST—I will try and tell you what you want to know about that queen. I got her of you in 1899 as a premium with GLEANINGS. I never saw a small colony of bees build up as that one did. In the spring of 1900 they came out in fine shape, wintered perfect. I raised them up in May and gave them 8 frames more so the queen would not want for room. I never saw such a colony of bees as they were in June, and they were actually storing honey when other bees in my yard were starving. No! they were not robbing. I never saw those two best colonies of mine trying to rob. THEY CERTAINLY WORK ON RED CLOVER. This is no guesswork, as I have seen them. As you know, the past two seasons have been very poor, and what honey my bees did get in 1898 candied so after cold weather set in. I packed this colony in a cliff hive and left them out, thinking that such a strong colony would winter perfect. The snow came on the middle of November, and those poor bees never a fly until the last of March or the first of April. When warm weather at last came I thought they were dead, as they did not seem to be flying much, so I did not pay any attention to them until in June. I noticed they were working a little, so I opened up the hive and found them in the upper story. I took the lower story out and left them in the one body. The queen was laying nicely, and I thought they would make a good colony to winter. Along the last of July I noticed that they needed more room. I gave them a super, 4 boxes, and in a few days they had filled it. They have made 72 boxes of as nice honey as you ever saw, and are drawing out some starters now, Sept. 2.

Very truly yours,

Geo. B. Howe.

Prices of Red Clover Queens.

Gleanings in Bee-Culture $1.00 and Untested Queen $2.00.

Untested Queen $2.00

Select Tested Queen $6.00

If you want something good you can not do better than to order one of these queens. All orders are filled promptly. No extra postage on these to foreign countries.

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| TH. C. MILLER | - | Department |
| E. E. HASTY | - | Prof. A. J. Cook | Editors |

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The Subscription Price of this Journal is $1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "Oct 0" on your label shows that it is paid to the end of December, 1901.

Subscription Receipts.—We do not send a receipt for money sent to us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and duly credited.

Advertising Rates will be given upon application.

National Bee Keepers' Association.

OBJECTS: To promote and protect the interests of its members. To prosecute dishonest honey-dealers.

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If more convenient, Dues may be sent to the office of the American Bee Journal, when they will be forwarded to Mr. Secor, who will mail individual receipts.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

Note.—One reader writes: "I buy every reason to believe that it would be a very good idea for every bee-keeper to wear one (the buttons) as it will cause people to ask questions about the business, and many a conversation that started would wind up with the sale of more or less honey. At any rate, it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10 cents; or 6 for 50 cents. Send all orders to the office of the American Bee Journal.

Langstroth on... The Honey-Bee

Revised by Dadant—1900 Edition.

THE AMERICAN BEE JOURNAL

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroughly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.25, or club it with the American Bee Journal for one year—both for $1.75; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

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The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.

HONEYVILLE, O.

HOWARD M. MELBEE,

[TOP CUT IS THE FULL SIZE OF THE KNIFE]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plated brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a life-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having same and address of owner, the finder will return it, otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of these "Novelty," your Pocket Knife will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more touching memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a fair idea, but cannot truly convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00). We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

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#4 Please allow about two weeks for your knife order to be filled.
A Bee-Keepers’ Paradise is what Editor Root calls Uvalde Co., Tex., with some other counties in that State and New Mexico. But after having raised the expectations of prospecting bee-keepers to the highest notch, he lets them drop with a dull thud by saying that Uvalde county is “alarmingly stocked.”

The Buffalo Convention Report we expect to begin publishing soon. There were no papers read except at the joint meeting of the pomologists and bee-keepers on the last evening. So, practically, the whole of the report will be discussions of questions. This should make it very interesting reading.

Hive-Covers.—Saw-kers on the underside of hive-covers have been successfully used to prevent warping, but Editor Root says that after a thorough trial of such covers they have been abandoned, because in dry climates these saw-cuts favor checking and splitting entirely too much. Even in northern Ohio they give a good deal of trouble.

Need of Laws on Bee-Diseases.—On page 631, Hon. J. M. Hambaug, bee-inspector for San Diego Co., Calif., offers some highly important suggestions that should have earnest consideration.

The careful, up-to-date bee-keeper deserves to be fully protected from his careless, slipshod neighbors whose bees are more likely to contract deadly disease, and when once contracted is harbored and permitted to contaminate surrounding healthy apiaries. Surely, there should be stringent laws in every State to compel every bee-keeper to aid in the discovery of bee-diseases and when found aid in its complete eradication. This is as much in the interest of infected apiaries as healthy ones.

Mr. Hambaugh also calls attention to the necessity of issuing a certificate from a lawfully appointed inspector, showing the healthy condition of every colony proposed to be removed from one locality to another. This certainly would be a wise provision. It would help in many instances, no doubt, to prevent carrying contagion from place to place.

Mr. J. M. Rankin, Michigan’s alert inspector, has just had an experience in the direction indicated. He examined a lot of hives, combs, etc., belonging to a bee-keeper at Evart, Mich., and finding ample evidences of foul brood, he officially ordered the bee-keeper to destroy the disease-infected combs, etc. Instead of obeying the officer of the law, he loaded the stuff on a car and shipped it to Clyde, Ill., near Chicago, where it will likely become a menace to the healthy apiaries in that locality.

Now, if Illinois had a foul brood law, and an efficient inspector, this case would be followed up, and finally be gotten rid of.

But what kind of a bee-keeper is the man that would ship bee-disease from one State into another, instead of destroying it, especially when ordered to do so by one whose duty and authority it is to clean up such disease before it is spread any further? The offending bee-keeper deserves the severest condemnation possible by his fellows, and also the complete destruction of his whole apiary if even the slightest trace of foul brood is found therein. Any man who would so wantonly convey disease from place to place, rather than obey a wholesome law, should be held up to the scorn of all good bee-keepers and citizens, and be made to feel to the fullest extent possible the result of such wilful disobedience.

We hope that there may be sufficient agitation to secure the much-needed laws in all the States for the protection of bees from contagious diseases. In view of the good work already done by the few State, county, and province inspectors of apiaries, it would seem that every State would be able to secure at least one inspector by the passage of a suitable law.

The Hive-Tool that suits best at Medina is a putty-knife, says the editor of Gleanings in Bee-Culture, while Dr. Miller says the Muench tool is away ahead of any other tool he has ever tried. Its broad semi-circular blade is easily wedged in under cover or super without marring the wood, and the other end is so constructed that a slight twist forces the frames apart with the exertion of very little strength.

Red Clover Honey.—A conversation is reported in Gleanings in Bee-Culture which is supposedly based on fact, from which it appears that a neighbor of G. M. Doolittle’s, living two miles distant, finds red clover perfectly fit for brood for the first time in 15 or 20 years, and his black bees are not to be seen on it at all, while Mr. Doolittle’s yellow bees are just swarming on it. From some colonies Mr. Doolittle took as high as 80 one-pound sections of red-clover honey, while the average yield was not far from 65 sections. The likening came, and made the total average from colonies not interfered with by queen-rearing about 145 sections, the highest average he has had except in 1877. It would be just like him to say that he now places a higher value on long tongues than he did.

A Special Enencoragement in Queen-Rearing lies close neighbor to the discouraging fact that we have little or no control of the drones. In order to stimulate to greater effort, it may be well to bring out with some minuteness wherein this encouragement lies. While it is true that drones from neighboring apiaries may meet our young queens, yet where one has a hundred colonies or more, especially if neighboring bees be few, the predominance in numbers of the drones in the home apiary makes the chance fair for some degree of safety from outside interference.

Let us suppose that we are so situated that outside interference of drones need not be taken into account. Suppose, too, that after close watch and careful record we have found one queen whose workers show marked superiority as honey-gatherers. All the better if the queen be of such age that such superiority has been shown in two or more years. The parents of this queen have had characteristics that made such a combination as to result in an offspring superior to either of the parents. Let us call the drone father of our present queen D1, the queen mother Q1, and designate their drone and queen offspring respectively as D2 and Q2. From our superior queen, Q2, will be reared the present season drones and queens that we will call D3 and Q3, and it will not be a difficult matter before the close of the season to have a Q4 queen in every colony in the apiary. Next season will then open with an apiary headed by Q3 queens, whose workers will be from fathers that vary from each other, hence the workers will be of varying value, none of them perhaps coming up to the mark of the workers of Q2, but taking the apiary as a whole there will be a noticeable improvement.

Now, as to the rearing of queens next season. If our superior queen Q2 is still living, and we are willing to take the risks of inbreeding, we may rear queens from her, or we may obtain a good queen of unrelated blood from elsewhere. In either case, the drones that meet our young queens will be the same, the sons of the Q3 queens, and may properly be called D4. Right in the character of those D4 drones lies our special encouragement. As parthenogenesis prevails among bees, these drones will not be of the same blood as the queen and worker progeny of their mother, but will be of the same blood as the Q3 queens themselves, and consequently of the same blood as the worker progeny of our superior queen Q2. Whatever superiority may have
been shown in the worker progeny of that queen, we have that same superiority in the drones with which the entire apiary is now stocked. Some claim that it is more important to have good drones than good queens, and no one denies that the drone is as important as the queen. So whatever the quality of the queens reared next year, we are in no danger of losing quality.

As already intimated, all this must be discounted by the chance of inferior drones from outside, but after making that discount there is still food for much encouragement in the thought that only superior drones are in our own yard.

The Best Fumigator.—A Stray Straw in Gleanings in Bee-Culture says:

If it is true that bisulphide of carbon will kill moth-eggs as well as larvae, why is it not a long way ahead of sulphur for those who fumigate their sections? Bisulphide can be used for fumigating for the short time of a month or within two weeks, and save the repetition of the fumigation that sulphur requires, also saving them, when there is no longer a danger, fumigation with sulphur.—[If the reports are true, the man who persists in using sulphur in place of bisulphide of carbon is far behind the times. The bisulphide is more thorough, and much less trouble to use. While it is subject to occasional fumigation, it is a danger for some time after应用, the burning of sulphur, even in an iron kettle, also has its danger.—Editor.]

But even bisulphide of carbon may have to give way to gasoline, according to J. B. Rapp, who says in the same periodical:

I have just made an important discovery, to me at least; that is, that gasoline is as effective in killing moth-worms in bee-combs as bisulphide of carbon, and it does not cost a twelfth as much. My plan is to fill a tight box or barrel with combs, then pour in a pint of gasoline; close up tight for 24 or 36 hours, and the work is done. Gasoline beats sulphur far away, and is much easier used. If used correctly, hundreds of Langstroth combs, and have no trouble with worms. As I think the gasoline kills the eggs as well as the worms.

The editor adds that he knows gasoline can be used in place of the more expensive drug to destroy ants, but it takes a larger quantity.

The Production of Beeswax.—Mr. Harry Howe thinks there may be profit in producing wax instead of honey in Cuba. He says in Gleanings in Bee-Culture that in the olden time many spicies were run entirely for wax, the honey being thrown away. At present wax brings 9 times as much as honey in Cuba, and the conditions are peculiarly favorable there for the production of wax, the honey-flow being eight months long, with hot enough nights during half that time for secreting wax without waste of heat. He says:

My plan is to cut out the combs instead of extracting the wax, but only half from each hive, extracting the other half so they will at all times have store-corn, and not longer a surplus to be had in the fields, contract the brood-nest and set out honey at one side of the frame. By July 15 they will be set aside, at a glance that both the quotations the American Bee Journal is able to be reliable for this reason—you are quoting one specially! In the trade journal, honey is but one of a great many, and for this reason will not warrant the time and energy of the American Bee Journal in a position to give.

By referring to the instance mentioned in Mr. Wm. Wilts' letter, it will be seen that it comes during the inactive period of the year; while if reference is made to the issue of Sept. 5, it will be seen that the lowest quotation is Aug. 6, and from that to Aug. 22, during which time we venture to assert that there could be no essential change in any market.

We might mention that in our business we have had occasion from time to time to write to different markets when for any reason our market happened to be short of supply, and this invariably found that we were unable to buy at a lower price than prices quoted; thus proving the correctness of the quotations, and certify to the value of the American Bee Journal to our shippers.

Wishing you continued success, we remain, Yours respectfully,

BLAINE, SCOTT & LEE.

We should be pleased to hear from the rest of those who quote the honey and beeswax market for the American Bee Journal. We want to get at the bottom of this matter, and if there is a better way to get at actual market values we desire to know it, and avail ourselves of it. What have the rest of the dealers to say?

GLEANING OF THE WEEK.—Mr. Tucker's son.—The picture on page 434 was taken from the roof of the barn. "The aged lady to the right is Mr. Tucker's mother, and next are his wife and daughter Grace. The young man on the left is his son, and the people in the background are his next-door neighbors. The little boys came in at the eleventh hour, but one can see them by looking closely.

It will be noticed that quite a few of his hives are covers, and he has not put on the lids of his hives. His two gable ends proper are made out of 4x4s, of an inch thick, for the under lid to lie in, leaving 1/4 inch to hook over the end of the hive. The center gable is an inch thick. The top lid projects one inch all the way around, and the tin is turned down over it. There are several layers of thin paper, 1/2 of an inch under the tin. The one-inch air-space and the paper make the cover all right, and it doesn't cost much more than the other kind.

Quoting the Honey Market.—Messrs. Blaie, Scott & Lee, of Boston, write us as follows in response to Mr. Cooley's letter on page 363:

American Bee Journal.—We note with interest the letter of Mr. Stoughton Cooley in the issue of Sept. 5, and as we have had the honor of quoting in the American Bee Journal for several years past, a word from us might not be amiss at this time.

Our method has been invariably to quote from actual sales. During the summer months—the period from May 1 to Sept.—the demand for honey, so far as we could judge that quotations are practically nominal, and although we received quotation cards regularly, yet during this interval, we very frequeently simply state that "the market is without change.

Now the question would seem to arise, Which is the more reliable, quotations given by the commission men from actual sales, or quotations from a trade paper? When it is known that the trade papers in the various centers must depend upon the commission men themselves for quotations, men who are largely engaged in making up the honey, melt the wax which remains; then when they have built their combs nearly down, set them out to be emptied and melted.

I think the improved condition of my bees in the beginning of the next harvest will abut pay for the extra labor; but until it has been tried, no one knows how it will work.
CONVENTION PROCEEDINGS

(Continued from page 660.)

REPORT OF THE TEXAS BEE-KEEPERS' CONVENTION.

BY LOUIS SCHOLL, SEC.

FIRST DAY—AFTERNOON SESSION.

The convention was again called to order by Pres. Sal-ley, at 2:00 p.m., and the first business was the report of the committee on constitution and by-laws. Secretary Scholl read the following, which was unanimously adopted.

CONSTITUTION.

ARTICLE I.—NAME.

This organization shall be known as "The Texas Bee-Keepers' Association."

ARTICLE II.—OBJECTS.

Its objects shall be to promote the interests of bee-keepers; the exchange of thoughts, experiments, etc., in apiculture, through the meetings of this Association; and through a closer relation of its members.

ARTICLE III.—MEMBERSHIP.

SEC. 1. Any white person who is in accord with the objects and the aims of this Association, may become a member upon the payment of $1.00 to the Secretary-Treasurer, payment to be made at or before each annual meeting of the Association; or not later than 10 days thereafter. Membership will continue as long as all dues are paid up.

SEC. 2. Any person may become an honorary member of this Association upon a two-thirds vote of the members present.

ARTICLE IV.—OFFICERS.

SEC. 1. The officers of this Association shall be a President, a Vice-President, and a Secretary who shall be ex-officio Treasurer.

SEC. 2. The officers shall all be elected annually by ballot of the members of this Association at their annual meeting.

ARTICLE V.—DUTIES OF OFFICERS.

SEC. 1. President.—It shall be the duty of the President to preside at the annual meetings of this Association, and to perform such other duties as may be devolved upon him by the Secretary-Treasurer. The President shall be ex-officio Vice-President of the "Texas Farmers' Congress."

SEC. 2. Vice-President.—In the absence of the President, the Vice-President shall perform the duties of President.

SEC. 3. Secretary.—It shall be the duty of the Secretary to keep the records of this Association; to make a report of the annual meetings; to receive membership fees; to make a report at the annual meetings; and perform such other service as the Association may direct.

SEC. 4. The President, Vice-President and Secretary shall form an Executive Committee. Their duties shall be such as usually fall to such officers.

ARTICLE VI.—FUNDS.

SEC. 1. The Secretary shall remit to the General Manager of the National Bee-Keepers' Association, within two weeks after the annual meeting, the sum of 50 cents for each paid-up member, as a membership in the National Bee-Keepers' Association for one year.

SEC. 2. The Secretary shall receive not less than $1.00 annually for his services, and shall receive another sum equal to his legitimate expenses for the benefit of this Association.

SEC. 3. The remaining funds of this Association shall be expended as the members thereof may direct.

ARTICLE VII.—MEETINGS.

This Association shall hold annual meetings at such time and place as the members may select by a two-thirds vote at some regular meeting; but if in any event it becomes impracticable to meet at the place selected, because of unforeseen events, then this Association shall hold its meeting at such time and place as the Executive Committee may select.

ARTICLE VIII.—COMMITTEES.

The President of this Association shall appoint, yearly, the following committees: Resolutions and Petitions; a Program Committee of one; and such other committees as may become necessary.

ARTICLE IX.—GENERAL.

SEC. 1. This Association shall ally itself with the Texas Farmers' Congress in every way possible, provided that such alliance is never detrimental to this Association.

SEC. 2. It shall be one of the aims of this Association to secure the passage of a law establishing an "Experimental Apiary" at College Station, together with the appointment by the Governor of an expert apiculturist, who shall be recommended to him by the Texas Bee-Keepers' Association.

ARTICLE X.—AMENDMENTS.

This Constitution may be amended by a two-thirds vote of the members present at some regular meeting.

The new association now bears the name of "Texas Bee-Keepers' Association," leaving the "North Texas" and "South Texas" associations as "local" bee-keepers' associations. Every Texas bee-keeper ought to be a member of the Texas Bee-Keepers' Association now, as with its new constitution and a new set of officers a great deal of good work can be done if the bee-keepers will only realize that which these men have asked for—the help, assistance and co-operation of the bee-keepers, and with that the Association could make strides forward as never before; only we need to work to help our neighbors, every bee-keeper ought to take pride in helping to build up a State association that will surpass all others, and this can only be done if they will give their assistance. Put your shoulders to the wheel, that is, your dollars into the treasury, paid for your annual membership, and help to keep it going. The greater the association, the more members it has, the more can be done.

Now something about what you get if you want to be a member:

By paying your annual dues of $1.00, you are not only a member of the Texas Bee-Keepers' Association, but 50 cents of this one dollar is sent with all of the other members, to the general manager of the National Bee-Keepers' Association, securing membership with that organization also. Thus one is a member of his State association, and at the same time can enjoy all the benefits of the National Association at just half the regular rate. Of course, it will be well to bear in mind that to do this, members must act according to Article III of the Constitution of this Association, in regard to membership and membership fees.

Besides all this, a reduction has been secured in the subscription prices of our bee-papers, when pay for them is given to the members of this Association along with their annual membership dues.

The Secretary was instructed to write to each member, of the change that has taken place; of the new name of the association; of its new constitution; its new business, objects and intentions; and to notify them of their annual dues of one dollar.

After this the general subjects on the program were again resumed, namely: "Manipulating Bees for a Large Yield of Extracted Honey," by O. P. Hyde, who said the main objects were, to have good, prolific young queens; large hives, not less than ten frames, then tier up as soon as room is needed, three or four stories high, and as soon as filled and well capped over take out the honey. He also touched on the minor points connected with producing large amounts of extracted honey; the above being the main objects.

W. O. Victor read an article he contributed to the Review, which, however, is too lengthy to copy, and the issue is not before me to make a summary.

FORCING QUEENS TO LAY IN CELL-CUPS.

"How Can Queens be Forced to Lay in Queen-Cell Cups?" was answered in a paper by H. H. Hyde. He does not claim to be responsible for being assigned that subject, and hopes nobody will be disappointed if he fails to give satisfactory solution of the question. He has not much experience to prove or disprove this query, but cited a case where he put cell-cups in top-stories of good colonies before grafting, to have them polished by the bees; when he distinctly remembers where in one case the queen laid an egg in such a cell, which was built out and hatched a queen. He said further that by placing cell-cups conveniently in a hive of bees that wish to supersede their queen, such queens could be forced to lay in them. Also at swarm-
ing time, queens can be forced to lay in such cell-cups conveniently placed in the hive; at other times it would not seem to be advisable, and can only be done with difficulty.

Mr. Stachelhausen thinks that it can only be done during swarming-time.

Mr. Atchley told how it could possibly be done, by placing a queen on their drone-board, and where queens are mostly found after their regular season's laying has been at its fullest, when the queens are almost worn out from the hard work of depositing worker-eggs. It is then that they are almost crazy to resort to delectable food. From this it seems that we could do this than that of laying worker-eggs. This is of course, the other cases cited, will be at about swarming-time.

**IMPORTANCE OF GOOD QUEENS.**

A paper from Willie Atchley on this subject was read, in which he said that too much could not be said about queens. Good queens, good bee-keepers, and good localities make bee-keeping a success; and either of these essential characteristics is treacherous when the other is wanting. For this purpose it is extraor-
dinary to see that all apiarists look sharp to the propitiousness of their queens, and the working qualities of their bees. Give him good queens, and a good location, and he will turn out a crop of honey.

Mr. Weaver and others gave some of their experience about good queens, a good locality, good queens, and good management, being a sure road to success. Some told about the difference in queens, some being large and fine looking, but of little use. Others have the abilities of the very smallest, sometimes called "stub" queens, have done wonders. This, however, is not a rule.

**BEARING GOOD QUEENS.**

This was by Mr. G. F. Davison, who gave his modus operandi, which were given at previous meetings of the Central Texas Bee-Keepers' Association.

He recommends the Alley plan he has so long practiced, and with which he has been successful. He lays in favor of the Doolittle plan and method, and although the best queens can be reared by the Alley plan, with the Doolittle method good queens, and more of them, can be obtained.

**MOVING BEES.**

O. P. Hyde has much and varied experience in moving bees, as he moves bees nearly all the time. He has also had some fun connected therewith, on which account he began to study how to find out the best way to move bees, and has been quite successful. To close the entrances, he uses a device (the idea of which he obtained from a bee-keeper who did not know anything about bees, only having a colony or two), which he can close up the entrances of 10 hives in one closed to the ordinary way, by tackling wire-cloth over the entrances. It is simply a piece of tin about two inches wide, with a cleat or piece of board half as wide nailed on the side, to which the wire is fastened. The lower half of the tin is perforated to give ventilation. Now with two 3½ wire nails in the cleat, just tack on the entrances, and it is done.

Next, the cover is nailed down with two more nails, one on each side, into the side-walls of the hive. Two or more story hives are held together by means of strips of lath nailed to the sides of the hive, diagonally across the sides.

In hauling, one should have a wagon-bed wide enough so two hives can be set end to end across the bed, and other time it is most wonderful in regard to the quick growth of honey-yielding and other plants after a heavy rain, the flowers appear most abundantly in a very short time. It is then that they move whole apiaries from dry situations to the fields yielding more. For all this they have wire-wagons, and some 200 regular shipping-

cases with wire-cloth, provided with slotted cleats in which the frames are hung, with all the bees put in, closed up, and the two sides of the box then riveted together. The empty hives are hauled on any other wagon separate from the bees.

Mr. Victor makes large frames by ripping hive-bodies into one piece, and much wire cloth is turned over.

This is nailed over the top of the hives after the covers have been removed. He next sticks moss into the entrances, nails cleats, one on each side of the hive, and they are ready.

H. H. Hyde recommends cleats nailed on diagonally across the entrances, and from their being done, they are recommended to develop the colonies at the right time.

Mr. and other bee-keepers' experience has taught that in their localities they can get their colonies developed to the most possible strength before the main honey-flow commences, for which purpose it is necessary to use different methods in different localities. In most localities this honey-flow is so early that we have to do all we possibly can to develop the colonies at the right time.

**IMPORTANCE OF LARGE BREEDING-SPACE.**

In a paper on this subject L. Stachelhausen said the secret of successful bee-keeping is to have the colonies at their fullest development just when the main honey-flow commences, for which purpose it is necessary to use different methods in different localities. In most localities this honey-flow is so early that we have to do all we possibly can to develop the colonies at the right time.

Mr. and other bee-keepers' experience has taught that in their localities they can get their colonies developed to the most possible strength before the main honey-flow commences. In this way, the beehives can be cut down, and the combs used for the first time in the colonies. For this reason, the bees have to be watched closely all during spring, causing a considerable amount of work, limiting the number of colonies that can keep, especially if scattered in different apiaries.

If in large brood-chambers, with a large amount of comb-surface, all this work is unnecessary, because the development of the colony is carried on, showing at once the advantage of such large brood-chambers. More colonies can be kept with the same amount of work; and even if the honey crop per colony should be smaller, which is doubtful, as by other management, the profit of the whole apiary will be larger. To get strong colonies in the spring, in such hives, it is necessary always to have enough honey in the hive, but not too much, with sufficient number of empty cells, or always enough more than the bees need at a given time.

Another advantage of large brood-chambers is that swarming is reduced to a minimum, especially so if the bees are kept in large hives during several generations. In this way the concentration of the colonies is great, so much so that in certain localities swarming can be practically prevented by the use of large hives, while in other localities the number of swarms is reduced very much, and, to prevent these few swarms, other ways can easily be executed.

Nobody disputes these advantages of large brood-chambers in early spring, but some say that they have disadvantages during the main honey-flow. It would seem to be a question worth asking. Why should the bees be prevented as long as they are advantageous, and afterwards contract the brood-nest as soon as possible? But this objection can not be overcome by this simple way.

1st. One objection is, when producing extracted honey, and having an extensive field of work, the flow of honey, the brood-nest will be contracted by the honey which the bees store around the brood. Contrary, in a moderate honey-flow, it is said, that the bees will use the large space extensively, and will store very much honey at the end of the flow leaving a strong colony of useless
Contributed Articles.

Bee-Diseases in California—Laws Needed.

By HON. J. M. HAMBEUGH.

A LL is not gold that glitters, but every cloud has its silver lining. This is more especially true of our chosen pursuit of bee-keeping here in California, and among the many clouds that hang about the bee-keepers’ horizon is that of bee-diseases.

Here, in this salubrious clime, where every month in the year, and almost every day in the year, bees are on the wing in quest of pollen and nectar, opens opportunity for the spread of infectious diseases, and this, coupled with the wild waste of rocky cliffs, canyons, and wooded districts, furnishes hiding-places for bees, that can wreak and fester in diseases un molested. It is hard for the wide-awake bee-keeper to overcome these dangers beyond his reach, but there is a danger of far greater magnitude right at his very door, that he needs to recognize, and which needs a cure, in the shape of a little more insistent legislation.

Here is Mr. A., a practical bee-keeper, with all his combns throughout his entire apiary movable and accessible at any time for inspection, and in appropriate condition to battle against any disease that may arise. Mr. B., his next door neighbor, is of the slipshod, go as you please school, has combns in the brood-chamber, and the consequence is, he is locking the door against all knowledge or treatments for comb diseases, both internal and external, and is also in shape to be (as it were) hugging an adder to receive its fatal sting, and also to dispense its venom among his neighbors. When there is such a deadly foe as foul brood abroad in the land, these inaccessible hives are a veritable death-trap, and, so far as inspectors are concerned, they are simply barren from investigation, save what the exterior may reveal.

In our route through the country these troubles are so manifest, and there is such a universal cry against their persistence, that it seems to me a very easy matter to have a law placed upon our statutes, compelling every one who keeps bees to have them upon movable combns, built in movable frames, and, by so doing, minimize the chances for comb diseases, and if not drive them entirely out of the soil, also in shape to be (as it were) hugging an adder to receive its fatal sting, and also to dispense its venom among his neighbors. When there is such a deadly foe as foul brood abroad in the land, these inaccessible hives are a veritable death-trap, and, so far as inspectors are concerned, they are simply barren from investigation, save what the exterior may reveal.

We also believe that a little further protection is needed to the bee-keeper, by statute enactment, and that is, when a bee-keeper contemplates moving from one location to another, he should have a certificate from a lawfully appointed inspector, the said certificate to be an assurance that each and every colony is free from all infectious or contagious disease, otherwise let it be a final offense to remove them from their old location.

Now, Editor York, I have sounded the warning bell, and if others interested, and see which one of the sister States will be the first to start this good and much-needed reform.

Robbing in the Apiary—Honey-Packages.

By C. DAVENPORT.

I WOULD like to be allowed to say a few more words in regard to robbing. Last year I wrote an article in which I gave some of my experience in regard to bees robbing, and afterwards in some comments that were made about it, it was said, in effect, that the advice I gave on the subject was given without a hinting at those who were using the honey under such conditions as to scatter live coals among dry straw. But this is a mistake, for I did not advise any one to practice my methods; in fact, I remember that I plainly said that I did not advise any one to follow my practices. I only gave my experience in regard to the matter; but what I wish to say is that, in my opinion, it
will some time be known, and generally recognized by bee-keepers, that a colony of bees of average strength (and, I feel sure, without exception, quite weak colonies if in normal condition) are never, as the saying is, “cleaned out by the robbers,” or never molested by them enough to injure them materially in any way, no matter what has been done to induce robbing, or what the natural provocation to the same may be, excepting the usual raids by the robbers.

I have watched this matter very closely the last ten years, and, besides, from two different incidents I have witnessed, I know that a colony of average strength will, before succumbing to robbers, make such a fight as few would have imagined. Generally in these incidents may be of enough interest for me to take space to describe briefly.

It occurred in an out yard during a time of great scarcity. Some of the bees had long been starved, and the colony was being robbed; after much fighting, the robbers were defeated, though not without loss. I have never been able to get any kind of a barrel that would hold honey in a warm, dry room without leaking. Even when I coated the inside a quarter of an inch thick with wax or paraffine it would not prevent them from the allowing the honey to ooze out between the staves. My failure in this line was not because these barrels were not dry enough; I have kept both those made from hard and soft wood in a dry, warm room for two years, and then after driving the hoops as tight as could possibly be done, they would soon commence to leak after honey was put in them. I have not only tried different kinds, but a year ago last fall I had three large ones made to order, which were warranted not to leak.

We have, however, made what might be called success of sucking up evaporated honey from the same as old wheat or other grain. Last fall at one time I had about 1000 pounds sucked up. Possibly in the future extracted honey may be shipped in sacks instead of cans or barrels.

The way I came to put honey in sacks was this: The three empty barrels mentioned, which held about 500 pounds each, got to leaking soon after being filled—two of them badly. I had nothing on hand to put much of the honey into, but I had observed when using the no-drip shipping cases that if a section become broken or the wax honey ran down on the manilla paper tray in the bottom of the case, this paper seemed to hold it as well as a tin tray would; and I noticed, at the place where I board, a number of empty flour sacks which had been purchased. I found they had a large number of these flour sacks in the accumulation of years. The paper they were made of was very much heavier and tougher than that used in shipping cases, and, being glazed or smooth like the latter, it was slightly rough or porous looking. I took a couple of these sacks and thoroughly coated the insides with beeswax, and filled them with honey. They held it all right, and soon afterwards enough sacks were waxed to hold the three hundred and ninety-five pounds contained.

The honey remained in some of the sacks nearly a month, and no leakage whatever occurred, except with one sack, and this was owing to a defect in the sack.

My method of waxing the inside was to pour a large quantity of melted wax in a sack, then with one hand gather up the points of the sack, and with the other hand take hold of the bottom at one corner, so as to turn it bottom side up and around in such a way that the wax would reach and coat all parts of the inside. This had to be done quickly, or a good deal of wax would adhere to a sack. It took considerable to wax them, anyway, but the honey was taken out, the sacks were cut up and boiled in water, by this means getting all the wax back again.

My success with these large sacks led me later to try small sacks for the retail trade. A good many who come to the house for a few pounds of honey never bring anything to put it in; few of them will buy a pail or jar, and if I lend them a dish to carry it in all of them will readily agree to return it and thus never do give. I have many customers in town to whom I carry a few pounds of extracted honey, and in this case I either have to wait for them to empty the dish I carry in, or else call for it again; when, if there is any one at home, we may perhaps find it has been filled with something else. For instance, last season one lady ordered three pounds; I had nothing smaller than a gallon jar on hand, so I delivered it in that. When I called for the jar, some time afterward, it was full of butter. She said she had forgotten I had lent her a honey jar.

So far as I could determine, the results of this experiment last season lead me to believe that I can reach this class of customers with a package that will go with the honey, for it will cost only about half a cent aside from some service in preparing it, which can be done during the leisure time in winter: a package that will give satisfaction to the customer, and be practically as safe to carry or deliver the honey in as one made of tin.

Southern Minnesota.

The Season of 1901, Suggestions, Etc.

BY A. BOOKE.

As the American Bee Journal is anxious to have reports from Bee-keepers, as well as any suggestions they may be able to make as a result of experience in the management of bees, I send my report of the season, as well as one or two suggestions that may be of use to beginners.

No Harm in Reporting Large Honey Crops.

My honey crop has been a very good one, but if I tell what it is, down may go the honey market. Pshaw, all rot! About the close of the season, which has been a fairly good one for me, I received some suggestions from the papers, made some enquiries for use in the weekly report. A statement was given which appeared in the next week’s issue, that Mr. So-and-So’s honey crop would likely be 5000 pounds, from some other colony. But in the next report in the paper appeared, the demand for my honey has been so great that I could sell ten times the quantity I have, and at better prices than I have formerly realized. Since the said report was given, I have been about finishing extracting, and find the quantity to be fully 10,000 pounds, and I am pleased to find that most of the colonies have a fair supply for winter, so that very little feeding will have to be done. A considerable number of the colonies, I find, are but superseding.

Having all the bees I was able to take care of, and had room for, I discouraged swarming, and have only an increase of about 25 percent. I have not practiced queen-clipping, but, having no help this year, I was unable to do so. I so close a watch upon them as is necessary when the queen’s wings are not clipped, and as a result I lost several swarms.

Next season I will try what clipping will do to prevent this.

Building Up Weak Colonies.

I notice that several correspondents are troubled to know how to build up weak colonies in the spring, or, in fact, at any time of the year. I have practiced changing positions of the wax with the colonies for many years, with very good results. I suggest doing this on a fine day, when the bees are either gathering pollen or honey—say about noon—and if I have a colony becoming very strong, and I do not want increases when returning the bees to the colony in the way suggested, and the chances are that swarming may be averted, and your colonies all averaged up and ready for the honey harvest.

I have a very weak late swarm of nice bees, that I wanted to retain, but they were entirely too weak to build up. I changed positions with a strong colony a few days before the honey-flow ceased, with the most satisfactory results—no fighting, nor any disturbance that I could notice.

Cross Bees—the “Joucing” Method.

My bees were unusually cross this year, there being only a day or two at the close of the basswood flow that I could extract without a veil, and mostly had to use gloves in addition to being well protected. I have tried the “joucing” method of getting the bees off.
The frames, recommended by Mr. Davenport, but while it may work with nearly empty frames, or the shallow Heddon frame, I am satisfied it will not do with any large-sized, well-filled frames.

**NO USE FOR BEE-ESCAPES.**

I have also tried bee-escapes, but have given them up as practically worthless. I have no time to fool away with them.

The honey-flow exceeding my expectations, I had to defer extracting for want of tins to put it in, and so tried bee-escapes, but, being alone, I found it about as much trouble, and got about as many stings getting the bee-escapes adjusted, as I did in getting out the combs without them. My plan was to start after noon, give the bees a good smoking, take out the frames quickly, and run them into the extracting room, and stack them up three and four deep, until I had 10 or 12 in; then extract these. In the meantime the bees would get somewhat quieted down in the yard, and I would then get off a few more. Any bees that would go in on the combs would soon find their way to the windows, and go out of the escapes.

The season being unusually dry, the honey is of very fine quality, and sells readily in small quantities at 10 cents. Latterly we have had abundant rains, and the bees are breeding freely, which augurs well for good wintering.

"HIVING TWO SWARMS IN ONE HIVE."

On page 581, Mr. Davenport says he has had no trouble from hiving two swarms together when both issue at or about the same time. In July last, when I had a large swarm nicely hived, but before I could remove it, a large swarm issued, and there being a cluster of bees on the front of this hive, it came down and went in with them. I at once put on a queen-excluder and two cases of sections with mostly drawn comb, to give them room. On the 5th day after, one of the swarms came completely away, and clustered on a limb of the tree exactly where the first swarm had clustered, which led me to believe that it was the first swarm that had left the hive, as the others never clustered at all. The time between the issuing of the two swarms at first was not more than 15 minutes.

My experience thus far leads me to conclude that bees do not do everything by rule, and we may always expect them to do something we never knew them to do before.

Ontario, Canada.

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**The Afterthought.**

The "Old Reliable" seen through New and Unreliable Glasses.

*By E. E. HASTY,* Sta. B Rural, Toledo, O.

**THE TWO-HIVE FEEDING PLAN.**

Yes, Mr. Fargo's two-hive feeding seems to offer fine possibilities. But first we must find out whether it will work as a regular thing, or only in exceptional cases. If the open-topped screen-yard we had up a bit ago will work that will be pre-eminently the way to feed. Apparently the two ways will combine kindly. I think that one grand trouble about prolonged feeding in the home hive is that bees declare it annexed, and decide to let it be needed. So be the danger of the same thing in the two-hive method. In the open air a salutary fact that somebody else may get it will keep all but the very lastest pegging away. Page 531.

**BLACK COMBS DISCOLORING HONEY.**

I agree heartily that black combs will discolor the inclosed honey somewhat; yet I fear that the attempts to soak them clean are entirely unpractical. The situation is this: Many layers of dried dirt, separated by many exceedingly thin layers of silk or wax. The best we can do is to keep the whole thing dry. The first soaking removes part of an outer layer, and makes the whole wet and nasty. With each successive soaking more and always more will be coming "from away back." Ram a two-quart can one-fourth full of dirty ham-salad-nachos (such as are found in a bee-keeper's trouser's pocket at the end of a hot week); fasten them down so they can not be moved about; and how long ere the bottom layer will be cleaned by turning water in and out the top? Page 581.

**HIVING TWO SWARMS TOGETHER.**

To C. Davenport, page 584, I would say that my experience with voluntarily hiving two swarms together is not large, because I usually do it when I can; but they get together in spite of me pretty often; and my troubles with balled queens when swarms are mixed are by no means imaginary. Quite willing to let his many successes have their due weight — and also quite glad to have so sound a veteran to fall back upon as Dr. Gallup, page 582:

"If you have two or more swarms come out at one time and cluster together, or if you have after or second swarms with more queens than one and you wish to separate them, shake them into the clustering box and let them stay for half or three-quarters of an hour, and the bees will ball the surplus queens, and roll down to the lower edge of the box."

I note that Dr. Gallup says, "Sometimes they ball every queen, but not usually." I think that with me balling every queen is rather the rule than the exception, if the swarm is a mixed one. Why this difference? His experience, I think, has been mostly in fat locations, where bees seldom swarm except during honey-flow. My experience has been in a lean location, where bees often swarm in time of dearth. As I see things, bees carrying little or no honey are not sure to be cross to their 'keeper, but pretty sure to be severe on stranger queens. In a mixed swarm all the queens are stranger queens to thousands of the workers, and if they balled some of them, and did not ball all of them, it would be a curious fact calling for explanation.

I listened to see that Dr. Gallup has had experience in making a colony into an impromptu swarm clustered in a box for the purpose of moving their location a short distance. Have wondered whether that would work. He finds that it does.

**HARD TO DESTROY ALL DRONE-BROOD.**

I smiled when J. D. Gehring said that he found destroying all drone-brood harder than he expected, and that unforeseen things happened. Been there. My wife is frequently heard to say, don't you be too sure you can destroy all drone-brood — not even by the excellent Doolittle plans on opposite page. Page 583.

**SHOWING MERCY TOWARD ANIMALS.**

Prof. Cook, on page 567, did not pass on from mercy toward animals to mercy toward bees; but there is room for quite a sermon on that point. This paper surely goes to many readers who want to do just right in the little things of life. I have often felt it a difficult problem to decide just when a bees' little life ought to be spared (at appreciable expense of time, which means money), and just when the prompt sacrificing of the little life is the real right thing to do. I have also wondered about the would-be rookers and stingers, how much less claim they have upon our mercy than the unseen insect men of the hive. I rather think that the insect door-keeper, doing duty promptly and well, should be a subject of admiration to a reflective and right-minded man — and that the sentence, "If stung me," ought not to be in such large vocal type as it is often put. Per contra, there gets allotted at times a considerable amount of sentimental nonsense and unwisdom, which would faint make us more careful of insect life than the Creator is himself, and which would make apiculture impossible before we got to its logical conclusions.

Our Wood Binder (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of $1.00 for your Bee Journal subscription a full year in advance, we will mail you a Wood Binder free — if you will mention it.
**The Home Circle.**

Conducted by Prof. A. J. Cook, Claremont, Calif.

OUR VENICE.

Time and money spent in welding all the home influences and attractions and loves and sympathies, are well spent. A year ago I was driven along the “Mountain Boulevard” which leads from Santa Barbara to charming Montecito. This drive of nine or ten miles is one of exceeding beauty, it seems to me of incomparable beauty. As we sped along looking now upon the beautiful ocean, now skirting some beetling cliff, now plunging into some bower of green that seemed to blot out all else for a moment, I heard over, “Oh, that the others of the home were here!” I said, “Before a year goes by, they shall, with me, enjoy this bit of Nature’s finest tracery.”

The year has been a brighter, happier, better one, as the memory of the charming landscape has given added charm to my life, and as the prospect of all of us of our home circle making that beautiful circuit together has been ever before me, I have been in a sort of perpetual sight seeing with the desire to see it all through the year through. But the far summit of this pleasurable experience was only reached when last Saturday we all actually enjoyed together that wonderful bit of landscape. It was a red letter day in our family.

Santa Barbara has been called the Venice of America. We have never looked upon Italian landscape, but to me it suffers from no wrong in the figure. While there is not the thrill and wondrous beauty in its entirety that we so much prize and admire in Redlands, yet here one of the finest hues of the world’s incomparable charm is before us. Many beautiful homes attract us as no other section of California can or does. I have never seen such a wealth of adornment in shrubs, trees and flowers, as this section has to offer. As I come home from each year—and I never pass them by—I feel that I have a real ownership in them. The graceful eucalyptus, the incomparable bamboo, the delicate exotic tree-ferns, and countless other vines, shrubs and trees, fill one with delight and admiration.

Montecito, the wonderful suburb, has some of the finest homes and the best adored residences to be seen anywhere. As one drives along among the hills, shaded by live-oaks, he is ever and anon coming to a place where wealth, taste and Nature have combined in the most incomparable charm before us. Many beautiful homes attract us as no other section of California can or does. I have never seen such a wealth of adornment in shrubs, trees and flowers, as this section has to offer. As I come home from each year—and I never pass them by—I feel that I have a real ownership in them. The graceful eucalyptus, the incomparable bamboo, the delicate exotic tree-ferns, and countless other vines, shrubs and trees, fill one with delight and admiration.

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The ANTI-LION.

A queer insect! What strong, sharp jaws! What a fierce, daring temper! A very rat-terrier among its kind. A unique home is his. He always dwells in the loose, shining sand. Above him is only space, for he rests at the very bottom of a funnel in the friable earth. His threatening jaws are alone visible; for all else is covered by the sand. Above him the side walls of his funnel are so steep that even the quick, wary ant passes its margin at its peril. Once our eager, daring, fearless ant-lion feels the tell-tale, falling sand, and he knows that another victim has had the temerity to brave the lion in his lair. He at once throws a harsh shower of sand, which surely brings the intruder down to the very jaws of death. No sooner has he the luckless wanderer in his merciless jaws than the latter is shaken as never a rat-terrier shakes his prey, until the poor victim has daylight and life shaken from him. Thus these ant-lions are our good friends, for they take their own meals from insects that would else feed on our fruit.

Shepherd’s begonias, they are in the not distant garden of her neighbor, Mrs. Gould. The whole world is enriched by the fond efforts of these two women. We have rarer, richest beauty that else we should not have known, for they would not have been.

Again, two women have done this beneficent work. We expect new, rich, rare developments from men. We have not usually found our grand women stepping to the front in such realms. We glory all the more when such strides are taken. I wish every home in the land could enjoy Mrs. Shepherd’s begonias, and every household know more of God and pleasure because Mrs. Gould’s petaunias were daily companions. I know of one home that is so blessed, and its inmates are very grateful.

HOME FLOWERS.

I know of an orange orchard, ten acres, which recently sold for $12,000. I thought it a great price, and so asked the recent owner how he was so fortunate in his sale. He replied: “My roses and palms did it.” His entire place is skirted by great fountains of green in the magnificent Phoenix palms, and alternating with these are most lovely roses, which grow and bloom as only California roses can do. Why can not every home rejoice in such loveliness?

I know that next to wife and the dear children, nothing so weds us to home as the flowers. I heard a lecturer say, a day or two since, that it was his business a few years ago to visit all the homes of a certain region. He said he found the home yard and porch the most certain index to the refinement and courtesy that would greet him in the home. He said he fancied that even the dogs in the flower-placed homes were more kindly in their reception. I believe it. Flowers beget a kindly, genial spirit, and every dog even is quick to feel and sure to be mellowed by such spirit. Were the flowers to be taken from our house, porch and yard, we would all wish to go with them.
Questions on Breeding of Bees.

1. In selecting queen and drone mothers, what is the most important part to look to, to improve the stock?

2. Why do the most of queens produce drones not uniformly marked? And some queens will produce uniformly marked drones. Does it denote impurity with those that do not produce uniformly marked drones?

3. Do you think it best to have the queen mother and the drone mother of no kin? or does it make any difference if they are closely related?

4. Are there queens from a queen that is mislaid, but reared from a pure mother?

South Carolina.

Answers.—1. In either case the important thing for practical purposes is to have mothers whose worker progeny show good results in the harvests gathered. All the better if of pure-established blood, but in any case the workers should be good honey-gatherers.

2. I don’t know why. I hardly think that a difference in the appearance of drones is a sure proof of impurity.

3. Other things being equal, it is decidedly better that there should be no relations, but improvements and advanced strains make some of their greatest triumphs through using closely related blood, because it is easier to find the same characteristics in two animals nearly related; but while it is easier to perpetuate good qualities through close relationship, it is also easier—perhaps I ought to say, it is still easier—to perpetuate bad qualities through close relationships. On the whole, I believe it is a pretty safe thing for bee-keepers like you and me to let close brothers alone.

4. If I should be obliged to answer that question in a single word, I should say yes, and for all practical purposes that is the right answer. But if you draw the matter very fine, it will be true that when a drone is the offspring of her own blood may to a slight degree be affected by the blood of her offspring, and hence the drone offspring may be slightly affected. Dzierzon, however, always counted that the mating of the queen had no effect upon her male offspring.

Several Queen Questions.

1. I have been working a few colonies of bees for six years. I now have 30 colonies, and this season I have been more successful than ever. After all their actions. In the place, my text books and papers teach me that with the sealing of the first queen-cell the old queen will issue with a swarm; but I have had several instances this summer where it failed to be true, after watching them for several days, after the cells were sealed, for swarms. I either killed or caged the old queen and destroyed all but one cell. What was the cause of their acting so? Was it a case of intended supersede? If so, how am I to tell which is intended to swarm or supersede?

2. The queen of one of my best colonies disappeared, and they swarmed with a very small virgin queen. My wife caught her, but she got away and the swarm returned to the old hive, 3 days after. At 5 o’clock p.m. this morning I looked through the colony and found a very fine virgin queen, and several capped cells, so I closed the hive and watched for a swarm. The queen kept peeping off and on, all day, but no swarm issued, and after watching for two days I opened the hive again and found the fine queen gone, and a small one in her place, and cells all destroyed. What was the cause?

3. I had several colonies in normal condition, that sealed queen-cells without anything in them; or, at least, after waiting beyond the required time I opened them and found them empty.

I received a premium queen and tried to follow directions carefully, but after eating the pasteboard off and part of the candy, they quit and kept clustered very tightly over the cage. After waiting three days I smoked them and turned the queen loose, but they balled her immediately. If re-caged the queen with them and put in a spot where there is a brood and女王strength, put over a strong colony, with a flour-sack between, for several days. I kept her caged with her attendants for a day, then turned her loose, and after two or three days set the hive on a stand by itself, and opened the entrance; but the next time I opened the hive she was gone. Now, what became of her? She acted like a virgin.

Nebraska.

Answers.—1. "Bees do nothing invariably," and there are exceptions to all rules. It is impossible to say whether queen-cells are intended for swarming or superseding by the appearance of the cells, but you can generally make a pretty good guess from attendant circumstances. If you find only two or three cells, you are pretty safe in guessing that swarming is not intended. If the cells are advanced, or the first begun for swarming there may be only one or two. If 8, 10, or more cells are started, you may feel pretty sure that swarming is in contemplation. The time when cells are found will help you to form a guess. Early in October the bees are issuing every day or so, the presence of queen-cells points pretty strongly toward swarming; when the honey-flow is about over, they point toward supersede.

2. A little hard to say. It is just possible that the small queen you saw was one that you had previously seen; sometimes a queen just out of the cell looks quite different in size and color from what she does later. But it may be that the bees concluded not to swarm, and allowed all the queens to emerge, or to be destroyed. The piping of a queen is usually an indication of a forthcoming swarm, but not always. To be a reliable indication of a swarm, there must be the piping of the free queen and the quaking of the young queen or queens still in the cell. Young queens quaking the day before or out of a cell in the hive, and a young queen may quark before emerging without the piping of another queen.

3. Are you sure that nothing had been in the cells? It is a common thing for bees to fasten the cap on again after the young queen has emerged, and sometimes they play a practical joke on a worker that happens to be in a cell from which a virgin has emerged, by fastening the worker in the cell.

It is possible that in some way the colony had a virgin queen—one might fly into the hive without your knowledge, or a queen-cell may have escaped detection—and so there was an unconquerable hostility to the stranger, which would be in a less favorable condition for acceptance through the journey in the mail and the propolis post office. Such a queen may look very like a virgin, and then after commencing to lay become as large as she was before maling. The probability is that the bees killed and dragged her out.

Dividing Colonies in Double Hives.

I have three double colonies. Would you recommend giving the top chambers a queen, and putting it where the bottom number is? Or simply placing the bottom and new stand? Or what is your plan?

Indiana.

Answer.—In this case the supposition is that a colony in two stories is sufficiently strong to be divided. As to the best procedure, conditions must be consulted. The plan you suggest is all right if the upper story is weaker in brood and bees than the lower story, or if the stronger of the two stories, giving it the new queen, putting the stronger story with the old queen on the new stand. If the desire be to have the two colonies more nearly equal in strength a story or two early in the season, when swarming is possible, you might make the division at a time of day when most of the bees were in the hive, and put the stronger half on the new stand with the old queen, fastening the bees in the removed hive for a time, perhaps till the middle of the next forenoon, and carefully guarding against accident. Of course the new queen must be caged as a newly introduced queen. But it’s pretty late in the season to talk about dividing now.
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144 & 146 Erie Street, CHICAGO, ILL.
A Good Yield of Honey.

I have a small apiary of 37 colonies, I started with two a few years ago. Some seasons they have done fairly well, and in other producing but a very little comb honey.

This has been the best season that we have had in the last section. The two years previous to this there were very light flows of honey, and during this time many beekeepers lost most of half of their hives, most of the loss being due to broods before being noticed the hive would be literally filled with large white larvae, that would consume the honey, and even the comb. But, as I said before, this has been a fairly good season in this respect and I have taken from one colony 346 pounds of nice section honey, well filled and capped; besides 10 pounds in sections that were filled and capped at a time of 350 pounds. I would like to ask if this is not the best record that you have ever heard of from one colony; although our colonies are much smaller than the California, the honey is winter, and the seasons longer, they may beat this.

—JOHN LENNET.


[Yours is certainly a good yield of honey, but we believe Mr. Doolittle once secured 560 pounds of comb honey from one colony in one season.—Editor.]

A Hive Roof and Shade.

Bees did well here until about July 1. July and August were so dry that they consumed a great deal more than they gathered during those two months. They gathered scarcely any pollen from the corn, which is generally a good pollen producer.

I will give a description of a roof for a beehive that I am using, and like it very much. Take hard, hard balsam that has been prospected, and put it in two or three pieces, and put them over the hive. I am not suggesting that the balsam will make the bees, but just to make them move in different directions. In use one at each end croswise of the hive to the other state or on down, making the bees crack, are nailed on a stake. It is light and handy, and will turn the rain as well as the sun. I have found this a lido or top for a hive, but a roof to turn the water and sun.

—HARRY S. HARBOLT.

Clark Co., Ind., Sept. 9.

"Making" Natural Swarms.

In answer to Mr. Hasy's "Not wise to hold the thing as an experiment until many have tried, others, and some have not." I have four swarms, knew of two or three going off, got one out of the rooks, so that I closed the season with 66 colonies; 6 or 4, however, have bee hives, and did good, either in honey or brood-rearing, for causes that are now remedied, but at the time I did not know what to do in the great cases. The rest were all very large, strong colonies, 2, 3 and 4 stories full of bees from top to bottom. Mr. Doolittle says: Varroa and artificial swarming, in Gleamings in Bee Culture, and I determined to try it on some of the small colonies, before the main flow was all over, and just about the time I made my last extracting the latter part of July, I used this Swa. It will not add all you say it will." Catalog and price-list free.

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Golden Honey-Plant.
I send a honey-plant which I desire named. There is much of it growing here on the bottom lands, and it is the greatest honey-plant we have in this part of the country. The nectar flows in it for about one month. It grows about 4 to 6 feet high. The honey from it has a yellow cast.

Our bees did no good this year in storing surplus honey.

J. L. BADER.
Coffee Co., Kau, Sept. 20.

The plant in question is the famous Golden honey-plant—Actinomeris squarrosa—and belongs to the great Composite family. It grows tall and branching in rich, loamy soil, and is a boon to the apiarist. Prof. Cook, in the "Bee-Keeper's Guide," page 301, mentions the plant as possessing a great attraction for bees. Many other composite flowers are good honey-producers, such as the bonnet, aster, goldenrod, etc.—C. L. Walton.]

Honey-Dew on the Hickory Leaves.

EDITOR YORK—I send some shellbark hickory leaves for your inspection. They were plucked at 11 o'clock a.m., covered with honey-dew ( ). For weeks the hickory leaves have been covered mornings with this stuff, sometimes so thick it would run down and fall in big drops. The bees gather it industriously. Toward noon it dries up considerably, but I have some leaves on my desk that...

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MARKET QUOTATIONS.

CHICAGO, Sept. 15.—No. 1 white honey is worth $1.50 per pound, with occasional lighter prices. Little more is being offered for fawry, which does not grade No. 1. Selling at from 1.00c to 1.60c; light amber, 55c to 70c; dark amber, 85c to 1.10c; and all grades of white; some fancy white clover and balsamwood bringing 3c. Honey from Ohio, ranging from 50c to 70c; dark at 55c. Beeswax firm at 280c.

R. A. BURNETT & CO.
CINCINNATI, Aug. 10.—The honey market is rather dull as of late. Honey is selling at from 1.00c to 1.50c, and Beeswax hogsheads from 1.35c to 1.50c.

C. W. WEBER.
BOSTON, Sept. 27.—We quote our market as follows: Fancy white in carons, 16c; No. 1, 15c; No. 1, 14c. Extracted, white, 95c; light amber, 8c; dark amber, 65c.

BLAKE, SCOTT & LEE.
ALABAMA, Sept. 19.—We quote: Fancy white, 16c; No. 1, 15c; No. 2, 15c; 4 lb. backwheat or amber, 12.5c. Extracted, white, 76c; light, 65c to 75c; dark, 50c. Beeswax, 26c to 28c.

OMAHA, Aug. 8.—New honey is arriving by express in small quantities from Iowa and Colorado, and selling at $1.50 per case in a return carton. California extracted honey is being offered carlots at 45c to 55c per pound, f.o.b. California. Shipping charges are paid on small lots of any sales having been made thus far. The production of extracted honey from the clover this year is large this year in Colorado, Utah and California.

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NEW YORK, Sept. 10.—Comn honey is now being brought to us for receipt at our warehouse, and is selling at 35c to 45c per pound, f.o.b. New York.

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DETROIT, Aug. 12.—Fancy white honey, 15c; No. 1, 14c; No. 2, 14c. Extracted, white, 60c; Beeswax, 26c to 28c.

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BUFFALO, Aug. 16.—Quite a good demand for fancy honey, 15c; No. 1, 14c; No. 2, 13c. Fancy white, 11c; old neglected. Adverse moderate shipments only of new as yet.

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SAN FRANCISCO, Sept. 4.—White comn, 10c to 12c; amber, 55c to 65c; dark, 65c to 70c. Extracted, white, 50c to 60c; light amber, 45c; dark amber, 60c. Beeswax, 320c to 350c.

Arrivals and spot offerings are of rather moderate volume, but there is much more on the way, and it is expected that it will all be vigorously placed. To secure liberal wholesale custom, prompt and reasonable prices are offered in favor of bayers. In a small way for especially desirable lots slightly higher figures than are quoted are realizing.

KANSAS CITY, Sept. 14.—Up to the present time only small lots of new honey comn have been received here, the market is rather quiet and will probably remain so until our own honey is available, which will be on the market at the rates heretofore quoted. Inquiries for comn are still coming in, and the firm market is anticipated. Inquiries for ex-

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MARKET QUOTATIONS.

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BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised

The classic in Bee-Culture—Price, $1.25, by mail.

Beeswax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

Please mention Bee Journal when writing.

RED CLOVER QUEENS

BLACK ROCK, N. Y., Sept. 3, 1901.

FRIEND ERNEST,—I will try and tell you what you want to know about that queen. I get her from you in 1899 as a premium with GLEANINGS. I never saw a small colony of bees build up as that one did. In the spring of 1900 they came out in fine shape, wintered perfect. I raised them up in May and gave them 3 frames more so the queen would not want for room. I never saw such a colony of bees as they were in June, and they were actually storing honey when other bees in my yard were starting. No! they were not robbing. I never saw those two best colonies of mine trying to rob. THEY CERTAINLY WORK ON RED CLOVER. This is no guesswork, as I have seen them. As you know, the past two seasons have been very poor, and what honey my bees did get in 1900 candied soon after cold weather set in. I packed this colony in a chaff hive and left them out, thinking that such a strong colony would winter perfect. The snow came on the middle of November, and those poor bees never a fly until the last of March or the first of April. When warm weather at last came I thought they were dead, as they did not seem to be flying much, so I did not pay any attention to them until in June. I noticed they were working a little, so I opened up the hive and found them in the upper story. I took the lower story out and left them in the one body. The queen was laying nicely, and I thought they would make a good colony to winter. Along the last of July I noticed that they needed more room. I gave them a super, 24 boxes, and in a few days they had it full. They have made 72 boxes of as nice honey as you ever saw, and are drawing out some starters now, Sept. 2.

Very truly yours,

Geo. B. Howe.

Prices of Red Clover Queens.

Gleanings in Bee Culture, Price, $1.00.

Gleanings in Bee Culture, Price, $1.25.

Gleanings in Bee Culture, Price, $1.50.

Prices of Red Clover Queens.

Gleanings in Bee Culture, Price, $1.00.

Compiled and corrected in February, 1902. 

THE A. I. ROOT CO., Medina, Ohio.

(UNITED STATES.)

GEORGE W. YORK & CO., 144 & 146 Erie Street, CHICAGO, ILL., are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO.

Send to them for their free Catalogue.
Langstroth on... The Honey-Bee

Revised by Dadant—1900 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroughly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.25, or club it with the American Bee Journal for one year—both for $1.75; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

GEORGE W. YORK & CO.,
144 & 146 Erie Street, • CHICAGO, ILL.

THE Bee-Keeper’s Guide; Or, Manual of the Apiary.
—BY PROF. A. J. COOK.


A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published today. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without THE Bee-KEEPER’S GUIDE.

This 16th and latest edition of Prof. Cook’s magnificent book of 460 pages, is neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting new subscribers for the American Bee Journal.

Given for TWO NEW Subscribers.

The following offer is made TO PRESENT subscribers only, and no premium is also given to the two new subscribers—simply the Bee Journal for one year:

Send us TWO NEW SUBSCRIBERS to the Bee Journal [with $2.00], and we will mail you a copy of Prof. Cook’s book FREE as a premium. Prof. Cook’s book alone sent for $1.25, we will club it with the Bee Journal for a year—both for only $1.75. But surely anybody can get only TWO NEW SUBSCRIBERS to the Bee Journal for a year, and thus get the book as a premium. Let every body try for it. Will YOU have one?

GEORGE W. YORK & CO.,
144 & 146 Erie Street, • CHICAGO, ILL.

The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.

HOWARD M. MELBEE,
HONEYVILLE, O.

[This cut is the Full Size of the Knife.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring steel; and the flint of the handle described above. It will last a last time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the “Novelty” is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the “Novelties,” your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side? The accompanying card gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the “Novelty” must be seen to be appreciated.

How to Get this Valuable Knife.—We sent postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal [with $3.00]. We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

GEORGE W. YORK & CO.
St., Chicago, I11.
Bee-keeping in the West Indies is the title of a pamphlet of about 80 pages, issued in August of this year by Mr. D. Morris, Commissioner of Agriculture for the West Indies. It is written by Mr. W. K. Morrison, who was engaged for the purpose of preparing the booklet, after visiting several of the principal islands of the group. Mr. Morrison was formerly connected with the United States Department of Agriculture, and is especially fitted for such an undertaking.

In introducing the pamphlet, Mr. Morris says:

"After a careful study of the circumstances Mr. Morrison is of opinion that the outlook for bee-keeping in the West Indies is very encouraging. At present, with the single exception of Jamaica, a bee-keeping industry can hardly be said to exist. At Grenada, St. Vincent, Barbados and Antigua a few bee-keepers were met with, but in the other islands, as at St. Lucia and Dominica, with an abundant harvest of honey-bearing flowers to be found all the year round, little or no attention has been devoted to bee-keeping."

Mr. Morrison gives hints suited to bee-keeping in the tropics, illustrations of the more important implements required, a list of the principal nectar-yielding flowers of that region, and a calendar of bee-terms.

The hope is expressed that the pamphlet will "serve the objects in view, and that a bee-keeping industry of a thriving and permanent character will before long be established in these islands."

Cuba and Jamaica are foremost in bee-keeping among the islands of the West Indies.

The Honey Crop of 1901 in the United States seems to be a rather uncertain quantity, if we may judge from the reports that we hear from various parts of the land. In view of this condition of honey affairs, we requested Messrs. R. A. Burnett & Co. (whom we regard as the largest wholesale dealers in honey in Chicago), to furnish a statement for publication, giving their honest opinion concerning this very important subject. Here is their response:

CHICAGO, Sept. 27, 1901.

EDITOR OF AMERICAN BEE JOURNAL.

There seems to be unusually conflicting accounts of the honey produced and being produced, in the season of 1901. We are just in receipt of a special circular dated at Medina, Ohio, Sept. 25, entitled, "An Unmitigated Shame; More Monstrous Tales About the Prices on Honey." Inasmuch as this circular is to appear in the next issue of Gleanings in Bee-Culture, we will not quote verbatim therefrom, but in the letter that accompanies this the A. T. Root Co. says:

"We believe that when you know the facts you will be governed accordingly." Now we quite agree with this statement—we certainly believe the facts and all that we seek to know (and we judge it to be the same with other people) is, that we want to be sure we have to be correct all the same.

It is probable, from most reliable information that we get, that the Middle and Eastern States have produced more honey than for seasons past, with the exception of southern Wisconsin and northern Illinois. These localities suffered the most severely of any. The Bee-keepers are still holding about the same quantity of bees, but the amount of honey produced this year is said to be more than ever before produced in the middle west.

The State of Texas has produced more honey than California did in ordinary seasons (10,000 to 12,750 pounds). New York and the New England States have had very good yields; so has Mr. Doc. little, of New York, admits that there has been an abundant flow of honey in his locality, in the Ohio and Indiana States, while in locations not far from those favored ones the yield has been light, thus showing that atmospheric conditions have been not always the same over an entire State.

Furthermore, the producers in the less favored sections, where they have not yet been told of their failure to get a crop, thus carrying the idea to those who were more fortunate that perhaps they had all the honey there was to be had. This has tended to make holders of the favored apiarists, resulting in the honey being held off the market longer than usual, as they naturally expected higher prices even than prevailed last year, which season was the nearest to falling below a sufficient supply of any year in the past fifteen.

The Western States, especially Colorado, Nevada, and Utah, are finding that there is not the demand from the East that has existed for the past two years, and are beginning to get anxious about marketing their honey, in consequence of which the associations are making a broad canvass for a possible outlet at prices somewhat near those obtained last year.

If it is true that the newspapers of the country have been telling that there has been a great honey harvest secured this season, it will result in benefiting the producers more than anything else; for, let the public get the idea that honey is plentiful, good and cheap, and they will call for it as would they not otherwise do; for who amongst us does not feel more inclined to purchase an article when it is good and cheap, rather than when it is scarce and dear? We can see great help, if this be true, and the information is broadly circulated, that there has been an abundant harvest of honey, for people must use more of it this season than ever before if the crop of 1901 is to be marketed before the coming crop of 1902 is due.

We are of the same opinion that prevailing prices are not too high, and that honey will be used freely, unless the people begin to believe that there has not been a good crop, but that it is scarce and dear, as the terms "short crop" or "short yield" implies advanced prices to the average mind; hence they look for a substitute, which, once adopted, takes the place of the article that was scarce, until the time for another harvest.

For the foregoing to advise people what to do with their property, but give it as our opinion, which, when compared with others may enable those having honey to sell to ascertain what are the facts.

Very truly yours, R. A. BURNETT & Co.

It will be noticed that Messrs. Burnett & Co. refer to a circular appearing in Gleanings in Bee-Culture. We have thought it best to copy it, so that our readers may have the advantage of both views. It is as follows:

AN UNMITIGATED SHAME; MORE MONSTROUS TALKS ABOUT THE PRICES ON HONEY.

In our last issue it stated that there had been gross exaggeration as to the honey crop of the United States. At that time the inflation buyers claimed a maximum output of only 500 cars; but now they want to have gone 2,000 cars. As stated, there seems to be a combination which has induced some of the daily papers to circulate false statements. They are now reported to have reduced all the prices (of the best, indeed the very best, the entire crop has not exceeded 500 cars, and this year there is a prospect of a failure, if to add insult to injury, they further state that Honolulu honey is being poured into California, and that the prices last year ruled at $1, cents, are now down to less than half that, and they will probably have to go to 25 cents if to add insult to injury, they further state that Honolulu honey is being poured into California.

Such stories have a strong tendency to unsettle the market; and the animus back of it all is very apparent. The Western "bees" are trying to sell, or, at all events, to improve the crop, because prices, which have been lower than the Eastern market as well. If, for example, there were 2,000 cars in California, and as much more of Honolulu honey, it would be perfectly clear that a large portion of it would have to go East. But no one need be alarmed over the matter. The facts are, I doubt whether 2 cars could be scraped up and sent eastward from California, all told. The large baking concerns have laid in quite a stock—probably all they will require; for when the price was down they snapped up every bargain they could get hold of; but now prices with business heads on them are holding the rest of the crop back.

For the present we have our end being as if we were being men on the Pacific coast to make a careful canvass; and it is very evident that the crop is light in comparison with those of the big years. I do not believe there is an aggregation of responsible producers anywhere in California who would guarantee to
day to deliver more than 25 cars, and as nearly as we can estimate they are holding back the further purchases to the extent of 20 to 25 cars. The price realized at the lower end of the market for this is usually the very season for disposing of honey, and it may take months to correct this

The situation in the East, briefly told, is this: There is actually less comb honey produced, and what there is seems to be of an inferior grade. We have advocated in these columns repeatedly that there is enough to go around, and have mentioned the extracted honey in the East; at least, good comb honey sells all the way from 2½ to 3 times as much as extracted for a like quality. The quality of the honey on extracted has become a little unsettled, owing to aforesaid "bees" who not only love honey, but are contriving to get in as much profit thereon as even to make a market where the markets of the East were being glutted; but some of our friends went into some of these markets to buy honey in car lots. Do you believe they could get any? There was not any in sight. To state the matter fairly, there is probably a fair crop of extracted honey of Eastern production; and the prices on extracted will, therefore, rule about the same as the prices for comb honey. The price will be higher at New York than at St. Louis—about 25 cars all told; and this is likewise being held for the same reason. Texas, West Texas, and the South States, will sell it up well; but much of its product will be marketed at home, while Arizona honey, a large portion of it, will have to be sold in the East.

Returning to California, latest advices show that the season has been a flat failure in the central portions of the State. Our men can not find more than three car-loads all told. In Southern California it would be as a rule to allow for 75 cars, if the general reports we get are true, and they come from men who are not inclined to "hull" the market. I know they are very close to the truth, because I was through much of that territory myself, and perhaps two-thirds of the crop had been harvested. I shall send copies of this statement, prepared for me, to the large buyers, and believe will be reliable and honest, and will seek their advice and help.

LATER.—Since the above was written one of our correspondents, Mr. G. C. Dealy, of San Francisco, reports by telegraph that a careful canvass, that he could scarce find, all told, 250 tons (20 cars), and that he is informed from reliable sources, that the crops are much wealthier in the far south and east and very light. Moreover, he finds that some of the buyers, in the paper at Los Angeles, credit to a bee-keeper as many cars of honey as he has in tons. As to prices, the honey is being held firm at 5 cents or more. E. R. Ror.

Like Messrs. Burnett & Co., we hesitate to advocate the large buyers of our readers that have to sell, what to do about marketing it. And yet we think we are safe in saying that whenever you can get as good prices as those of last year, it would be well to accept them very promptly.

Having said that, we may also venture the opinion that the honey price is higher in price, but will likely go lower than the prices quoted now. This we believe because of the feeling that more honey is being held back by bee-keepers this season than in many a year before.

It is exceedingly unfortunate that there seems to be no reliable way in which to get at the exact amount of honey produced. Were it that a possibility, the matter of prices could be more easily be controlled.

A Phase of In-breeding Among Bees

in which there is a difference as compared with other stock deserves consideration. Where breeders of cattle practice in-breeding for the sake of in-breeding certain characteristics, they seem to prefer matting a heifer to her father rather than to her brother. There is a good reason for this. The father and mother of the heifer being of unrelated stock, the heifer is not of the same blood as either, but may be said to have half the blood of each; and likelihood is greater that the heifer which is adopted is not as close in in-breeding as when bred to her brother, which is of the same blood as herself. Now if we have a certain queen of superior blood from which we rear young queens, and then allow these young queens to mate with drones from the same brother, it might look, to a careless observer, the same as breeding the heifer to her brother. But in-breeding is must be taken into consideration, and in reality it is the same as breeding the heifer to her father. For the drone is not of the mingled blood of his mother and the drone with which she mated, but he is of the same blood as his mother. If this year we stock our apiary with drones from a certain queen, and the next year rear young queens from that same mother, allowing them to meet drones of the queens reared this year, we will have practically the close in-breeding of brother and sister that would obtain in cattlerearing, the mating of a queen and drone from the same mother will not be so close breeding.

Weekly Budget.

The Chicago Bee-keepers' Association will hold its next semi-annual meeting on Thursday, Dec. 5, instead of Thursday, Nov. 7. This is the result of a meeting of the executive committee on Oct. 3. The date a month earlier was fixed by the officers of the American Bee-keepers Association. A Stock Exhibition will be held in Chicago Nov. 30 to Dec. 7. Low railroad rates will then prevail, which should greatly assist to swell the attendance of beekeepers.

Look out for a full notice by Secretary Moore, next week. In the meantime, begin to plan your trip to Chicago. No one will be spared to make it the largest and best meeting of beekeepers in 1900—the recent Buffalo convention excepted.

APPRECIATION OF MR. G. C. Dealy.—In writing about his bee-keeping, Mr. Dealy had this to say (see page 618):

On May 22, 1900, I moved three small apiaries, consisting of 57 colonies, another brother of 13, from Walworth Co., Wis., to Wood county, arriving at my destination on May 24.

The weather was considerably cooler than in the previous season in Walworth county, and the losses sustained in moving the apiaries, they were in very poor condition when I arrived. The weather was very favorable the 108 colonies increased to 168, and I shipped two tons of comb honey.

I put the bees in winter quarters, Nov. 25, in an outside cellar. After regulating the ventilation to what I supposed to be right, I left them until spring, returning March 29, when I found the temperature to be 72 degrees in the cellar, and the loss at the outset 9 colonies.

Honey. But because of the high temperature in the cellar during the winter many of the bees became light and left the hive, the hives not having been well put up, and of course were lost. As a result I lost 63 colonies from spring dwindling, a total loss of 22 colonies more than the increase of last year. Those that are left are doing well, and at present there is a good outlook for a fair crop of honey.

Messrs. Salyer, Hyde & Scholl—the officers of the Texas Bee-keepers' Association—were shown on page 609. Since then we have received a few personal items concerning each, but not such as delayed so they could not appear in the issue with the pictures.

All three of those in question are yet young men, Mr. Salyer being the only one married. Messrs. Hyde and Scholl are just out of their teens, and not yet of age; nevertheless all three have done a great deal for Southern bee-keepers, and perhaps there are not many such "youngsters" that have gained so much fame.

Mr. Salyer is vice-president of the Central Texas Bee-keepers' Association the last two years, until elected president of the new State association at the last meeting. He has been in the bee line for many years, combining it with farming and stock-raising, as he has fine herds of cattle.

Mr. H. J. Hyde has been in the bee-business ever since nine years old, helping his father during summer and attending school during winter. As the junior member of O. P. Hyde & Son, and at the head of the queen-rearing department of that firm, besides being an ardent apiculturist, he is able to answer to the bee-papers, he is already well known to the beekeepers of our land. He is of a temperate disposition, abhorring the use of all intoxicants and tobacco. Mr. Hyde is a member of the Baptist church. At home he has held several minor offices of trust, and has been assistant secretary of the Central Texas Bee-keepers' Association, at the last meeting elected vice-president.

Mr. Louis Scholl has been actively engaged in apicultural association work for several years. At the age of 15 he was chosen as the association secretary for his school, and in such, certain clauses in the constitution of the association, restricting an officer to only one year's term, had to be ruled out. He has held his office ever since that time.

His bee-keeping career began while yet quite young, and, on account of his studious habits, he has mastered more about the honey-bee than many another of his age; and if he lives the bee-world may yet hear more of him. He has cast aside great strides towards enviable notoriety, especially among the bee-keepers of the South. His communications to several bee journals have appeared from time to time.

Mr. Scholl is a total abstainer, and an earnest Christian.

In order the able, conscionable management of these three men, the Texas State Bee-keepers' Association should flourish "like the green bay tree."
Convention Proceedings.

(Continued from page 631.)

Report of the Texas Bee-keepers’ Convention.

By Louis Scholl, Sec.

BEGINNERS RUINING THE HONEY-MARKET.

"How can beginners best be educated how not to ruin a market for bee products experienced?"

D. C. Milam said the selling of honey is the most important subject connected with our industry, the important part being that it depends upon that which brings the cash on which success is based. By producing a first-class article, it should be put up in the best marketable shape, and so as to attract the attention of buyers. The price seems to be almost universal over Texas. Beginners should be taught all this; especially when an experienced bee-keeper has a market established, he should see to the bee-keeper does not throw away their honey, or help them to establish a market for it. When beginners have a surplus of honey during a good year, they just want to get rid of it, and then they do harm through their ignorance.

The demand of wholesale honey is so great that it has never been filled. Of course, while their honey is of such fine quality as to have such a wide reputation, they also have some very inferior honey, from a few localities. Some of it is not even edible, and if it should be put on the market, it would have to be sold for such a person that should happen to eat such inferior stuff would lose all desire for any more honey. Some make a big mistake by extracting too soon, before the honey is well ripened. He cited a case where some honey he bought in barrels, by a dealer who handled honey extensively, and opening a barrel at one time, the vle stuff shot out all over his person and dress, and made him feel so badly that he could not even bear to think about honey—so much so that not honey would ever buy again. Besides this, he gave several other experiences.

He also spoke about organization and the prices of honey. Then all the honey could be bought for a little less per pound to sell again for enough to make sufficient for the trouble, and thus it would save much to the experienced bee-keeper, especially those that have a good market for their product. He said that all honey put up for sale should be a first-class article, and every package should contain the name and address of the producer, to show that it is such. He also told of a firm that bought and sold any kind of honey, just as it would happen along. But that firm does not sell any more now.

W. O. Victor's experience has been quite varied. He related a case where a large bee-keeper sold his honey, of fine grade, for 10 cents per gallon less than wholesale prices, and that in his home market, which ruined his entirely. He tried to buy the honey from this bee-keeper, offering him the real wholesale price, which was 10 cents more per gallon than his wholesale price, but he refused to sell, for the reason that he had to supply his customers with honey.

WHAT IS THE BEST RACE OF BEES?

W. O. Victor said he believed he was perhaps not well informed on the different races of bees, he having begun with the Italians; they treated so well that he stayed with them. He never had any other race in his yards, and hardly knows which is the best race of bees. He told of the many "strains" of Italians, and how they could be bred to possess some of the good qualities. He spoke about the different strains of Italians, the bee-keepers would start to go over everywhere whenever a hive is opened. These call it "race-horses" on account of their running, and thinks it the proper name for them. These he calls out as soon as he comes into the apiary.

The dark, leather-colored Italians he thinks the best, as they are the gentlement bees, sticking to their combs, and for honey-gathering they are the best all-round bees, always ready when honey is to be had, watching even for the bands to open, so that the first sip of nectar might be taken.

Some of the other strains are so vicious that he is afraid of them, for the reason that they are dangerous.

Mr. S. H. Hyde asked if a cross between the three-band Italians and Holy-Lands or Cyprians would not be a good one. Mr. Atchley answered that it would.

L. Stachelhausen said that it took different races for different localities, the three-band Italian not being good for his place, and the Italians, he thought, would have to replace the first one. It might be best to cross them.

H. H. Hyde told of his experience with different races and their average yields, the best being from Holy-Lands. The Italians choked the brood-nests too much.

Mr. Victor said that plenty of room given during slow feeding would not give too many hives, he would always be given a little ahead of time for the flow to begin, and the brood in the brood-chamber should extend from side to side, so the bees are bound to store above. Then always give a little more room than needed.

MISCELLANEOUS MATTERS.

Upon motion of Mr. Davison, it was decided to send four representatives to Buffalo, N. Y., in September, to represent the Texas Bee-keepers' Association, before the meeting of the National Bee-keepers' Association. Udo Töpperwein, G. F. Davison, Louis Scholl and H. H. Hyde were elected as such representatives.

W. O. Victor was appointed a committee of one to prepare a program for the next meeting.
The committee on “Resolutions and Petitions” handed in their report, which was adopted.

The South-Texas Bee-Keepers’ Association, meeting in conjunction with the other associations, asked that they be allowed sufficient time to transact some of the Association’s business, and to elect officers for the ensuing year; also to decide upon a place to meet the next year. Officers elected for the coming year E. J. Atchley, president; W. O. Victoria, vice-president; and J. W. Lewis, secretary.

The next place of meeting will be at Beeville, Tex., on the first Wednesday and Thursday in September, 1902.

The committee judging the bee-keepers’ exhibits handed in their report of awards, as follows:

AWARDS AND WINNERS.

COLLEGE STATION, July 25, 1901.

By Louis Scholl, Secretary-Treasurer, Texas Bee-Keepers’ Association.

Single-comb nucleus, Golden Italian, 1st prize, $2.50—P. Hyde & Son.

Single-comb nucleus, 3-Bland Italian, 1st prize $2.50—P. Hyde & Son.

Single-comb nucleus, Holy-Land, 1st prize, $2.50—P. Hyde & Son.

Swepstakes on bees, greatest number of different races, 1st, Surprise package of valuable articles—O. P. Hyde & Son.

Best section comb honey exhibit—1st, one-comb honey hive—Dr. G. Davidson; 2d, Golden breeder queen—J. B. Salyer.

Best sample case section honey, Special, 50 cents—G. Davidson.

Best sample case comb honey exhibit—1st, 5 pans honey-case—G. Davidson; 2d, Golden breeder queen—J. B. Salyer.

Best sample bulk comb honey, Special, 50 cents—G. Davidson.

Best exhibit bulk comb honey—1st, 5 pans honey-case—G. Davidson; 2d, Holy-Land breeder—J. B. Salyer.

Best spectrum extracted honey, Special, 50 cents—G. Davidson.

Best exhibi-t, 1st, 1st case wax-extractor—Louis Scholl; 2d, Apiary tool chest—J. B. Salyer.

Best sample cake bright yellow wax, Special, 50 cents—Louis Scholl.

Best display honey-plants, pressed and mounted, 1st, Brass Higginsville smoker—Louis Scholl; Special 50 cents—Louis Scholl.

Largest and best display apianary implements, 1st, Cash price, $.50—1st Toeppelewien; 2d, Foundation fastener—O. P. Hyde & Son.

Swepstakes, largest, best and most interesting and instructive exhibit, all things considered, 1st, Cowan honey-extractor—Udo Toeppelewien; 2d, cash prize of $10—O. P. Hyde & Son.

Best exhibit bee-keepers’ supplies, 1st, blue ribbon—Udo Toeppelewien; 2d, red ribbon—O. P. Hyde & Son.

The other business was then all settled, and just before adjournment, upon the entering into the room of the bee-keepers’ section of the Farmers’ Congress, of Prof. Connell, he was presented with a case of beautiful white section comb honey, by the Association, with very appropriate words by Mr. Atchley. Prof. Connell accepted the same with words showing very pointedly how this kindness was appreciated by him, and he thanked them all for their kindness.

The convention then adjourned.

J. B. Salyer, Pres.
Louis Scholl, Sec.

Contributed Articles.

Queen-Breeding—A Review of the Subject.

BY ADRIAN GETAZ.

U.S.T. now, in some bee-papers, a certain class of critics have chosen to criticise our queen-breeder severely, infatiating that they don’t know the fundamental principles of the art. Some have even intimated that a college course of study should have been taken, or at least a full study of Darwin, Huxley, etc. Exactly what advantage a college education would be to a Mr. G. Davidson, with very appropriate words by Mr. Atchley, is a question, the answer of which would be to a queen-breeder, has not been shown. It is even questionable if a full knowledge of Huxley’s and Darwin’s theories concerning the “Origin of Species” and “Descent of Man” would be of any use at all.

Again, the fact that our leading bee-breeder, by not filling the bee-papers with learned (?) contributions on the subject, is not at all a proof that they are a lot of ignoramuses. Some of them undoubtedly know a good deal more than their critics suspect. The fact is, that these critics who speak so learned (?) about in-breeding, and other similar topics, do not seem to know so very much, after all; and while they have succeeded very well in criticising what is done, they have lamentably failed to show what is to be done.

To-day it is raining, and I have nothing pressing to do, so I will take my chances and dabble into the subject, running the risk of showing my own ignorance just for the fun of it.

HEREDITY.

It is hardly necessary to say that heredity is a short word to state the fact that any living being is similar to his father and mother, or ancestors. So a cat is a cat similar to his ancestors. A plant of corn is similar to those that furnished the grain from which it grows, and the pollen which fecundated it (fertilized it). I use common words in place of scientific terms, as far as possible.

VARIABILITY.

But the offspring is never the exact image of its ancestors. There is always some minor difference, sometimes one way, sometimes another, sometimes in one particular, sometimes in another—in size, color, different aptitudes, etc. It is that disposition that enables us to improve our stock. For instance, suppose we want a stock of cattle especially good for milk; by choosing the best milking cow procurable, and a bull a descendant also of good milking stock. In virtue of heredity, their descendants will be generally better milk-producers than any other breed of cattle taken at random. By this ability, some will be better and some not so good, some may be even better than their immediate ancestors, and some may be worse. We choose the best, those, if possible, better than their immediate ancestors, and repeat the process again and again, we will get a stock superior in aptitude to produce milk.

It is almost needless to say that all our noted breeds of stock—cattle, horses, chickens, dogs, etc.—have been produced, I might say created, by that process.

SURVIVAL OF THE FITTEST.

This is called a theory and often criticised or made fun of. But it is a fact, not a theory. Let me give some examples: Suppose some deer were put in a country where there are wolves. Suppose some very fleet on foot and some quite slow in running. The wolves will undoubtedly catch up with and kill the slow runners. The fleet-footed will escape and breed. The result is that the next generation will average a better running stock. Of these, again, the slowest will be destroyed, the quickest remain. The result is that eventually a swift-running stock will be the result.

Take the quails and partridges. They may have been of any and all colors at the beginning. But the bright-colored ones were the easiest to see, and were caught by the hawks and other enemies. The brown and gray remained. Those striped ones, as we now know, are the least distinguishable from the brown earth and dead grasses, and finally remained alone. In domesticity, where all are protected, all colors stand an equal chance, except what choice the breeder may make.

ACQUIRED QUALITIES.

Not only the peculiarities inherent to the animals themselves at their birth, but also those acquired, are, at least to a certain extent, transmitted to their offspring. For instance, the pointer dogs. The first were evidently trained to that mode of hunting birds—a very unnatural one. Their descendants, or rather some of them, inherited that disposition, at least, to some extent. The best were chosen, and more thoroughly trained, and the process pursued until now we have a breed of dogs in which it has become a second nature. There is no doubt that the thoroughly trained race-track geldors for transmitting to his offspring. Take, for instance, the pointer dogs. The first were evidently trained to that mode of hunting birds—a very unnatural one. Their descendants, or rather some of them, inherited that disposition, at least, to some extent. The best were chosen, and more thoroughly trained, and the process pursued until now we have a breed of dogs in which it has become a second nature. There is no doubt that the thoroughly trained race-track geldors for transmitting to his offspring.
different position—for instance, a wild animal be domesticated—and variations in size, color, disposition, etc., will appear at once.

The individuals—like the father and mother, the more strongly and surely will their characteristics be transmitted to their offspring. And if they are very different, all sorts of variations may be expected.

The more alike the characteristics and peculiarities, the more surely will they be transmitted. A "sport"—that is, an animal or plant showing some extraordinary peculiarity—is not at all sure to transmit it to its descendants, while the "fixed" qualities will nearly always be transmitted.

A fixed characteristic is one that has been transmitted from generation to generation either through the natural operation of the survival of the fittest or through the choice of the breeder.

IN-BREEDING.

That is, breeding between close parents or relatives. This is said to be injurious to vitality. The fact is quoted that in natural process of reproduction of plants and animals, in-breeding is avoided. On the other hand, all our best breeds of horses, cattle, fowls, etc., have been obtained by in-breeding. Numbers of bulls and stallions have done service as long as they lived, with their own mothers, grandmothers, daughters, granddaughters, etc.

One thing is certain, in breeding from close relatives, we breed from animals having similar characteristics and same peculiarities, and, according to the above rules, such will more likely be transmitted, and even intensified; for the \( f_{ring} \) of a characteristic generally intensifies it. Now any defect which that breed may have, will thereby be fixed and intensified, until eventually endanger or destroy the very life of the animals themselves.

INFLUENCE OF THE MALE.

In breeding hens, cattle, etc., it is found that the male has more influence on the offspring than the female. This is due in a great measure, if not altogether, to the fact that the male used is of a superior stock, with qualities better fixed and more intense than those of the females. If the process be continued, and the females be bred to the improved stock, and the males of the common stock, the reverse would probably take place. In the human race we do not see that the children inherit more characteristics from their father than from their mother.

INFLUENCE OF THE FEMALE.

The horse-breeders tell us that the male gives the qualities and the female the size. That is true, more or less, of all the animals that are developed in the mother's womb, but it is not so true of any animals.

All those familiar with horse-raising know that a colt at his birth has nearly the full length of his legs; and that when full-grown his height (if he has not been stunted by lack of food or other hindrance) is about twice the length of his legs. It is easy to see that the colt born of a large mare has a start at his birth that he will keep during all his growth.

In plants and animals born of eggs or seeds, such an advantage does not occur.

In bees, the size is limited also by the size of the cell. It is a well-known fact, that drones born in smaller cells than the regular drone-cells are smaller in proportion to the size of the cells.

As to Bees.

In our attempts to improve our races of bees, we have to meet several difficulties that do not occur in other lines:

1. We have not the same control of the reproductors.
2. If we desire to improve a herd of cattle we have the choice of the very individuals. We choose the best cow, and a bull descended from a superior stock. In improving our stock of bees, we want to improve the qualities of the workers. But we can not use the workers themselves. We have to fall back on their mothers, and use for reproduction drones and drones of their mothers have produced good workers, and take our chances.

2. We have only an imperfect control of the drones, and if we could breed from an individual drone of our choice, however, it is extremely improbable that the drones of his sons would give better workers than that one? There is nothing to show. At best we could eliminate the weakest and undersized one. The only point where "hand-picking" of drones could help is in regard to color. The yellowest drones will undoubtedly produce the yellowest workers.

3. We are to work in the same line as Nature. In improving cattle, for instance, in getting up a good milking stock, we are developing a quality that in the wild state was completely unknown, and with careful results. In the wild state, the animals (something like the Texas steers) have developed chiefly hardiness, health and strength. If we were to take the Texas stock and try to improve the size and shape of the animal, we would make but little headway, because Nature has already developed them almost, and perhaps up, to the limit attainable.

First of all, what we want chiefly is hardiness and honey-gathering qualities; that is, the very qualities that Nature has been developing for thousands of years, and we may expect that the limit has been nearly reached, if not altogether. We may perhaps increase the size of the bees and length of tongue.

CONCLUSION.

After all is said and discussed, all that is to be done is to get the queens and drones from the very best colonies obtainable, and rear the cells under the most advantageous conditions of warmth, feed, etc. It is needless to say that underized or defective queens (and, if possible, drones) should be rejected.

That's all.

Knox Co., Tenn.

Size of Hives Not Necessarily in Accord With Lay-ing Capacity of Queen-Bees.

BY G. M. DOLLITTLE.

A CORRESPONDENT writes thus: "I would like your opinion concerning the H. B. R. L. (R. L. being Largaasen) hive, so generally recommended, the same would, if badly occupied with weak-combs, contain about 115 sq. inches, and give about 8,500 cells. From this we must deduct at least ten percent of the space for the usual supply of honey and pollen, leavings, etc., about 2,000 cells. Allowing 21 days from the egg to the time the bee enters its cell, and one day for the bees to clean the cell, and for the queen to lay in it, again, we have an average of about 200 cells for the queen to fill per day. Now, in 2,000 eggs the usual daily laying capacity of a queen in a strong colony? If not, should any queen be considered a queen that annually produces less than the number of eggs it is laid for? This is the question that the reasons, or lack of reasons, given in this paper, may help to determine what size of hive to build the comb in. Please write me a letter."

I did not know that it was necessary to make our hives, as to size, to accommodate the prolificacy of the most prolific queens, nor do I so think. Suppose a queen could lay 5,000 eggs daily, on an average, as some think possible. What is the price or worth of those eggs? Does the sum and substance of bee-keeping depend upon keeping all queens employed at egg-laying to their fullest capacity? Bees, when they come on the stage of action at just the right time, are very valuable, but eggs are of no value, only as they tend in the direction of producing these valuable bees. Aye, they tend toward positive disadvantage, and, to take away the profit in this way, those who have only, as they look toward the end of producing the required bees in the field at the time of the honey harvest. Here is a point often lost sight of by the large-hive advocates.

Eggs cost practically nothing; but as soon as the bees begin to perfect them toward other bees, then they begin to cost; and if this perfecting is going on to any great extent at a time when the perfected product is placed on the stage of action, either before or after their presence in large numbers is needed, we not only have the cost of perfecting to pay for, but the cost of their consuming, after being perfected, as well. This consuming part we always have to pay for; but we willingly do it at any time when the product of the individual is of value. There is no reasonable objection to this; but I can see no object in doing this at any other time, simply that the extra laying capacity of any queen may be gratified. A hive that is large enough to gratify the greatest aspirations of very prolific queens, at the times of the year when the necessity of the colony is present, of course, but I have no objection.

But I can see no object in doing this at any other time, simply that the extra laying capacity of any queen may be gratified. A hive that is large enough to gratify the greatest aspirations of very prolific queens, at the times of the year when the necessity of the colony is present, of course, but I have no objection.

From all past experience I think that 2,000 eggs per day would be a good mean average for any queen. Rain, cold, or other disturbing influences often retard the activity in the hive, and of the queen, and thus it happens that at times the best of queens often does not lay more than 1,000 eggs in one day. While, of course, the queen, if she can multiply this number by four, and still have plenty of room in a hive which will give an average of only 2,000 daily.

Then, again, as two and one-seventh generations of bees can be brought on the stage of action to where one steps off, we find that, in a hive giving an average of 2,000
bees daily, we can have in that hive, barring accidents, if the hive is properly managed, 105,000 bees on the stage of action right in the honey harvest, when their productive power is the greatest; and at such a time such a number of bees are a host to roll honey into the sections, with the combs all filled with brood below; and this rolling of honey into the sections means the rolling of money into the beekeeper's pockets, from which come the necessities, comforts and luxuries of life.

Experience has shown the men who are advocating an eight-frame Langstroth hive that such is the best, as this keeps the frames full of brood, and puts honey into the sections.

Again, suppose a colony of bees having a good, prolific queen is given 30 Langstroth frames, using but eight to start with, and adding two or three at a time, as the bees can occupy them, until the 30 are all in, it will be found that such a queen will lay from 4500 to 5000 eggs daily, during the best part of the egg-laying season, and die of old age or exhaustion when from 12 to 18 frames old; while with the eight-frame brood-chamber she will give as good results in comb honey each year, and live from three to four years. With the large hive the bees are quite likely to get the start of the queen, and commence to store honey in the brood-combs before entering the sections at all; and in such cases the bees seem loth to go into the sections, but continue to store honey in the brood chamber in preference to going into the sections, thus crowding out the queen with honey, in the combs which ought to be occupied with brood, till we have, as a result, very little section honey in the fall, and a colony in poor condition for winter. Besides, it is well to remember that all queens are not equally prolific, and while 20 percent of our queens would keep the brood-chamber of a ten-frame Langstroth hive properly supplied with brood to give the best results in section honey, the other 80 percent would not be prolific enough to do so; hence, in the majority of the hives in the apiary, we should have a condition working against our best interests, which could not be overcome by the extra amount of comb honey produced by the 20 percent, whose queens were prolific enough to work in these ten-frame hives to advantage.

For these reasons it would seem best to adopt a size of brood-chamber which any and all queens, that are worth keeping at all, would have occupied with brood at the commencement of the honey-flow, thus securing the best yields of surplus section honey at all times.

Because a queen may lay 5000 eggs daily by using plenty of comb-capacity and coaxing, it does not necessarily follow that it is to the best advantage of the apiculturist to accommodate or even coax a queen to bring her fullest laying capacity to the front at any time. Queens, in any well-regulated apiary, are among the smallest part of the expense incurred, while labor, hives and combs go toward making up the largest part of the same.

For these reasons I claim that the capacity of the queen should rather be above the capacity of the brood-nest than below it, so that all combs may be fully occupied with brood before the honey harvest arrives. Unless this is the case, the outside combs continue, in most cases, to be dead capital (honey) from year to year. However, all our questioner (or any one else) has to do is to use part ten-frame and part eight-frame hives in the apiary, when a little time will satisfy him which is the better for his locality.

Onondago Co., N. Y.
such a low moral level I should rather expect him after awhile to transfer his nationality to the more prosperous nation, and next to offset them by carrying steppings in the opposite direction. Page 562.

TRADE BULLETIN QUOTATIONS.

I should suspect that the trade bulletin of a big city would be less reliable on honey prices than the leading honey-dealer of that city—liable to print the figures of somebody’s g Essex, or figures adjusted from one sale at abnormal prices. Page 566.

*The Home Circle.*

Conducted by Prof. A. J. Cook, Glencoe, Calif.

MOTHER.

This is surely the most precious word in the home circle. I am reminded of a sweet, wholesome, delightful story that I lately read in a magazine. An acquaintance of a motor-man was riding with his friend on a trolley car as the latter guided and directed it through the streets of our great metropolis. He noticed that the city was very unusual so he, starting and stopping and in making the numerous turns he was not thrown or pushed or handled at all roughly as is the wont so frequently in our rides on the electric cars. He asked him if it was not an unusual experience to a young fellow to come out to the fortunate rider on this special car. His friend explained as follows:

After he had run the car for a time his mother came to keep his home for him. He longed to take her on his private trips and he would have enjoyed her in his car every day. He proudly took her with him the first day after her arrival, and to give her a rare treat he gave free rein to the current that was silently and invisibly hurrying them over street after street on his beloved home. In the kindred affection, he learned for her dear boy she led to conceal a mortal fear, and serious pains and aches, as she was pushed, knocked and jammed hither and thither as they flew around bends or stopped and started in a break-neck fashion.

On the morrow she so studiously concealed her aches and pains, and serious lameness. He was saddened, and greatly disappointed, that his precious mother wished no more to go with him, as this would turn his work into pleasure, and rare pleasure if it would bring joy to his beloved parent. Finally he learned through a third party, of the shock and inconvenience which his mother had received on the occasion of that first ride. He was dumb with sorrow, chagrin, and contrition. He successfully urged a second ride, and now his care more than equaled his previous rashness. Caution made the start and stop so gentle that those riding felt no jar; the turns were so skillfully made that no push was felt. The fond mother felt no fear, and suffered no harm or inconvenience. She now takes daily rides to the joy of both her own and her son’s heart. The son added: “In all of my trips now, I wonder if some other son’s mother is not in my keeping, and so the cran and leavers are ever pulled out to check the jar and lessen the shock as the turns are made or the speed varied.”

Oh! how few mothers really know or realize the wondrous influence they exert to make the world brighter and better.

THE CALIFORNIA RED-HEADED WOODPECKER.

This is one of the several beautiful California birds that belongs to the order Pic. These birds are quickly known, as two toes oppose two others on each foot, which enables them to hold fast to fence-post or tree-trunk. Their beak or bill is a well fashioned chisel, by which they loosen the knot that leads to grub, or fashion their nest. Their long tongues are barbed that fishhook-like they may catch and pull out the coveted grub or caterpillar. Mr. and Mrs. Red-head are alike capped with red, and, like many other birds, as instance in blackbirds and robins, are quite exclusive in their attentions the one to the other.

Mr. Woodpecker’s name is not Roberts. He would not be excluded from his seat in Congress, if elected thereto. Mr. and Mrs. Red-heads are probably the most harmonious and industrious birds working together most delightfully and industriously. They bore numerous holes in quite regular form and position into the great mountain pines. They then hire away to seek the rich, nutritious acorns which they crowd one into each hole, so compactly that one needs his knife to loosen them. Often a very large acorn is such a misfit that the hole must be greatly enlarged, and then one of the pair holds the nut while the other makes a nest. An unusual bird. Calla, a sound hole, or a nest, is the name of one of their other birds to aid. As soon as the hole is sufficiently large, all return to their own work except the two that then adjust the acorn snugly, and proceed with other nuts. Later, as food is scarce, these nuts are eaten, and form the hearty meal for this faithful and deserving man and wife bird.

THE OJAI.

Queer word is that. We pronounce it O-hi. It means “carpet nest.” Indeed, it is strewn with the tufted grass and lovely woods which enfile the north and southern sides. It is in Ventura County, hardly more than a half mile to the north of Ventura by the Sea.” In its nest-like form it is similar to the oriole of the East. A ruga is the name of an oil-cushion where I am now writing, and El Cajon. The Ojai, however, is peculiar in fondly bearing numerous great, spreading, beautiful live-oaks. Their nest-like valleys, which nestle at the foot of a great ring of mountains, more beautiful than the trees and shrubs, are exceedingly lovely. They hold the fortunate people who call them home, with a fascination that makes them ever afterward impatient of any other home. I never feel more close to the verge of envy than when I visit these gardens is somewhat southerly.

I often find my lips whispering: “Oh! always to look upon this grandeur.”

BOOTS THAT SHINE.

It is my privilege as conductor of farmer’s institutes in Southern California, to be much with the professors of that institution, of which every Californian is so justly proud. In California, where we have little or no rain from April to October, the dust gets very assertive. To keep one’s boots bright with an innumerable amount of polishing is no mean accomplishment. One of my colleagues, who happens to be my companion for these two weeks, has that exceptional faculty. He tells me that Mrs. —— often holds him up to the children—our two boys—as an example that they should the better exert their thoughts to bring the shoes whine. How blessed the mother who can always say: “Do as thou seest thy father do.” in her efforts at discipline.

Questions and Answers.

Conducted by Dr. C. C. Miller, Marengo, III.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—E. H.]

Questions on Nectar-Yielding Plants.

I want to keep a few colonies of bees, and want to provide a pasture for them. What is the most durable and quickest seeds to sow?

How long does it take buckwheat to come into bloom after coming up in (very) seasonal weather? How long does it stay in bloom? Is it fit to cut and feed to stock?

Alfalfa down here doesn’t yield any honey. What is the difference between white sweet clover and white clover?

I had about an acre of crimson clover in the spring which the bees worked on as long as it lasted. I had the seed mixed with alfalfa, but it was no good. Is there anything you can suggest?

Answers—Answering your questions somewhat out of their exact order, I can not say how long it is from coming up till bloom of buckwheat, never having taken exact figures. They should be harvested at the proper season for standing, three or four weeks might not be out of the way. But that guess may be considerably out of the way. As to length of blooming season, my guess would be also three or four weeks. Very likely both of these guesses might be lengthened. The blooming season is very often closed by the
first frost. I think buckwheat is never cut up and fed to stock, but the grain is harvested.

The difference between white clover and sweet clover is about seven feet. White clover grows close to the ground and has its blossoms as gobular heads like red and crimson clover; white sweet clover grows tall and has its blossoms singly all over the bush. Very likely sweet clover and crimson clover will be as good as anything you can sow. crimson blossoms early, and probably closes about the time sweet clover comes in bloom, and the latter will bloom till after several frosts. If harvested for hay before it comes in bloom, the full blooming will be later than if left to its own course.

Queer Idea About Rye Flour and Bees.

How do you fix rye-flour for bees to make comb for their hives? I can not find any one that knows anything about rye flour. I have read that they make comb out of rye, but I don't know what to do. I have a quantity of rye flour.

GEOLOGIA.

ANSWER.—I think you must have been misinformed. Rye flour is used sometimes as a substitute for pollen, but not as a material from which comb can be directly produced. Bees make comb only as it is needed, and it is honey more than pollen that is used in its production. It will be wise to feed rye flour to bees only in the event of a scarcity of pollen, and it may most likely make a better use of your rye flour than to feed it to bees.

Swarming of a Divided Swarm.

After making a divided swarm, as described by Mr. Deolittle on page 478, is there danger of them swarming any more than that season, provided they are supplied with enough supers and sections to keep them from getting overcrowded?

ANSWER.—I should say there was no more danger of swarming than the danger in the case of a natural swarm.

Honey-Dew for Winter—Insuring Bees.

1. I have 48 colonies with plenty of bees and honey, but I am afraid they will not winter well, as they have gathered considerable honey-dew, or bug-juice, if I may call it so. Have been through the month of September, and I think it will last as long as the weather stays warm enough for the bees to work. Will they winter all right if I use a Hill's device and a cove to cover them, and packed on the outside with forest leaves on both sides and back about four inches thick?

2. Is there such a thing as insuring bees against loss in wintering in this locality? If so, where and what do they usually charge per colony? Say from Nov. 1 to May 1.

ILLINOIS.

ANSWER.—1. There is a great deal of difference in honey-dew. Some of it will do well for winter stores, and some of it is little better than poison. It would be impossible to say which kind your bees are getting, but if bees have generally wintered well in your locality you may be on the hopeful side, for it is quite likely that they have had the same thing in other years.

2. I don't know of any such insurance, but will yield the floor to any one who does.

Queen-Introduction—Pure Italian.

1. I was rather unfortunate in my queen-rearing during the late summer. Out of 14 queens emerging during June and the early part of July, all but two were missing before they began to lay; after that they did better. I had to give some colonies three cells before I got a queen to lay, and in one case I had to introduce a bought one. The weather during the early part of summer was very cool, in only five or six days up to nearly the middle of July did the highest temperature reach 70° F., and it was seldom much over 60°. Do you think that would account for the loss of queens? If not, what would?

2. I have bought three queens and introduced them safely, but I noticed, in one case, on two occasions, where I looked into the hive, a number of cells with two, three, and, in a few, four eggs; on the last look I saw worker-brood capped over, looking all right. Would you consider that queen a faulty one?

3. I think I saw recently in one of your answers that if a drone was dark it was not pure Italian. I got a tested queen last year from a well-known Italian firm, and while all the workers have the three bands, the drones are quite dark, some showing a dash of dark gold and some none. Would you consider that queen pure Italian?

BRITISH COLUMBIA.

ANSWERS.—1. Weather seldom warmer than 60° and never more than 70° would be enough to account for your loss.

2. It is not very unusual that a queen on first introduction after a journey in the mails does something out of the common line, and afterward does her work in good shape. It is just possible, too, that the workers rather than the queen were at fault. If bees were few in number, and if the queen was a good layer, she might need more room to lay than the space covered by bees, in which case you might find a plurality of eggs in a cell. At all events, if you later found sealed brood in regular order you need have no anxiety.

3. If I used language to give you the impression that I thought a dark drone was proof of impure blood, I advise you not to put too much reliance on the statement. The looks of either queen or drone can hardly be taken as a test of purity. Some excellent Italian queens have been very dark, and the same may be said of drones. The workers are the ones by which purity is judged.

Don't Feed Sugar to Complete Sections.

1. I have 20 supers about half full. Can I mix honey, sugar and water and let the bees finish them? If so, what proportion of each would be best?

2. There are plenty of drones flying now. What does that indicate?

INDIANA.

ANSWERS.—1. Don't think for a minute of using even the smallest proportion of sugar to finish sections. Just now about the greatest foe-beekeepers have to fight is adulteration, and for them to band together in a national association to fight it, and then feed sugar themselves to get sections finished would be about as consistent as is the Christian man who prays 364 days in the year for the downfall of his enemy, and then on the 365th day votes to support it. If you want to feed to have sections finished, use diluted honey. Very few, however, have been able to make it pay. Better sell at reduced price sections that are not finished, and let the bees empty out any that are less than the size of a 36th. Pile up the sections you want bees to empty, and allow entrance for only one or two bees at a time. If you allow a larger entrance, the bees will tear the comb to pieces.

2. It does not have any special significance; at least it may not. Sometimes colonies that have a good queen will suffer drones to continue. At the same time it may be that some colony or colonies have laying workers or drone-laying queens.

Killing off Drones.

What is the cause of drones in some of my colonies? One of the strongest has lots of them. They are killing off the drones this early, Sept. 24.

INDIANA.

ANSWER.—There is nothing strange about it. The strongest colonies would not feel in so much of a hurry to kill off their drones as the weakest ones, especially if the strongest ones had queens and were superseding them.

German or Italian Queen.

Is the queen enclosed herewith a genuine German, or is she crossed with Italian blood?

CALIFORNIA.

ANSWER.—I don't know. You can't decide by the looks of a queen as to her blood. You must have her worker progeny to judge by. I have seen imported Italian queens as dark as the sample sent, while their worker progeny were beautifully marked with the three yellow bands.
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Two maps on one sheet, all for only $1.50, sent by mail or prepaid express; or we will forward it free as a premium for sending us Three New Subscribers at $1.00 each; or for $2.00 we will send the Map and the American Bee Journal for one year.

Address,

GEORGE W. YORK & CO.,
144 & 146 Erie Street, CHICAGO, ILL.
Bees In Fine Condition.

The honey season is over and the bees are in fine condition for winter. Our crop was 23 tons from 300 colonies, spring count, and increased to 425 colonies. Two of us did all there is to do, and found time to do considerable on the farm besides. L. L. Andrews, Riverside Co., Calif., Sept. 11.

Bees and Pear-Blight.

I notice in the American Bee Journal an item in the column of 'bees and plants' which I would like to have some one confirm before it gets into print. I see some think the bees spread it, and some think they do not. I am of the latter opinion. I have a pear orchard and in the last two years the pear blight has appeared on every pear tree. I have the Bartlett and another late pear; this year some of the trees died almost to the roots, while some of the Bartletts blighted just a little. What made me think this was not the spread of disease, is a tree that stands close to others that did, that does not show a bit of blight, and is loaded with pears, and a tree of the same kind, about 20 yards away, died clear down. Another instance is a seedling I get some distance away. It is loaded with Bartlett pears. It never had a blossom, and never died. It took the disease, and died. Now, if the bees spread the blight why did this tree, and any other Bartlett not take it? All were loaded this spring, even to those that died, showing the bees had worked on them, and it is true about the fruit needing bees to cross-pollinate. And why did the seedling take it? Can you answer that? Cutting off the diseased parts seems to stop the disease to some extent here.

Lathu Co., Idaho. F. C. Holbrook.

Poorest Honey-Year in Nine.

We have no surplus honey here this season, but bees are doing well now. It is the poorest honey-year we have had in central California in the nine years I have lived here. J. W. Steele, Merced Co., Calif., Sept. 1.

Troubled With Grasshoppers.

The bees in this part of California have done very little this year, a living, I must say. I fed mine until the latter part of June, but I am pleased to say they are doing well now, and living up well to keep off grasshoppers. They did not get until the latter part of August. The cause, I think, was the grasshoppers on the alfalfa fields; the trees were likewise covered with little jumpers, and the bloom blasted. The bees would sit out on the alighting-board and act as if they were looking for a job. But now that is all changed; they are out by the time the sun is up, flying hither and yon, gathering the nectar from the alfalfa and carpet plant. Most of the grasshoppers have disappeared.

I have just received the American Bee Journal: it is full of good things for the bee men and women. I like it very much; in fact, it is almost as good as I expected it to be. I have tried the straw for robbing, and find it very good. It has stopped it every time for me.


The Seasons of 1899 and 1901.

I wish to remind the bee-keepers of the Mississippi valley what educators to us the year 1899 and 1900. We had so much honey in 1899 that we had no surplus honey from other sources, but plenty to keep up good strength from July 1 to late fall, while we were able to get some honey from grandmother's bee-keepers in the states south of us because the colonies were strong at just the right time.

Because of a severe drought, 1901 has yielded only a light crop from clover, ending two weeks earlier than usual, leaving nothing of much account for bees to work on from July 15 to Aug. 3, a period when very few eggs were laid by the queens—a period just when all queens should have been filling every available cell with eggs. Our bees came up to an abundant flow from heartsease with only a little over half the strength main- tained in 1899, where there has been, for some, on the very colonies of at least $800, which could have been remedied if foreseen. Stimu- lating the colonies for spring, I believe we gathered an equal or greater return from 1901 than we did in 1899.


Please mention Bee Journal when writing.

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C. S. DITTMER, Augusta, Wis.

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THE NICKEL PLATE ROAD will sell tickets each Tuesday, Thurs- day and Saturday during October to Buffalo Pa—Ames in the oldest and most extensive training rooms, return, at $6.00, good in coaches, return limit 5 days from date of sale. Tickets with longer limit at slightly increased rates. Three through trains daily. Chicago Passenger Station, Van Buren St. and Pacific Avenue, City ticket office, 111 Adams St., Chicago.

36—411A-4

Of the Evening Primrose Family.

I send a sample of leaf and blossom of a weed that grows sparingly around here, on which bees work prodigiously. I have no doubt they gather both pollen and honey. I do not know, and have found no one who does know what it is, or how to identify it. I hope you will be able to show me the same species. It is a small plant, like a little gailardia in size. My attention was first attracted to it by the hum of the bees on it, and I subsequently found it was a very pretty plant, like you to tell me through the General Items column of your excellent paper what the name of the weed is, and its value, as I wish to save seed if it is con- sidered a good honey plant.

J. O. MEYER, St. Louis, Mo.

Please mention Bee Journal when writing.

taken and read with great pleasure the American Journal for about four years, and I have enjoyed its weekly visits immensely. Though I have used only 25 coloums, but I am prepared to increase when spring comes again. Not boasting at all, but I have the name of keeping bees in Missouri, being on of the seven informed bee-men in this section, and I give the credit to the American Bee Journal, as this is how that was begun.

This has been an exceedingly poor honey-year in northeastern Missouri, owing to the drought that has prevailed since in April. Yet I am not as hopeful as some, and for getting the things that have passed I look forward for better seasons and greater blessings.


Shelby Co., Mo., Aug. 3.

[The plant belongs to the Evening Primrose family. Its botanical name is Gauges biennis, and it goes by its first name - Gauga.

These are the author on writing - honey-producing plants do not speak of it as being especially productive, but bees are not easily deceived, and if they are interested in the flower no doubt it is furnishing them honey or pollen, probably both.--C. L. Walton.]

Am. Valuable W. 50 cts. Metal FRED T. K. taken that to informed bee-men in this section, and give the credit to the American Bee Journal, as this is how that was begun.

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Some Points in Indoor Wintering.

Some that are of interest are given by Mr. Darling, in the Canadian Bee Journal. formerly great stress was laid upon the covering in winter, so that the right amount of upward ventilation could be secured, but late winter events have caused to the conclusion that Mr. Darling has reached, that it is not a matter of special importance how the air is introduced into the hive, only so there is enough of it, and if plenty of good air can enter below, the upper part may be as tight as a drum. Mr. Darling says:

In regard to packing, I have used sawdust and cork dust, and I have tried wintering outside at all; I live where it is too cold—too near the North pole—but for years I took off the propolized sheet on a cotton cushion filled with sawdust or cork dust (I brought the sawdust from the sawmill and the cork from the saw-mill). I fail to see very much difference in their effect, only I thought the sawdust from the sawmill was quite as warm, and the cork dust is a little drier. There is so much evaporation from bees that if you take a little piece of lath and leave it lying on top of the cushion for a number of hours, you will find it cover on all, if you lift that piece of lath up any time after it has been there a few hours, there will be a wet spot on that cushion of the size of that piece of lath. If nothing touches the cushion it is dry all winter long, and sawdust is dry. I have often put my hand under it and it is warm and cozy on top of the sheet, if there is anything under.

I had formerly tight bottom-boards, and that is the reason I took off the propolized sheet. Lately I have taken off the bottom-board, left the propolized sheet on, and put the cushion on; that allows no moisture to get through, but I raise up my hive at the front—I don't like going to the back to let them down—and I find that they winter just as well and better than they did without the propolized sheet, and with the bottom-board tight there is no danger of there being any dampness above, and my rooms and bees are as dry as they were when the boards were fastened.

Queens Fertilized in an Upper Story. The Mr. Wardell, the man who has charge of his colonies, has evolved a system of having queens fertilized in upper stories, that is a perfect success. I do not speak of this as a system, as he may be the more wholesome honey to sugar, the very best quality of alfalfa honey I have received from you is better suited than the honeys of more marked flavor, according to my taste.

C. C. MILLER.
McFarley Co., III.

Order the Above Honey and then Sell It.

We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, III.

stand of there being from 25 to 30 pounds of honey left in the brood-nest, which he does not want there, that amount all goes into the store, where he does want, and he can command the very best market price obtainable. When I asked Mr. Burt if it was not easier for him to have the honey in the brood-nest, he said it was not, according to his practice. "I prefer," he said, "to sell my honey, what I do not use at 15 cents per pound and then buy syrup at 3 or 4 cents; and I not only make a good trade, but I give the bees a much better feed. While good honey does well in winters, yet there are occasional ones when the syrup-fed colonies come out much better. No, sir," he said, "I do not want any honey in the brood-nest in late summer, I prefer to feed sugar syrup, for then I know my bees have the very best food for winter."—Gleanings in Bee-Culture.
AMERICAN BEE JOURNAL

Oct. 10, 1901.

HONEY AND BEESWAX

MARKET QUOTATIONS.

Chicago, Sept. 19.—No. 1 white honeycomb is selling at 85c per pound, with occasionally a cent more being obtained at times. We also note that No. 1 does not grade No. 1 selling at from 130c to 140c, with occasional sales as high as 150c. We understand that there are various kinds selling at 100c. Extracted in moderate demand at from 50c for the various kinds down to 25c for some white and basswood bringing 5c; light amber ranging up to 11c; dark amber from 25c to 30c; wax firm at 28c.

R. A. BURNETT & CO.

CINCINNATI, Aug. 10.—The honey market is rather dull on account of the warm weather. Extracted is selling from 25c to 50c; No. 1 white sells 60c; better grades alalfa white-water from 75c; white clover from 85c. Fancy white honeycomb sells from 135c to 165c.

BOSTON, Sept. 27.—We quote our market as follows: Fancy white in cartons, 10c; No. 1, 12c; No. 1, 14c, Extracted, white, 90c; light amber, .6c; dark amber, 30c. Blaker, Scott & Lee.

ALBANY, N. Y., Sept. 19.—We quote: Fancy white, in cartons, 9c; No. 1, 11c; No. 1, 13c; No. 1, 15c; Extracted, white, 9c; light amber, 7c; dark amber, 30c. H. R. Wright.

OMAHA, Aug. 8.—New comb honey is arriving by express in small quantities from Iowa and Colorado, and will undoubtedly prove a re- tail way. California extracted honey is being offered carlots at 45@45c per pound, I.o.b. Cal. and 35c on freight. The demand for all of any sales have been made thus far. The proposition of extracted honey seems to carry large this year in Colorado, Utah and Californ.

P. O. MILES.

NEW YORK, Sept. 27—Comb honey is now beginning to arrive in large quantities, and, as a rule, quality is fine. The demand is good, and we quote it as follows: Fancy white, No. 1, 1c; No. 2, 12c, and amber, 11c. No buckwheat is on the market at present, but is coming within a week or so. Extracted is selling close to 50c per pound according to quality, and Southern honey in barrels at 85c and 90c per barrel. Beeswax dull at 25c. W. W. McClenahan & Bro.

DE MONES, Aug. 7.—There is very little doing here in new crop of honey. Some small lots of near-by produced comb honey are on the market and selling in a retail way at $3.50 to $3.75 per pound. Our quotations in this line before Sept. 1, our market does not consume a great deal of extracted honey.

F. C. KELLY.

DETROIT, Aug. 12.—Fancy white honey comb, 140c@145c; No. 1, 138c@141c; no dark to quote. Extracted, white, 65c. Beeswax, 20c. M. H. Hunt & Son.

BUFFALO, Aug. 14.—Quite a good demand for fancy, 160c@175c, and lower grades, 125c@14c; old neglected. Advise moderate prices. Request our list of new as yet. BATTISON & CO.

SAN FRANCISCO, Sept. 4—White comb, 10c@12c; amber, 75c@ dark, 60c@75c. Extracted, white, 55c@60c; light amber, 45c@; amber, 45c. Beeswax, 20c. Arrivals and spot offerings are of rather moderate volume, but there is as much or more on market the case happens to be unex- pectedly guessed. To secure liberal wholesale customers we would advise moderate prices to the user of buyers. In a small way for especially desirable lots slightly higher figures than are quoted are received.

KANSAS CITY, Sept. 14.—Up to the present time only small lots of new comb honey have been on the market, and these met with ready sale on the basis of 150@160c per pound for fancy. For next week there is no prospect of anything being sold. We have not had any orders and the quotations are issued at $1.00@$1.25 per case for lots of small size, which would be equal to about 40c on the market. The future of a firm market is anticipated. Inquiries for extraction and for comb honey still seem to have their ideas too low. In a small way 85c@90c is quoted.

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Written by EUGENE SECOR and Dr. C. C. MILLER.

Prices—Either song will be mailed for 10 cents (stamps or silver), or both for only 15 cents. Or, for $1.00 strictly in advance payment of a year’s subscription to the American Bee Journal, we will mail both of these songs free, if asked for.

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RED CLOVER QUEENS

BLACK ROCK, N. Y., Sept. 3, 1901.

FRIEND ERNEST—I will try and tell you what you want to know about that queen. I got her of you in 1899 as a premium with GLEANINGS. I never saw a small colony of bees build up as that one did. In the spring of 1900 they came out in fine shape, wintered perfect. I raised them up in May and gave them 8 frames more so the queen would not want for room. I never saw such a colony of bees as they were in June, and they were actually storing honey when other bees in my yard were starving. No! they were not robbing. I never saw those two best colonies of mine trying to rob. THEY CERTAINLY WORK ON RED CLOVER. This is no guesswork, as I have seen them. As you know, the past two seasons have been very poor, and what honey my bees did get in 1900 candied soon after cold weather set in. I packed this colony in a cheap hive and left them out, thinking that such a strong colony would winter perfect. The snow came on the middle of November, and those poor bees never a fly until the last of March or the first of April. When warm weather at last came I thought they were dead, as they did not seem to be flying much, so I did not pay any attention to them until in June. I noticed they were working a little, so I opened up the hive and found them in the upper story. I took the lower story out and left them in the one body. The queen was laying nicely, and I know they would make a good colony to winter. I got them at the end of July I noticed that they needed more room. I gave them super, 24 boxes, and in a few days they had filled. They have made 72 boxes of as nice honey as you ever saw, and are drawing out some wave this, Sept. 2.

Very truly yours,

GEO. B. HOWE.

Prices of Red Clover Queens.

GLEANINGS in Bee-Culture 1 year and Unregistered Queen. $2.00
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Send to them for their free Catalog.
HONEY DISPLAY AT THE CINCINNATI FALL FESTIVAL—(See page 662.)
THE AMERICAN BEE JOURNAL

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Dr. C. C. Miller, - Department Prof. A. J. Cook, - Editors.

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To promote and protect the interests of its members.
To prevent the adulteration of honey.

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Note. - One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one of the buttons as I have noticed people to ask questions about the busy bee, and many a conversation was started and wind up with the sale of more or less honey; at any rate it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."

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THE— The Bee-Keepers' Guide; Or, Manual of the Apiary.

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The Noveltv Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown above.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire, the lining are plate brass, the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

Why Own the Noveltv Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Noveltv" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Noveltv," your Pocket-Knife will serve as an identitv; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faithful, but cannot convey an exact representation of this beautiful and AIRY KNIFE, as the "Noveltv" must be seen to be appreciated.

How to Get this Valuable Knife. - We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00). We will club the Novelty Knife and the Bee Journal for one year, both for $1.50.

GEORGE W. YORK & CO., St., Chicago, Ill.

For please allow about two weeks for your knife order to be filled.
No Foul Brood—A Correction.—On page 627, we called attention to a reported case of removing foul-brood hives, combs, etc., from Michigan to Clyde, Ill., near Chicago. The owner of the alleged diseased material, mistrusting that he was the one referred to, called at our office for an explanation of the matter. We told him that our authority for the statement made were the foul-brood inspector of Michigan, and another man in that State.

He stoutly denied that any foul-brood material had been shipped by him, and said that the goods were still in the railroad car at Clyde, the car being unopened on account of some question about the freight charges.

In order that there might be no further cause for disagreement, we suggested submitting the matter to Mr. N. E. France, the famous inspector of apiaries for Wisconsin. He was immediately sent for. He came at once, and the owner of the car of bee-material, with Mr. France and the writer, spent several hours in examining very carefully all that the car contained, and found no evidence of foul brood whatever.

It seems that there were some foul-brood combs, etc., in the apiary from which the carload was taken, but those were not shipped. Hence, the unfortunate error.

We make the above explanation for two reasons: First, because we do not wish to accuse any man unjustly in public print; and, secondly, to show how easy it is to be mistaken.

As we did not give the name of the bee-keeper in our first reference to the matter, of course we omit it now. The carload of hives, frames, etc., was shipped from Rapid City, Mich., instead of Evart, as was stated on page 627.

We are more than pleased to have the matter end as it has, as doubtless will be all the bee-keepers in and about Chicago; for there is already enough foul brood in this vicinity without importing it from another State.

But, all the same, there should be a law in every State prohibiting the removal of any apiary, or part thereof, without first securing a State certificate granting permission, and also assuring that there is no disease.

Old vs. Young Queens for Breeders.—Editor Hutchinson calls for the experience of his readers as to the comparative value of old and young queens as breeders. In view of the fact that H. Edwards, of England, says that all queens making a record have been reared from the eggs of a comparatively old queen. One would naturally expect that the time of life at which the offspring of any mother would have the greatest vigor would be at the time when that mother herself is in the greatest vigor. A queen can do little toward making a record for herself, usually, during the same season in which she is born, for few queens are born before the swarming time, and the season will be well over before the entire force of the colony consists of her offspring. Her record will not be made before the end of the second season, and after distinguishing herself in her second season she is used as a breeder in the third season.

So it comes about that those who select the best to breed from will use comparatively old queens, and this may go far to account for the fact that Mr. Edwards’ best queens came from comparatively old mothers. But if he had reared queens from one of his breeders while she was yet in her first year, and as yet had established no reputation, might they not have been just as good as those she produced a year or two later?

Prevention of Early Swarms, says the Bee-keepers’ Review, is secured by some Ontario bee-keepers by using bottom-boards of wire-cloth, the abundant ventilation at least retarding swarming. Some might like this better than raising the hive on blocks.

Position for Bee-Escapes.—Almost universally they are put in the center of the escape-board. It was suggested in the Bee-keepers’ Review that one corner of the board is the better place, because when bees become excited about getting out of the super they run around the edges. Yet E. W. Brown, of northern Illinois, reports that in cool nights a cluster of bees would remain in the center all night if the escape was in a corner. Perhaps the best way would be to have an escape in the center and one in the corner.

Plurality of Eggs in a Cell is nothing very unusual when a prolific queen is in a limited brood-rest, but the cells containing more than one egg each are worker-cells. It seems, however, that exceptional cases occur in which a normal laying queen will lay the second egg in a queen-cell, according to the following from Gleanings in Bee-Culture:

A rule that I supposed without exception was that, if you found more than one egg in a queen-cell, you might be sure of laying workers. The other day I found two eggs in a queen-cell and a good laying queen present.

"Bees do not fling invaribility."

Thickness of Top Bars.—S. T. Pettit champions in Gleanings in Bee-Culture top-bars less than 3/8 thick. He quotes a correspondent who says:

"For a number of years I have been using a top-bar ¾ inch thick and ½ wide, and not a burr-comb on a single frame in eight years’ use."

This agrees with Mr. Pettit’s theory that the width of the top-bar and not the thickness is the essential thing to prevent burr-combs; although Mr. Pettit himself finds it necessary to use a thickness equal to ¾ to prevent sagging.

Dr. Miller says he still wants thick top-bars even if they make no difference about burr-combs, because the thick top-bars make so great a difference between brood-combs and sections that the bees will not carry up black wax to darken the sections.

Mr. Pettit thinks this point can be gained better by using queen-excluders. Editor Root thinks that ¾ top-bars gave more burr-combs in their apiary than 3/8.

Prevention of Winter-Breeding.—An article from Wm. McEvoy, in the Bee-keepers’ Review, gives his way of preventing the bees from beginning to rear brood in January when wintered outdoors. He thinks that by preventing the bees from starting brood-rearing in January—a thing that often occurs with bees wintered outdoors—we not only save store, but the lives of many of our best colonies, which often dwindle down and out in spring from the large amount of brood-rearing that they do at a time when they ought to be at rest. His plan of prevention is to crowd each colony upon five combs about the first of October, and seal each one of the five combs being sealed right down to the bottom. If any combs are unsealed, he feeds till the bees will take no more. This leaves no room for brood-rearing.

Cane vs. Beet Sugar.—Some discussion has taken place with regard to the propriety of using refined beet sugar for feeding bees, and some bee-keepers have felt uncomfortable because they had no means of determining whether granulated sugar was made from cane or beets. Bee-journals across the water have insisted that sugar made from beets was not safe food for bees. The following letter in Gleanings in Bee-Culture seems to teach that beet sugar is all right:

Mr. Huber Root called my attention to an article published in Gleanings Aug. 15, and asked me to read it and give my opinion of some of its statements. The writer, W. K. Morrison, seems to think that sugar made from cane is better than that made from beets. I do not know how he or any one can know when he gets granulated sugar whether it’s made from cane or beet. Of course, if he
sees the name of a sugar-factory of Nebraska, Colorado, or Michigan, on the sack in which it comes, he knows that he has beet sugar, but, if he has no way of knowing, for, even though it be from the refineries of Havemeyer or Arbutte, it may be from either source, for these refineries handle raw bate sugar from Belgium, Holland, France, Austria, and Russia, as well as raw cane sugar from Java and the Indies. One of the most remarkable characteristics of sugar, which the writer is that cane sugar is sweeter than beet sugar, "just as Jersey milk is richer than Holstein milk, and it seems, that cane sugar is a higher price." In the first place, I will say that cane sugar does not command a higher price than beet sugar; for in determining the price of sugar there is no question of its source, but of its quality. In the next place, I will say that the characteristics of sugar from whatever source, depends upon its polarization of purity of sugar. As the chemical form of the molecule, the same (C_{12} H_{22} O_{11}), and their physical characteristics are both the same, it results that neither one, or the other can be said to be sweeter. The simile can not hold for the reason that, while sugar is a fixed chemical compound of so many atoms of carbon, hydrogen, and oxygen, with certain physical characteristics resulting from the atoms of the molecule, the cellular qualities of sugar, on the other hand, is a variable physical combination of many chemical compounds; and while the sugar in the central parts of the molecule of sugar would make it other than sugar, there can be a great variation in the quality of milk, and it would still be milk. It might contain more or less water, more or less casein, more or less fat. The writer of the article claims that Dr. Wiley says that beet sugar is cane sugar, and cane sugar is beet sugar. I think that Dr. Wiley could say that. He might say that they are identical, or that beet sugar is cane sugar, but that cane sugar is beet sugar, for the reason that "cane sugar" is the common name of the article which is chemically known as "saccharin," and "saccharine" is the common name of the article chemically known as "glucose." The name "cane sugar" was given, at a time when the only known source was cane; but since then it has been found in other grasses besides the cane, and in a number of roots, as the carrot, parsnip, turip, and notably in the beet. The writer of the article further states that, by this definition, sugar is any material which is 500 times sweeter than ordinary sugar, ought to be cane sugar also, but it is not so, it is not! Sugar is not a sugar at all, having none of the characteristics of sugar except that in a dilute solution it will sweeten the tongue, while in concentrated form it would be very bitter, and it is in no sense a food, as is sugar. I do not know what he means by "the same process of reasoning," but certainly no process of reasoning could class saccharin as sugar.

MELVIN R. GILMORE.
Buffalo, N. Y., Aug. 31.

It seems that after reading this letter one may feel easy about the matter, especially after the following assertion of Editor Root:

I will reiterate what I have repeatedly said in these columns, that beet sugar, such as we have used for the last 20 years for feeding our bees, has been eminently satisfactory.

The Best Hive-Cover. — There has been some pleading for a hive-cover that would not leak, warp, or twist. A strong cleat at the ends will prevent warping, but it will not prevent twisting. Two thin boards with an air-space between them, the grain of the one boards at right angles to the grain of the other, the whole glued with water-proof paper, will probably solve the problem, the air-space at the same time making the cover warmer in winter and cooler in summer. The demand, however, for a cover of this kind has so far not been as might be supposed. Gleanings in Bee-Culture says:

Some days ago Mr. Culvert sent some samples of covers, such as I described, to a number of prominent bee-men, as well as dealers, located in different parts of the country, and good many of the replies have now been received: and nearly all favor a single-board cover in place of the double board with air-space. Indeed, the Excelsior cover with sides and ridge-board is considered quite good enough, and it seems to be that a double cover would be better on all accounts.

Westward Ho! — Editor Root predicts that within 10 or 20 years the larger amount of honey will be produced west of the Missisipi; intensive agriculture making bee-keeping less and less profitable in the East, while in the great West there is much land that can never be cultivated, but will produce good crops of honey. We'll see.

Getting Combs Built to Bottom-bars, says J. C. Derwiler, in Gleanings in Bee-Culture, is easy with wired or unwired frames, but the work is more expensive in the upper stories. That has been well known for a long time, but Editor Root might have taken the space for a foot-note to say that in most cases it would be inconvenient, and in some cases impossible to use such frames in upper stories, leaving the advocates for foundation-plaits perhaps the only ones who can get combs directly built to the bottom-bar without sagging in a lower story.

Wanted—A Foul-Brood Law and Inspector.—An Illinois subscriber, who finds good reason to suspect that some serious disease is getting a foothold in his apiary, says that disease akin to foul brood is by no means uncommon in his locality, and adds:

"We, as well as the rest of the State, badly need a law and an inspector, the same as Wisconsin or Canada has had."

Some bee-keepers will not agree with him.

One will say:

"I've been keeping bees 25 years and have never seen a case of foul brood, pickled brood, black brood, or any other kind of brood but healthy brood. That's the use of pastis. The expense of an inspector so long as the disease is not known in the State only in exceptional cases.

To this it may be answered that one reason for the need of an inspector is the fact that without an inspector the scourge may exist and flourish for a considerable time in any given locality without its existence being generally known. It may be a great deal cheaper—undoubtedly it is a great deal cheaper to have some one constantly on the lookout to prevent the spread of foul brood, than it is to stamp it out after it has obtained a firm foothold. It is better to be at the expense of insurance than to run the risk of being burnt out. Decidedly, our correspondent is right. Illinois ought to have the law and the inspector.

The Chicago Convention, to be held at the Brilliant H. O., double board, 56th and Fifth Ave., on Thursday, Dec. 6, promises to be something of a revival of the old North-Western. It is hoped that all who can do so will arrange to attend.

Weekly Budget.

DR. C. C. MILLER, and his sister-in-law, Miss Emma Wilson, were in Chicago on Thursday of last week, attending the American Sunday-School Missionary Conference, where Miss Wilson read a most thoughtful paper on "Quarterly Examinations in the Sunday-School." Both Dr. Miller and Miss Wilson are enthusiastic along Sunday-school lines, and are already leaders in certain important things in that direction. They find that Sunday-school work combines well with bee-keeping. At any rate, both are successful in their devoted hands.

A MAGAZINE FOR COLLEGE MEN.—The Business Side of a Great University," by President Harper, of the University of Chicago, is the opening article in the College Man's Number (Oct. 12) of the Saturday Evening Post, of Philadelphia. Pa. Theodore Roosevelt, Harvar 80" is the title of an entertaining paper on the President's college life, by his friend, Owen Wister. Other strong features of this number are short stories by Ma. A. Nurse, and Frank Norris, and a page of droll "Nature Studies," by Oliver Herford. This number will be of unusual interest to all college men.

MR. N. E. FRANCE, of Girtus Co., Wis., when here to make the inspection referred to on the previous page, of course called at our office. He reports about half a crop of honey in his apiaries this year. He also said that there would be less foul brood if all bee-keepers would read the bee-papers. Quite a testimonial to the value of such publications. Mr. France, in his recent work in his position as inspector of apiculture, but has met many difficulties. His pathway will have to be made easier, or he will decline to continue in the work. Wisconsin bee-keepers can never repay him for what he has done in their interest. Neither can they find another man who will be likely to do the work so well, and with so little friction all around.
Contributed Articles.

Quantity of Nectar in Blossoms—Water Used by Bees.

BY C. P. DADANT.

Do all the blossoms yield nectar that are visited by the bees for nectar? In other words, are the frequent visits of bees to blossoms out of which they secure no pollen an indisputable evidence that they are gathering nectar from them? This point is still being debated between two progressive apiarists of France—L’Abbe Multier, president of the Association of Bee-Culture of Haute Marne, and G. Collot, the editor of the monthly Revue de l’Apiculture Pratique.

L’Abbe Multier holds that in his section of country, although the bees work faithfully upon the basswood bloom, they never or almost never harvest any nectar from this tree. He holds, that although the basswood blossoms attract the bees, they go there and remain, in a sort of drug, instead of working. Indeed, it was proposed in a bar-room, while the bees that go to other blossoms go back and forth, from the hive to the field, and vice versa, and over and over without stop.

If the above-named gentleman had not in many instances shown his observing mind, one might be tempted to think that he misrepresented matters, but that is out of the question. He is not the first who has noticed that the bees may spend much time on blossoms without apparent results. The Revue Internationale had, years ago, seen the bees eagerly at work upon the blossoms of the Eryngium Gainteum, and had ascertained that they secured nothing worth mentioning. He had marked some of the workers while they were there, with a slight flour-dust, so as to be able to follow them in their flight, and had actually seen the same bee on the same bunch of blossoms, working faithfully and busily, for five consecutive minutes. It is very evident that the quantity of nectar secured, though sufficient to keep up the life of the bee, was so insignificant as to leave its honey-sac unfilled.

I mentioned this fact in my letters from Switzerland last year, in the American Bee-Journal.

When the Echinops Spharceaphalus was accidentally discovered to be a valuable honey-plant (?), the gentleman who made the discovery noticed the numerous visits to the plant by the bees, and sat down to an experiment as did Mr. Bertrand, only, instead of marking a bee and watching it, he marked off the workers while they were there with a mark, and saw if the same blossom was visited 1600 times by bees during the same day. This experiment, reported to the North American bee-keeper’s congress, brought the Echinops before the public in the United States, and a general rush was made towards the production of this plant. But it was since ascertained that not only was this a noxious weed imported from France—a sort of dwarf thistle—but it was also found, that, although the bees were always upon it when in bloom, yet no apparent results were secured. At least this is the final verdict, as far as I have heard. Mr. Bertrand, through his experiments in Switzerland, had already come to this conclusion, and I have heard from the Echinops and the Eryngium as not worthy of cultivation.

In the case of the basswood, the accusation of uselessness is not to be considered, except in instances like the one I have mentioned, where the trees are not numerous, and honey-producers are not short of clover honey in others. And the odor of the basswood honey, as well as its taste, can not be mistaken for any other. It is stronger in flavor than the perfume of the basswood itself, and stronger, too, than any imitation perfume, but a rank and almost disagreeable odor, which has caused its being classed as secondary in quality.

But the fact that the basswood bloom is evidently a useful honey-producer does not, after all, destroy the evidence, that in many cases the bees work upon blossoms which attract them by their pleasant smell and retain their attention by probably supplying them with enough nectar for their daily sustenance. Perhaps there is a remunerative quantity to make these blossoms desirable or entitle them to a place among our domesticated plants.

But plants and trees which furnish a supply of honey in certain localities under certain conditions, prove useless in places, and it is not to be ascertained of his situation and act accordingly.

DO BEES USE WATER TO COOL THE HIVE?

I see the above question put by J. A. Gerelts, page 566. In this article Mr. Gerelts connected with the American colonies from the combs melting down, and that he was told that the want of water by the bees was the cause of this. Let me give him our experience on the subject.

In 1878, if I remember rightly, we had established an apiary in the same woods, in which the bees have been in an old French gardener, about six miles from our home. The hives were in the yard near the house, and only a few of them sheltered from the rays of the sun by apple-trees. A small number of the hives had roofs, the others (new hives) were not sheltered in any way, for we had never before experienced any loss from heat, and had no idea of the possibilities.

During that summer the trees were tremendous, and we were hoarding the bees in the house. We were unable to put the honey-boxes fast enough to keep the bees with room, and the combs were exceedingly heavy. I remember going to that apiary at one time with six or eight extracting supers, and being unable to get them down. The surplus supers were filled with empty honey-boxes and all were filled at my next visit, a few days later.

These bees needed no water supplied to them artificially. There was a large creek in close proximity, and they had no great difficulty in getting it along finely at that place on their own resources in that line.

One day during the hot weather, I received word by a messenger sent by my old friend, the gardener, that something was wrong with the bees in the house. I was unable to go there for two days, in spite of his warning, and when I arrived on the third day I found five hives entirely empty, and some 15 others with from one to five combs broken down. The bees in the partly broken hives were already re-building the lost mass of piled-up broken combs, mixed brood, pollen and honey. But the five hives that had broken down entirely had nothing left but a pile of debris, dead bees and rotting brood. Remember that all these hives had supered on, some, one or two—super of our large-size Queen, containing when full some 60 or 65 pounds, and the body of the hives probably contained as much. All this was gone, and very certainly the most of it had run in the garden and been used for manure.

A few bees were found gathering straw out of our hives, that is, over the oil-cloth, at the top of the hive and under the cap, summer and winter, and it was on the suggestion of our old friend, the gardener, who had been put to work on mats all his life when gardening in Paris. He knew how to make them, and made for us a large lot; he said that in Europe they used them to keep away the frost, to shelter their plants from the heat of the noon sun, to cover their glass hot-beds on cold nights, and for many other purposes connected with gardening.

We have used these mats ever since. They not only keep off the heat of the sun in summer, but they retain the heat in the winter. They are good non-conducting shelters, and absorb moisture. We make them of what is known by us as "slough", a plant of the botanical name of which I believe to be "Spartina," a tall, wiry grass well known to any one who lives along the Mississippi. This material is stronger and tougher than straw, and mats made of it would last for ever if we could only bind them with indelible twine.

We had made also, of some of these mats, of large size, two feet high, by six or seven feet in length, and had used them to wrap up our hives for winter. But they were so cumbersome that we were forced to alarm our rats and mice destroyed the cord with which they were made. I believe it would pay to keep such mats in a safe place so as to use them for wintering.

The most important thing that we have had to prevent a recurrence of the accident above mentioned. Whenever the hives suffer from the heat, we raise them from the bottom-board so as to give plenty of ventilation. This we think is as necessary as the use of a shelter from the sun. We also use roofs (portable roofs made...
of rough boards) over all of our hives, and since we have used these precautions we have not had any accidents of this kind to suffer.

Hancock Co., III.

EXHIBIT OF BEES AND HONEY AT A FALL FESTIVAL.

BY JOHN R. SCHMIDT.

A NOVEL and interesting exhibit in the Pure Food Department of the Cincinnati Fall Festival was the display made by Mr. C. H. W. Weber. In a tastily decorated booth a complete line of bee-keepers’ supplies, consisting of the latest hives, utensils, and equipment was on exhibition in the pursuit of modern beekeeping, together with a nice display of comb and extracted honey put up in a most inviting and catchy way, as shown.

The exhibition attracted such universal attention, and was so much admired by the thousands of visitors, that it might be well to go into details somewhat as to its make-up, thereby possibly enlightening some interested readers who may improve upon the same at the next fair or exhibition coming his way.

The display being in a corner of a building, the two white-washed walls were well hidden behind a mass of choice comb honey in cases, tiered up over five feet high. Behind each of these, bottled honey was arranged, showing the different sizes, and also the special registered labels, a distinct marking for that kind of honey only. If proven otherwise, a $100 offer is yours, puts some significance into the meaning of these labels. The honey-cases and the bottles were encased by numerous one-pound car-tons colored a light lavender on two sides, and lettered in gold, signifying the contents a gift-edged product.

Potted plants (natural palms) furnished a florist, and placed in the center of the display, added much to the appearance and helped to enliven the exhibit; not to say a word about the bees, which made a “hot time” caused by the ever mischievous boy, this time with a sharp lead-pencil, who knocked apart the wire meshes at the entrance and allowed bees to escape before being discovered. Luckily, only one souvenir was carried away.

The three well-known hives, viz: 8 and 10-frame dove-tailed, Danzebaker, and the Langstroth portico, all complete and pried up, were set up in a neat as a pin, were placed near the rear wall, where they showed up to good advantage. The Cowan extractor, comb foundation, supers, smokers, and many small articles too numerous to mention, made up what may be called the foundation of the exhibit. Last, but not least, each tele- phone subscriber was furnished with an extra instrument in his exhibit free of charge, thus establishing perfect outside communication with almost every booth in the building, through a miniature exchange, which was on exhibition and illustrated the working of this wonderful instrument. This highly appreciated convenience came in especially handy when the bees escaped for it was telephoned instantly to the office and the scene was saved.

The most conspicuous place of the exhibit—the front—was occupied by two small tables, one of which contained a model 8-frame dovetailed hive having four glass sides. The hive was perfection in the full sense of the word. It contained a full colony of plain 3-handled Italian bees upon 8 frames of comb, with brood, honey and everything just as you would find in any prosperous colony. The upper story consisted of a 4½ x 4½ x 3½ plain section super, with fences partly cut away on either side to show the sections of honey in the various stages of completion.

In order that the queen might be seen at all times, a one-frame nucleus was shown, making it easy to keep track of this important individual.

Another nucleus illustrated the rearing of a queen-bee from the tiny egg to the matured product ready to begin her supreme reign, or be sent through the mails in one of the well-known cages. This was also shown and fully explained.

It may not be wise to say that these observatory hives were very attractive in appearance, which was due to the perfect workmanship. Instead of being painted they were nicely varnished. The top, lower-story and bottom-board were held securely together with nickel-plate fastenings, giving the whole a handsome appearance. Double-weight glass on the sides and ends of the full colony, and on the sides of the nuclei, made things as plain as day, and revealed the mysteries of the bee-hive to hundreds

with their strange, and, many times, ridiculous ques-tions.

Now, thoroughly aroused as to how bees “make” honey, the interested observer passed on to the other table, where a neat and polite young lady attendant was in charge of two large glass vessels of honey, distinct in quality and flavor, viz: the famous Colorado alfalfa, and white clover honey. Each who wished to sample was provided with a small, flat piece of white basswood, which served as a spoon. After once used, the piece was done for, and dropped into a receiver. This method not only avoided a lot of mushy work, but was extremely sanitary, and many sampled the honey who otherwise would not have done so. Quite a number of orders were booked for delivery, not saying anything of the one-pound sections and the bottles sold every day at the exhibit. On an average about three gallons of extracted honey was consumed every day from the sample table. Each little stick held, at most, half a teaspoonful of honey (many times less), so it is easy to imagine how many dips were necessary to take away three gallons of honey.

After the first day it was found absolutely necessary to restrict some of the children “unaccompanied by parents” who were especially fond of honey, for they actually could not decide on which should be the last dip.

An unusual and unexpected coincidence developed in the form of a biscuit-baking booth next door, which adver-tised a well-known flour, and gave away hot biscuits and coffee. The hot biscuits and the honey soon developed a mutual attraction, to the tune of several angry calls over the telephone for “More sample honey to the exhibits! Quick!” A fortunate misfortune which may be answered by yes and no.

The exhibit was a success in every way, and the howling success of Cincinnati’s great annual show was largely due to the exhibitors taking such an interest in their exhibits, as this one did in his. May it only serve its purpose well, and help bring “more business” to the bee-keeping industry, as well as in other pursuits.

Hamilton Co., Ohio.

HOW I MANAGED A SWARM OF BEES.

BY DR. E. GALLUP.

On April 19, 1919, I caught a medium swarm of bees. Now I propose to tell, for the instruction of the beginner, how I handled those bees.

I hived them on six empty frames. After seven days I began to move the outside frames one at a time, into the center of the cluster, so the queen would occupy it with eggs, and have the bees build all worker-comb. It had a young queen and probably was a second swarm. Bees left to themselves, especially with an old queen, usually build more or less drone-comb at the outside of the cluster.

On May 24 I had 14 frames all filled with worker-comb, and the queen had occupied them as fast as built.

On May 13 I moved the queen and two frames of brood into an empty hive, moved the old or first hive about the width of it to one side; set the hive containing the queen near enough to the position of the first hive so as to throw
Preparing Bees for Winter—A Conversation.

BY G. M. Doolittle.

HELLO! What are you doing with the bees this morning? I supposed all work with them was over for this year.

"In this you are mistaken, Mr. Smith; for, in my opinion, to reap the best results in wintering bees, September is the ideal month for the job. Of course, they should be fed in case of any mishap. But I could never see the necessity of the first thing pulling smoke in at the entrance, whether it is required or not. It looks to me like carrying your whip, and every time you get ready to do a job, the bees thin up, and the smoke, put on a good, smart cut with it for fear they will kick or hook. When I use smoke I usually just run a little at the top of the hive. Let the bees keep on at work, and out in at the entrance. By some doing so we can keep them gentle.

Bees that were in good condition have done remarkably well. The honey season is nearly over now. The loss in the three dry years that have passed has been very heavy in the mountain apiaries, where there was no irrigation. They will work in the valley until September.

Orange Co., Calif., Aug. 3.

Oct. 17, 1901.

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the most of the working force into the new hive; placed an empty frame between the two full ones, and adjusted the division-board. I sent for an Italian queen for the old hive. I have two boys, to the land and trees in the entrance, we should disturb them and stop their labors entirely for the time, but as we handle them, keep them right on at work, and they are not disturbed a particle. If every time we look at them, we allow them to be over-smoked, they should soon have them so cross that it would be dangerous for the children to go about them.

When I had 125 colonies about the house, I never had my own or the neighbors' children stung by them at all. We opened one hive too early in the morning, nor too late in the evening, when the weather is too cool.

I commenced this article some time in May, and it is now Aug 3. It was mislaid and forgotten.

Always have your smoker ready, in case of any mishap. But I could never see the necessity of the first thing pulling smoke in at the entrance, whether it is required or not. It looks to me like carrying your whip, and every time you get ready to do a job, the bees thin up, and the smoke, put on a good, smart cut with it for fear they will kick or hook. When I use smoke I usually just run a little at the top of the hive. Let the bees keep on at work, and out in at the entrance. By some doing so we can keep them gentle.

Bees that were in good condition have done remarkably well. The honey season is nearly over now. The loss in the three dry years that have passed has been very heavy in the mountain apiaries, where there was no irrigation. They will work in the valley until September.

Orange Co., Calif., Aug. 3.

October and November, by being obliged to eat poor, thin stores, this causing bee-diarrhea on account of the bees not being able to hold their feces, because they cannot evapo-rate the moisture. For the first month of this time they are anxious to learn about the bees, so I have opened both hives three and four times a week, and sometimes twice a day, to take out the combs and show the bees at work, the queen depositing eggs, how the workers unload their pollen, etc. One can scarcely find a swarm that is not more or less crossed with Italians.

In examining those bees we have not used a bee-veil or one particle of smoke at any time. Now, if I should, as much as an Italian queen, put her in the new hive, to the land and trees in the entrance, we should disturb them and stop their labors entirely for the time, but as we handle them, keep them right on at work, and they are not disturbed a particle. If every time we look at them, we allow them to be over-smoked, they should soon have them so cross that it would be dangerous for the children to go about them.

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Questions and Answers.

**Conducted by**

**DR. C. C. MILLER,** Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller, direct, with subject, sent. Please do not ask the Doctor to send answers by mail.—**EDITOR**.)

**Burr-Comb With Honey Between Super and Brood-Frames.**

I am a beginner in bee-keeping, having 16 strong colonies, in hives having 8 Hoffman frames with ¾-inch top-bars, with Ideal supers for section honey, and I am bothered very much with burr-combs full of honey being built by the bees between frames and supers; built so solid that it is impossible to remove them without lifting the frames, although the bees had plenty of room in the supers for storing honey. What will prevent bees from building burr-comb and storing honey between frames and supers?

**SUBSCRIBER.**

**Answers.**—Is the space between each two top-bars and the space over top-bars ¾ inch or a shade less? If so, there should not be very much trouble with burr-combs. I hardly know what can be the trouble. Perhaps there was an accumulation of burr-combs over the top-bars from former years. If there are burr-combs over top-bars when you put on supers, you may be sure the case will not be getting better, but worse all the while. In any case, the burr-combs are there now, and if let alone will be there in worse condition next year. I have been putting up supers or boxes, to scrape the tops of the top-bars clean with a sharp garden-hoe. Put your foot on the top of the hive at one end, and hoe toward you. Let an assistant play the smoker to keep the bees down out of the way.

**Foul-Broody Frames—Moving Bees a Long Distance.**

1. Can frames from foul-broody colonies, after the wax and honey have been melted out in a solar extractor (the heat of which is so intense as to cook eggs hard), be safely used in the apiary again?

**Answers.**—1. **I think** it would be safe to use such frames again, although very unsafe to use the honey again, and consequently unsafe to use the frames if any honey were left on the frames. That excellent authority on foul brood, Wm. McEvoy, tried to make it very clear to us at Buffalo that it was safe to use, without destroying, hives that had contained foul brood. Other authorities have insisted that it was unwise to use such hives, but the fact that under Mr. McEvoy’s instructions at least 5,000 such hives have been used with no evil results, makes it seem practically safe to use them. So I conclude that frames with no honey on them might be used without harm. While I think it might be safe to use such frames, I do not think it advisable. Mr. McEvoy advises using the hives and burning the frames, of course saving the wax.

2. The two items in the preparation are to provide abundant ventilation, and to provide against moving of the frames. One way is to provide ventilation by means of wire-cloth to cover the entire top of the hive, having a frame two inches deep on which the wire-cloth is fastened. If fixed-distance frames are used, all that is necessary to fasten the frames in place is to put wedges between the dummy and the frames or side of hive. If loose-hanging frames are used, you may wedge, between the frames, sticks long enough to reach to the bottom of the hive and project above the top-bar. Or, you may fasten the frames in place by driving small nails into each end of each top-bar, not driving the nails entirely in, but leaving them out enough so they may easily be drawn after the journey is over.

It will be well to study up what is said in your textbook on the subject.

**Drones—Honey-Boards—Sweet Clover, Etc.**

I have an apiary of 60 colonies that I am running for pleasure and a desire to study the nature, habits, etc., of the honey-bee. I have nearly all the standard books on apiculture, but can’t solve many little things that develop, and therefore I have to apply to our best authority, and wish to ask:

1. Why is it that several of my colonies lately have turned out a full force of drones, after killing them off in July, as is their customary habit here and elsewhere?

2. I don’t think I have seen a drone since some time in the latter part of July (it is now Sept. 23), and a few days ago I was strolling through my apiary, and all at once the peculiar note of a drone on the wing attracted my attention, and, on examining, I found the place alive with them, but they seemed to be confined most to certain box-hives, and are again being driven off by the bees. How do you account for this?

3. Some of my colonies are storing honey in their supers, while the majority of them haven’t stored any after the principal flow closed, which is generally about the last of June here. I have tried baiting them, still they seem to be basely engaged, and carrying in pollen.

4. A drone would not seem to act for a covering for supers to act as a honey-board, Is there any objection to it?

5. How do you prevent the honey-board being stuck to the frames and the frames over?

6. Suppose you use a piece of crocus-sack for a covering in place of a honey-board, would it be a good way to give the bees air to raise up the top by placing two cross-sticks under the top, raising it an inch or so? Would that increase the vitality of the honey?

7. Will yellow and white sweet clover yield nectar in this climate? If so, how long after sowing? When is the best time to sow it?

**Answers.**—1. I don’t know. I may give a guess at it. It is possible that in your locality, as in many others, you suffered from the terrible July drought, causing the bees to kill off their drones. Then when rains came and started up a moderate honey-flow, eggs were again laid in drone-cells. It must be remembered that each year about one quarter of the drone-cells are superseeded, and the drones usually done somewhat late in the season, so if a colony with a superseding turn of mind had been left by the July drought without any drones, there would be nothing left for them to do but to rear drones.

2. The difference in conditions accounts for the difference in behavior of different colonies. A colony with a young queen might be likely to rear no drones after July, while a colony with an old queen that it was trying to supersede would be sure to rear them. At the time you saw them the bees were probably killing off the drones from the supers at such times the drones being driven out of the hives make an unusual show of numbers.

3. I suppose you’d like to know why such difference. Well, there may be a difference in the industry of colonies. That one colony is in a more exposed position, and that the other is near some protected place, and there is a maple patch or the brood-nest may also make a difference. One colony had an old queen which did not lay well, and instead of keeping its combs filled with brood in June filled them chiefly with honey. Then it superseded its queen, rearing a young and vigorous one which not only filled all the vacant cells with eggs, giving no chance for storing below, but obliged the bees to carry up some of the honey previously stored in the brood-combs. A few years ago we had a change in weather during the first part of the season, allowing very little honey to be stored in the brood-nest. As the season advanced the queen was forced to lay in, and the vacant cells left by the hatching bees were largely filled with honey, leaving the honey-board to be covered by holding the bees up, or by putting a brood-board in place of the honey-board, having nothing whatever between the top-bars and the super above. You will probably be pleased if you
make such a change; but you must allow only ½ inch or a shade less between the top-bars and the sections or frames in the super. It will also be a help to have only ½ inch space between each top-bar, space you can secure by nailing strips of light wood of the appropriate size to the sides of your super in the exact top and bottom, and keepers also think it desirable that the top-bars be from ¾ to ½ inch thick or deep.

5. By having the space between top-bars and a super a scant quarter of an inch. You can also prevent it by doing away with honey-boards altogether.

6. Letting air directly into the super has the effect to make slower work in building comb wherever the air enters. So look for comb honey, but is a good thing for extracted honey.

7. They are of such universal adaptation that almost certainly they will succeed with you. You may sow in fall or spring. They will grow the first year without blossoming; the second year, they will begin blooming before white clover is over, and not stop entirely till hard freezing weather; and the following winter they will die root and branch.

**The Afterthought.**

The "Old Reliable" seen through New and Unreliable Glasses.

By E. E. HASTY, Stix. B. Roral, Toledo, O.

**The Home Circle.**

Conducted by Prof. A. J. Cook, Claremont, Cali.

**CORONADO.**

There are three places that every visitor of Southern California should certainly see before he leaves this part of our country. I hardly need to say that one of these is Redlands, with her incomparable "Smiley Heights," wealth of verdure, beautiful homes, and show of thrill everywhere. That one is Santa Barbara, with its lovely bay, its splendid climate, magnificent mountains and sea, and its incomparable suburb, beautiful Montecito. I have just spent Sunday at the third, beautiful Coronado. This is across the bay from San Diego. The climate here is wondrous even for California; never hot in summer, never cold in winter. San Diego and Coronado enjoy and rejoice in one perpetual summer.

Off San Diego are two long peninsulas. The outer, Point Loma, stretches southward, is some miles long, and high and precipitous. The inner, Coronado, stretches northward more miles, is often very narrow, and is low and level. All of Point Loma holds the ocean from the beautiful Harbor of San Diego. Only the south end of Coronado feels the pulse-beats of the great Pacific. Coronado Hotel, and Coronado Tent City, mark the limit where the ocean sweeps this peninsula. So it is opposite the point of Loma. On one side the huge breakers thunder along the shore; on the other the long, quiet bay nestles, and is in striking contrast to the rough seas. That is the very narrow stretch of land. The great ocean steamers, or the more powerful war vessels that are wont to enter San Diego Harbor, must round the magnificent Point Loma, then pass northward in the narrow channel between the Coronado peninsulas, then round the extreme northerly point of Coronado, when they may drop anchor in the ever peaceful waters of San Diego Harbor.

Coronado Hotel is one of the grandest in the world. Its prices are equally renowned, yet the moderate price may still be had. The food is wondrous. The cuisine is rarest edification. The same company that controls the great and far-famed hotel, are likewise proprietors of Tent City, where neat-dressed and carpeted tents can be rented very reasonably. A fine tent for three can be had for a month. In this are good beds, all the utensils for light housekeeping, gasoline stove, dishes, table, etc. Table and bed linen are also furnished. A good and very reasonable restaurant may be made to supplement

Sealing inside, directly on the hot honey, looks rather like a novelty. Pages 564—566.

**PRODOLING SECTION-TOPS.**

Dr. Miller’s third answer to Indiana’s questions will bear talking about. He is doubtless correct that bees often dand the top of sections worse when an enameled cloth is laid on. Angles with a crevice in the bottom of the angle always will have some objection made to them, but are awful busy at something more important. In doing this job they ram the material home forcibly, with the result that the section tops are soldered quite a distance from the edge. There is another side to the question, however.

**The "ONENESS" OF CLAREMONT.**

Happy Claremont! One church, one literary club, one horticultural society! I don’t know but such a town ought to pray never to grow any bigger. I’m sure they have a right to pray a little. "Lord, we thank thee that we are not in the spirit of split-up-eness as other towns are." Page 569.

**BRITISH COLUMBIA BEE-KEEPING.**

And so in British Columbia one man says bees can not find supplies—has tried it—and another man gets 90 pounds of sections. Page 571.

**HONEY AND HONEY CONSUMERS.**

And so black mangrove honey from Florida, notwithstanding its high quality and flavor, stirred up suspicion when peddled in a distant State where no one ever tasted just such a taste. Apparently Mr. Wallemeyer has struck an important general principle. The ordinary customer wants one of the honeys he has tasted before—and fears a swallow.

But it isn’t a general principle everywhere that consumers object to buying as much as three pounds of one thing within delivery distance of a city grocery does seem to stimulate the disposition to buy by dribbles, but the main cause lies elsewhere. Most consumers consider buying honey at all as a piece of extravagance. They dash in desperately to the depth of half a pound; but would consider it wicked to go much deeper. The remedies are obvious, if we are willing to use them. In retailing extracted honey I use a five pound package, and am seldom asked for less. If I remember rightly, we breeders sell almost entirely in a 20-

"Useful when empty" is a very important phrase.

Shot in every new bottle to break out the shelby, thin glass. Sugar.

Could wish that all the pictures had turned out clear like the first one, so that we might learn the exact manipulation.

Good wife that will non-colloquially get dinner with 300 pounds of honey encumbering the range!1

No sin to adulterate with paraffine your own usings of wax, if it makes it better.

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the home fare if one desires. A good literary and reading-room, with all the papers and magazines, is free to all. A very fine band discourses most beautiful music each evening. All kinds of bathing—surf, still water, or indoor warm water plunge bathing are at the command of all. All the attractions of the great hotel are shared with the occupants of Tent City. For one of my simple tastes Tent City offers as inviting a menu as does the great hotel. I know of no place in California, or elsewhere, where as much can be had to gratify wholesome desire as at this beautiful retreat at delightful Coronado.

CULTURE.

At the pretty little hamlet of Chula Vista, on the mainland opposite the south end of Coronado peninsula, I had the pleasure of being entertained by Judge A. Haines for two days the past week. At the dinner table one evening, Judge Haines, who has a family of delightful and promising children, two of whom are making an enviable record in college, remarked upon the tremendous importance of the parents gaining and holding the fullest confidence and sympathy of the children. To do this we parents MUST be able to enter fully into the plans, thoughts and feelings of our children; must give heartiest sympathy to all that pleases and interests them. This, said the Judge, is the key to all right training in the home.

I was greatly interested in his further remark, that the best use of education was to make us able to extend these sympathies. Nothing, said the Judge, will help us so much to give and gain this fullest and best sympathy, as will rich culture. Thus education, broadest and best, will, as its best fruit, make possible such training as will result in grandest men and women. Such will most exalt our citizenship, and most bless the world. Judge and Mrs. Haines' own home and family are the best proofs that his philosophy is correct.

The Judge made one other remark: Anarchy, whose foul presence has struck such a cruel blow not only at us, but the world, feeds on sensation and superstition. Culture is the arch foe to both these blots of character. Culture, then, should rid us of theastardly presence, that so seriously menaces our peace and safety.

EVERGREEN TREES.

The mother-love is one of the most holy and sacred of instincts. It impels the mother-bird to fashion her nest where the younglings will be most secure against discovery and harm. Thus the pine and other evergreens are most sought for purposes of nest-building. Thus every home grounds we may well plant a group of evergreens. I have only two lots for my home at Claremont, yet down by the barn I have a vigorous Monterey pine, Lawson cypress, Norway spruce, silver cedar, giant sequoia, and graceful arbor vitae. Already the birds have found my grove and appreciated it for nest-building. Thus this grove has three advantages: It gives real beauty, gives a touch of evergreen landscape, brings the cheering, beautiful presence of our feathered friends. Hurrah for the little grove of ever verdant conifers!

THE GARDEN.

Every bee-keeper, every rancher, should have a garden. What a superb place to give the children the needed wholesome employment! What a chance to give them responsibility and opportunity to earn money that shall be all their own! What a rich addition it gives to the family table as the best corn and peas are only known to him who raises them in his own well-cared-for garden. What a rich pleasure for the family as a whole, to plan, plant and clean in this little best corner of the home grounds. With what pride we note the growth of the luxurious pie plant and vigorous asparagus. A friend—a very busy man of Escondido—a great bee-section, has just told me how he helps the purse by his garden. He has only three lots, all told, yet his monthly income is very helpful. One month it reached $20.80. His cabbages sold readily for two cents per pound, when lemons sold for only one cent.

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GEORGE W. YORK & CO., 144 & 146 Erie Street, CHICAGO, ILL.
The Drone’s Folks.

"The drone," says a Straw in Gleanings in Bee-Culture, "is always a half orphan, for his father is always dead before he is born. He has no home, for the memory of his mother’s female children is never his father. In fact, he never has any father except his grandmother, and he never likes to see any of his children."

In Breeding.

The worst dangers in bee-keeping are where two beings are mated that are of exactly the same blood, having the same father and mother. Fortunately, the bee-keeper need take no pains to avoid such close breeding; Nature takes care of that. A drone and a queen from the same mother are not full brother and sister, and therefore the drone is not father of the drone. The only way to mate two of exactly the same blood is to mate a drone to his mother, and the drone is born too late for that.—Gleanings in Bee-Culture.

Bees and Pear-Blight.

Regarding the bee and pear-blight question in connection with the fall in the market for the blighted fruit, it is noticeable that many of the fruit-growers are coming to (or appearing to come to) the conclusion that there are certain means of protecting the blighted fruit, and that by following the same the trees in blossom will not materially abate the destructive effects of the pest. The same is true of the attention passed by the bee-keepers in their conception, to move the bees out of the region of the blighted trees during the time they were in blossom, required some raffity action on the part of the fruit-men in filling out certain blanks required by the drying merchants, and this was done some time ago, but nothing has been done. It is probably true that the pear-orchardists are not so sagacious as to the beneficial effects of the proposed removal, and many of them are fair men, and therefore disinclined to put the bee-keepers to this expense unnecessarily.

I talked with Prof. Weihrauch (who, it will be remembered, originally declared the bees to be guilty), while in Buffalo, regarding this case of the pear-blight, and he was not inclined that the bees would bring about relief, owing to the presence of wild bees and numerous other insects that would, undoubtedly, spread the disease. He was sure, from extended experiments, that the bees were very necessary for the health and proper maturing of the fruit, although he admitted that possibly conditions in California might be different. Pear culture is a careful, canny man, and a friend of the bees, and so much so that he deems it necessary to have a few colonies of them in his own pear-orchard, pear-blight or no pear-blight.

Taking everything into consideration, it appears now there will be no conflicting of interests between the bee-keepers and pear-men; and it is hoped that the matter will remain thus. It is probable that the pear-blight disease losses its hold or "runs out," as we sincerely hope it may,—Gleanings in Bee-Culture.

"Review Notes" from the Bee-Keepers’ Review.

Beeswax is the last thing that I should think of using for a lubricant, yet when I took my spectacles to a jeweler because one of the hinges was badly out of order, I was told that it was difficult to move it, he simply rubbed beeswax around the joint and held it over a lamp until it was hot, then he put it on, and there it has worked all right. He says that when the hinges to a watch-case work hard for some reason, rub beeswax on it if a similar thing occurs.

Extracting-Combs are better when they are thicker than the ordinary brood-combs. There is less caps for the bees to do, and less unapplying for the bee-keeper.—Besides, it is easier to uncap a thick than a thin comb.

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GEO. W. YORK & COMPANY.

Chicago, Ill.

THE NICKEL PLATE ROAD will sell tickets each Tuesday, Thursday, and Saturday during October to Buffalo Pan-American Exposition and return, at $6.00, good in coaches, return limit 3 days from date of sale. Tickets with longer limit at slightly increased rates. Three trains daily. Chicago Passenger Station, Van Buren St. and Pacific Avenue. City ticket office, 111 Adams St., Chicago.

With thick combs there are fewer to handle. No beekeepers produce bees better or more easily than the bee-keeper in the brood-nest. With the Heddon hive Mr. J. B. Hall, of Ontario, uses only comb in a single packet thin strips of wood to the edges of the honey, the frames of such a width that seven will place in the brood-nest. If the frames are needed for brood-rearing this is an easy matter to remove the strips of wood.

Packing put around the bees in winter sometimes causes confusion, for their movements will easily be detected by the radiates from the cluster. How it does this is well illustrated by the house that Mr. Jacob Alpaugh, of Ontario, told me of an experience of his when the season was an entire failure and colonies not able to hold through the winter. Although already in debt, he went in still deeper by getting several hundred dollars worth of vegetables. The next year proved to be one of the best. Prices were good, and there were only a few bees in the Parmatine, and this he put in then and left with money in his pocket.

A STRUT STRING, or even a piece of wire, attached to the end of the tree, is an efficient device for starting a screw-cap on a honey-can, or loosening the cover of a fruit-case. I find the string wound around the cover, drawn up, drawn down, or drawn out by the string will not slip, and then use the stick as a lever for starting it. But had you ever thought of it? I saw this device at the house of R. H. Smith, of Ontario.

EQUALIZING COLONIES and contracting the brood-nests of old colonies just at the opening of the honey harvest is something that is not often practiced, but Mr. Albert E. Hall, of Ontario, says that with the Heddon hive he finds it an advantage. He looks over both cases of both-nests, and if it is necessary to equalize colonies that contain the most brood, leaving this case upon the comb. The combs of honey are left away to be given to the bees. At the time the harvest is over. The more populous colonies will contain more than one case of brood, while the weaker colonies have less than one case of brood; and, by the time each colony is given one full case of brood, not much of any brood will be left. This methodcrowds the bees into the sections and curtails the production of beeess at just about that time.

PREGNANT QUEENS are something that may be found in the apiaries of Mr. Miller, of the last one having a record of each colony, the breeding of the queen, the amount of surplus secured, etc. to this colony, this year, next year, and a list, furnished seven super of surplus. He hasn’t looked up the breeding of the queen yet, but says he can trace its back ten years.

Bee-keeping Colonies devoted to comb honey production, and the others to extracted honey, will allow the bee-keeper to require their a year from his honey, the bees worked for comb honey will swarm, and thus furnish the queen-cells for use in the comb. This was said by A. E. Hoshall, of Ontario.

CUSHIONS are usually used on top of colonies that are wintered out-of-doors, but M. H. Hunt says that he prefers to lay a large piece to make hay, the Sharples Drum Separators. Look "Business Directory" & Cat. 212 free. W. Chester, Pa.
of cloth in the upper story, over the broad-
est, and pour the chaff into the cloth. He says that he has stuck more stringently than the corners, than with the cushions. In the spring he can grasp the cloth by the corners, lift it out, and dump its contents into a box. The cloth is packed away in a small space for the summer, and are easily protected from the ravages of the weather.

A PORTICO, four or five inches deep, having a wire-cloth front, and large enough to cover the whole front of the hive, is the best thing possible with which to fasten in bees when moving them or shipping them. Nothing worries bees more, or sooner puts them into a ferment, than to find the entrance closed. While such a portico does not allow the bees to fly, it does not close the entrance, and allows them to live in it, off the comb. When hives are arranged in this way they can be stacked up without shutting off the ventilation. Jacob Almagn, of Oregon, has some porticos as these for use in moving bees, and one of them can be fastened to the front of the hive in about five seconds by means of a hook made of wire. He had two colonies swarm once when moving, and the porticos were filled so full of exciting bees that the latter disgorged the honey in their sacs and perished as a result.

DRAWS COMBS in sections can be very profitably secured by the close of the beard, and wood by leaving on one super of finished sections, raising it up and putting beneath it a case of sections filled with foundation. By keeping close watch this can be removed as soon as the combs are partly drawn, and before much honey has been stored in them, or the sections are scarcely soiled with propolis. If the flow continues longer, another case of sections can be put in the place of the one removed, and another set of drawn combs secured. Such super of half-drawn combs are very valuable for use the next spring.

HIVES IN GROUPS of four is the arrangement used in the apiary of J. B. Hall, of Ontario. The groups are named from the letters of the alphabet; thus there is A group, B group, and so on. The two north hives in group A face north, the two south ones face south. In group B the two west ones face west, the two east ones face east. In group C the hives face north and south the same as in group A. By this arrangement no two hives standing near each other have the same relative position, and there is little danger of a returning swarm getting into the wrong hive. When the bees are placed in the cellar in the fall, each hive is marked with a pencil on the front in such a way as to indicate its position: thus: "G—S—W" means that it is the southwest hive in group G. In order that the position of group G may not be forgotten, a big letter G is printed on a piece of section-box, and taken to a tree just north of the group. Other groups are marked in a similar manner.

Standard Belgian Hare Book!

BY M. D. CAPP.

THIS book of 175 pages presents a clear and concise treatment of the Bel-
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titation and constructing of the hares; the selection of breeding stock; care for the young, feeding, dis-
ees and their diseases; marking, marketing, shipping, &c. The first edition sold 40,000 copies was sold in advance of publication.

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ALL IN 60-POUND TIN CANS.

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A sample of either, by mail, 10 cents, to pay for package and postage. By freight—two 60-pound cans of Alfalfa, 8 cents per pound; four or more cans, 75 cents per pound. Basswood Honey, 50 cents more per pound than Alfalfa prices. Cash must accompany each order. You can order half of each kind of honey, if you so desire. The cans are boxed. This is all.

ABSOLUTELY PURE HONEY

The finest of their kinds produced in this country.

Read Dr. Miller's Testimony on Alfalfa Honey:
I've just sampled the honey you sent, and it's prime. Thank you. I feel that I'm something of a heretic, to sell several thousand pounds of honey of my own production and then buy honey of you for my own use. But I have to confess that for use in any kind of hot drink, where one prefers the more wholesome honey to sugar, the very excellence of the alfalfa honey I have received from you is better suited than the honey of more mild flavor, according to my taste.

C. C. MILLER.
Mclaren Co., Ill.

Order the Above Honey and then Sell It.
We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.
The New vs. the Old.

I started in the spring with 47 colonies, 6 of them too weak to give any color; I increased them, but I have doubled back to 70, and taken off 3800 pounds of honey, mostly extracted, and plenty of stores left for winter. The above has been done where bees in five box-gums could not exist together for want of flowers. I give the improved hive and the Italian bee credit for the above.

L. W. McRae.

Washoe Co., Ala., Oct. 2.

Honey Conditions in Nevada.

The Nevada State Journal (Washoe County's leading paper), says: "Nevada's honey crop is almost a failure. Around here the bee-men are telling the same story.

Such is the fact, all things considered. I have received 200 pounds per colony, and for the season I think I have taken the prize in this locality. I know of some who have received 300 pounds per colony; others have secured none at all. Although honey is scarce, buyers are offering only 1 cent per pound for comb, and 5 cents per pound for extracted. The A. I. Root Co. have a man in the field that is offering the best price: 50 cents per pound for comb, and 5 cents per pound for extracted. No sales have been made as yet, as we are after higher prices, if possible.


Slow Honey-Dealers.

I shipped to B. Presley & Co., St. Paul, Minn., on July 31, 1901, 675 pounds of as nice white honey as was ever put into cases, and for two months I could not get a word from them—not even an acknowledgement of the receipt of the 675 pounds. Finally, after getting an attorney to write them, they sent me the sum of $86.00, or a trifle over 10 cents per pound.

Kanabee Co., Minn., Oct. 5.

Good Season for Honey.

This has been a fairly prosperous year, notwithstanding the extended drought. The wild bees during the summer were flying free from storms and wind, thus giving an unequal number of working days. We had a heavy run early in the season, but cutting out little clover, also red clover, being used by the drouth, was visited more frequently than country by the bees, and we also had a fairly good fall flow from heartsease, goldenrod, and many other flowers that secrete only during dry, hot weather.

My surplus at home is 497 pounds to the colony, spring count, from 75 colonies: one colony, 15 pounds; another, 28; and the latter part of May I had a chance to sell 500 colonies for $2500, but during the negotiations the bees had flown away, and I refused to sell. I produce section honey, extracted, and chunk honey, and sell all of it without regard to color for 15 cents per pound, and look forward to local dealers in this and adjoining towns.

I am engaged in quite a number of other enterprises, but the connection with bees. Many neighboring farmers, who own their own farms, valued at $800 to $1400 each, and many of them seeing my annual profits do not exceed $800, while my average profits from sales of honey and bees from my home apiary have been for 10 years $300 per annum on the investment.

I am one who believes bee pay, and pay better than almost any other kind of business. I am in the business because it is profitable financially, and not for health or pleasure. I think an industrious person who would ordinarily succeed in other affairs will do so in keeping bees, but it is a hard job when we fail at farming or mercantile business I would not advise to go into the bee-business.

L. Gandy.

Richardson Co., Neb., Oct. 3.

An "Infallible" Method of Introducing Queens.

Bees are subject to more modes of manipulation than any other creature we have. There are all kinds and shapes of hives, all sizes of frames and sections, differences of foundation, and methods of introducing queens, all of which go to "rattle" the amateur, and place him in a helpless position. A wise bee-keeper has the only one." B says, "My way of manipulat-

ing bees is the best way;" and now here I am saying that this way of introducing queens as infallible. Yes, infallible only in colonies where a laying queen has been taken out within a very few days, say not to exceed four, and there is lots of hatching brood, and this may be done just as soon as the old queen is removed. When you have found the old queen, and killed her or disposed of her in some other way to suit your convenience, every bee out of one hive is mounted on a new queen, and lift a frame from the hive and put into the cage, 15, to 20 young bees from one hive. I have been told that doubtfully there are no old bees put into the cage. Remove the top cover, and, in from 24 to 48 hours the queen will be hiber-

nating, laying her eggs in the cells within six hours.

Queens are very nervous little things, and when the cage is filled up with the little innocent, fuzzy things, she is contented, and the colony at once will say, "Look at the young queen; why, the cage is full of our bees;" and they do not molest her. "So we will hustle her out," and surely they will, and even when she seems to be a bit nervous, her nervousness has all disappeared, and she takes up her duties and commences laying in a very short time. I have been told to cut her out now and introduce them in this way. This may not be my own invention, yet I have never seen it mentioned, but possibly it has been; but some amateur may profit by it, nevertheless. A. D. D. Wood.


Poor-Season—Old Bee-Books, Etc.

I am a new scholar in bee-keeping, I bought two colonies last fall; one swarmed, and I captured it. The season was poor, and I found it difficult to carry them through. I did not get a taste of honey. Although my first attempt is a failure I will continue; that is my ambition, and I have looked into the affairs of the National Bee-Keepers' Association.

I have been deeply impressed by the high character. Christian spirit and police shown, each to the other, at the bee-keepers' conventions and rallies. I would have enjoyed meeting the brethren (and sisters, too) at Buffalo, and receiving advice and pointers (though I have received some pointed ones from the books).

I love to read the American Bee Journal so much that I feel lost when I do not have it in my hand.

I have just read three old books on bee-keeping—one by Mosey Rusden, July 14, 1869, dedicated to the "King's Most Excellent Majesty." This book is in four sections, has 143 pages, gives very clear the habits, nature, and functions, of the "king-bee," tells how to handle bees (up-to-date, 1869!) how to construct hives, treats on diseases of bees, and, in short, does everything. If any man knows anything more than I impart, let him disclose it; otherwise, improve with me.

The next book is by Thomas Widman, 1770, "A Treatise on the Management of Bees." His writing is delightful and very palatable to peruse. He describes a movable-frame hive (quite up-to-date). The engravers are almost as good as any of the older writers. I wish you could read this book for its many interesting points.
SWEET CLOVER
And Several Other Clover Seeds.
We have made arrangements so that we can furnish the various kinds by freights or express, at the following prices, cash with the order.

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SWEET CLOVER

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Oct. 10.—There is a very good trade in No. 1 comb honey at $4.50 per lb.; that which is well packed at $4.75 to $5 per lb., from $3.75 to $4.25 per lb., from $1.36 to $1.44 per lb.; some small lots of fancy have come on the market this week, the prices for these being from $1.36 to $1.44 per lb.; the dark honeys of various grades range at from $1.06 to $1.16. Extracted sells fairly well, from 25 to 27 cents per lb. for white and dark honeys. White clover honey is at 25. A. R. BERNETT & CO.

CINCINNATI, Aug. 10.—The honey market is rather dull on account of the warm weather. Extracted sells very free at 25 to 26 cents per lb. for white and dark honeys. Better grades alfalfa water-white from 36 to 38 cents; white clover from 38 to 40 cents. Fancy white comb honey sells at from 135 to 136 cents.

C. W. WEBER.

BOSTON, Oct. 12.—Fancy 1-pound honey in cartons, $1.70; A No. 1 in glass or cartons, 15c; No. 1, $1.15; very little No. 2 being received. Light amber extracted, 75.

BLAIRS, SCOTT & LEE.

ALBANY, N. Y., Sept. 19.—We quote: Fancy white comb, $1.25; No. 1, 135c; No. 1, $1.15; No. 2, 85c; No. 3, 60c. Extracted, white, 75é; light amber, 65 to 67c; dark, 55 to 60c. Beeex., 28c to 30c.

H. W. RICHARDSON.

OMAHA, Aug. 8.—New comb honey is arriving by express and is selling well in this city, and Colorado, and selling at $2.50 per case in a retail way. California black clover honey is offered in carlots at 42¢ to 44c per pound, f.o.b. California shipping-points; but we have not heard of any being having in stock. The production of extracted honey seems to be quite large this year in Colorado, Utah and California.

PICKREY BROS.

NEW YORK, Sept. 12.—Comb honey is now beginning to arrive in large quantities, and, as a rule, the quality is very good, and the prices we quote as follows: Fancy white, 140c; No. 1, 115c; No. 2, 105c; No. 3, 95c. Extracted honey, 50c. Honey of this quality is in demand and in line before Sept. 1st. Our market does not consume a great deal of extracted honey.

PICKREY BROS.

DETROIT, Aug. 12.—Fancy white comb honey, 140c; No. 1, 130c; no dark to quote. Extracted, white, 55c; light amber, 55c; dark, 45c. Beeex., 26c to 28c.

Arrivals and spot offerings of this moderate volume, but there is as much or more market than can be conveniently or advantageously placed. To secure liberal wholesale custom, prices would have to be shaded in favor of buyers. A large and abundant market for our comb and extractable honeys are expected. Other desirable lots slightly higher figures than are quoted are realized.

KANSAS CITY, Sept. 14.—Up to the present time only small lots of new comb honey have been on the market, and these met with ready sale. The sales of boxed clover honey have been slow, although the price is $4.25 per lb. for fancy white. For next week heavier receipts are expected and quotations are named at $1.06 to $1.25 per lb. for fancy. A few small lots of clover honey ranging from about 140c to 145c; the demand being quite brisk, a few lots are at a premium. A large and ready market for comb and extracted are a little more numerous, but large bayers still want to have their ideals too low. In a small way 56c is establishment.

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We have a Large Stock on hand and can ship promptly.

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“Buckwheat Cakes and Honey”

Words by EUGENE SECOR, Music by GEORGE W. YORK.

This song was written specially for the Buffalo convention, and was sung there. It is written for organ or piano, and has been all the songs written for bee-keepers. Every home should have a copy of it, as well as a copy of

“THE HUM OF THE BEES in the APPLE-TREE BLOOM”

Written by EUGENE SECOR and Dr. C. C. MILLER.

Prices—Either song will be mailed for 10 cents (stamps or silver), or both for only 15 cents. Or, for $1.00 strictly in advance payment of a year’s subscription to the American Bee Journal, we will mail both of these songs free, if asked for.

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RED CLOVER QUEENS

BLACK ROCK, N. Y., Sept. 3, 1901.

FRIEND ERNEST:—I will try and tell you what you want to know about that queen. I got her of you in 1897 as a premium with GLEANINGS. I never saw a small colony of bees build up as that one did. In the spring of 1900 they came out in fine shape, wintered perfect. I raised them up in May and gave them 8 frames more so the queen would not want for room. I never saw such a colony of bees as they were in June, and they were actually storing honey when other bees in my yard were starving. No! They were not robbing. I never saw those two best colonies of mine trying to rob. THEY CERTAINLY WORK ON RED CLOVER. This is no guesswork, as I have seen them. As you know, the past two seasons have been very poor, and what honey my bees did get in 1900 canned soon after cold weather set in. I packed this colony in a chaff hive and left them out, thinking that such a strong colony would winter perfect. The snow came on the middle of November, and those poor bees never a fly until the last of March or the first of April. When warm weather at last came I thought they were dead, as they did not seem to be flying much, so I did not pay any attention to them until in June. I noticed they were working a little, so I opened up the hive and found them in the upper story. I took the lower story out and left them in the one body. The queen was laying nicely, and I thought they would make a good colony to winter. At the last of July I noticed that they needed more room. I gave them super, 24 boxes, and in a few days they had it full. They have made 72 boxes of as nice honey as you ever saw, and are drawing out some starters now, Sept. 2. Very truly yours, GEO. B. HOWE.

Prices of Red Clover Queens.

| Gleanings in Bee-Culture | 1 year and Untested Queen | $2.00 |
| Test Queen | $4.00 |
| Select Tested Queen | $6.00 |

If you want something good you can not do better than to order one of these queens. All orders are filled promptly. No extra postage on these to foreign countries.

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MR. ANSELL'S HONEY-DESIGN SHOWN AT THE MINNESOTA STATE FAIR. — (See page 670.)
Langstroth on The Honey Bee

Revised by Dadant—1900 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroughly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

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This is a splendid chance to get a grand bee-book for a very little money or work.

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The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.

HOWARD M. MELBEE, HONEYVILLE, O.

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The holsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the liners are plated brass; the back springs of Sheffield spring-steel; and the finish of the handle as described above. It will last a fast time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it otherwise they will send the name and address, and destroy the knife. It traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your Pocket Knife will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How to apply this Knife. What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying car gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00). We will club the Novelty Knife and the Bee Journal for one year, both for $1.50.

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OBJECTS:
To promote and protect the interests of its members.
To prevent the adulteration of honey.
To prosecute dishonest honey-dealers.

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Membership Dues, $1.00 a year.
“Too Prevalent” Unqueening.—Quite a number of beginners in bee-keeping make a big mistake in the first year. They have ordered or purchased queens from a dealer or breeder, they immediately kill the queens of the colonies where they wish to introduce the new queens when they arrive. This is a risky and unnecessary thing to do. Never destroy a queen as early as the queen sent for is received. Very often queens can not be sent by return mail, even if so advertised. A breeder may be able to send by return mail almost invariably, but more than likely the bee-keeper who has been so hasty as to kill the old queen before the new one arrives is so unfortunate as to have the mailing of his queen unavoidably delayed several days or a week. Even a queen-breeder can not control all circumstances at all times. So the safest way is to wait until the new queen is on hand, then proceed to remove the old queen and introduce the new one according to directions.

Discrepancies of Apriarian Writers.—There is not entire unanimity among the writers of bee-literature. Views are held that seem diametrically opposed. Sometimes they are really just as much opposed as they seem to be. Sometimes wrong views are held. Sometimes a difference of locality or a difference in conditions may give rise to opposite views, both views being right. Sometimes, however, a fuller understanding may show that there is really no discrepancy where discrepancy appeared.

A case in point is that of getting unfinished sections cleared out by the bees. The Miller plan is to have the sections in a pile with an entrance so small that only one or two bees can pass at a time. The B. Taylor plan is to spread out the sections so as to allow the freest approach. One plan seems to be the exact opposite of the other, yet a little explanation will show that both plans have the same basis for action.

In a time of scarcity expose a single section of honey, and in a little while it will be so thickly covered with bees that no part of the comb can be seen, and the comb will be chewed up by little bits. If by any means it can be so managed that the bees shall not beat all crowded upon the comb, the bees will deliberately empty the honey without marring the comb.

The Miller plan says: Admit so few bees at a time that they will not be crowded upon the comb. The Taylor plan says: Spread out so many sections that there will be no crowding. Each plan strives for the same thing—to prevent the bees crowding upon the comb. The Miller plan is safe in any case; the Taylor plan works more rapidly, but can be used only when 8 or 10 sections can be put out for each colony.

The Illinois Fair Premiums were awarded by C. A. Dumont this year. Secretary James A. Stone, of the State Bee-Keepers’ Association, has sent us the list, which is as follows:

- Display of comb honey—1st, J. A. Stone & Son, $30; 2d, Chas. Becker, $15; 3d, G. M. Rumler, $10.
- Collection labeled cases containing 12 or more pounds of white honey from different flowers—1st, Chas. Becker, $8; 2d, J. A. Stone & Son, $5; G. M. Rumler, $5.
- Collection labeled cases containing 12 or more pounds of amber or dark honey from different flowers—1st, Chas. Becker, $5; 2d, G. M. Rumler, $5.
- Case white clover honey, 12 to 24 pounds—Geo. A. Hunt, $3; J. A. Stone & Son, $5.
- Case of sweet clover honey, 12 to 24 pounds—J. A. Stone & Son, $5; Aaron Coppin, $2.
- Case of basswood honey, 12 to 24 pounds—Chas. Becker, $4; J. A. Stone & Son, $5; G. M. Rumler, $5.
- Display of extracted honey—Chas. Becker, $20; 2d, J. A. Stone & Son, $15; 3d, G. M. Rumler, $10.
- Honey extracting on the grounds—Chas. Becker, $5; Aaron Coppin, $4; Geo. A. Hunt, $3; J. A. Stone & Son, $5.
- Frame of comb honey for extracting—Chas. Becker, $5; 2d, J. A. Stone & Son, $5; 3d, G. M. Rumler, $5.
- Display of candied honey—Chas. Becker, $3; 2d, J. A. Stone & Son, $5; 3d, G. M. Rumler, $5.
- Display of beeswax—Chas. Becker, $5; 2d, J. A. Stone & Son, $5; 3d, G. M. Rumler, $5.
- Honey vinegar, one-half gallon, with recipe for making—Chas. Becker, $4; 2d, J. A. Stone & Son, $5; 3d, G. M. Rumler, $5.
- Display of designs in honey or beeswax—J. A. Stone & Son, $12; 2d, Chas. Becker, $8; 3d, G. M. Rumler, $6.

The Colorado Convention.—The 22d annual session of the Colorado State Bee-Keepers’ Association will be held in Representatives Hall, State Capitol, Denver, Nov. 18, 19, and 20. The following program has been prepared by the program committee. The secretary, D. W. Working, says it is probable there will be a few minor changes in the program, but nearly all the papers have been definitely promised, and that a profitable and interesting meeting is assured.

In addition to the usual officers’ reports, discussions of questions, etc., the following papers, addresses, etc., will be given:
- Grading Honey—J. S. Bruce.
- Summary of the Recent Discussions on Brood—F. L. Thompson.
- President’s Address—R. C. Akin.
- Stereopticon Talk, Illustrating Bee-Keeping in the United States and Canada—E. R. Root.
- The Interests of Isolated Bee-Keepers—Frank Drexel.
- Advice to Beginners—H. C. Morehouse.
- Methods of Wintering Bees—F. L. Jouno.
- A Good Honey-House—T. Lytle.
- Abnormal Swarming-Fever—Mrs. A. J. Barber.
- How to Extract Honey—A. F. Foster.
- The National Bee-Keepers’ Association—R. C. Akin.

An attractive feature will be the exhibit of bees and bee-products. The premium list (a copy of which we have not seen) should attract a large and representative showing of the work of our little storers of sweets.

It is earnestly hoped that there may be a large attendance. The Colorado Association is practically the only rival of the National, both in membership and value to the bee-keeping industry of the United States. Some day we trust there may be others to claim such a distinction.

How Long are Brood-Combs Good?—To this question a bee-keeper replies in Centralblatt, that at the most they should not be used more than three or four years, one reason therefor being that the queen shows her preference for new combs in which the bees are better developed. It would be very hard to convince the mass of bee-keepers that just as well developed bees do not proceed from combs 20 years old. And that queens prefer to lay in fresh combs is decidedly against the observations of many bee-keepers on this side.

Correct Use of Bee-Keeping Terms is a matter of some consequence. It has been a matter of no little difficulty to have the use of “hive” for “colony” eliminated from our bee-literature. “Swarm” for “colony” was also quite common. Now that the tendency toward correctness in terms has become somewhat general, there seems to be a letting-up under the plea that several names for the same thing gives a pleasing variety. This is
The Buffalo Convention.

Report of the Proceeding of the Thirty-Second Annual Convention of the National Bee-Keepers' Association, held at Buffalo, New York, Sept. 10, 11 and 12, 1901.

The 32d annual convention of the National Bee-Keepers' Association was called to order at 7:30 p.m., Sept. 10, by Pres. E. R. Root, of Ohio, who called on Rev. E. T. Abbott, of Missouri, to offer prayer. Mayor Diehl, of Buffalo, was then introduced to the convention and delivered the following Address of Welcome.

I don't know as the Mayor can entertain you very long, but I wish to extend to you a most hearty welcome to our city, and I am sure that your deliberations will be of benefit to your

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 himself has been of great benefit to the people of Alsace." And he took me into an addition to his barn and showed me a large tin tub and showed me how the Americans had taught him to get the honey out of the combs by the centripetal method, and it, of course, pleased me as an American citizen very much, and shows me that your meeting tonight must be of benefit to you and of benefit to everybody.

I hope that, in the interval between your deliberations, you may have an opportunity to see our beautiful Exposition, which will certainly show a large number of exhibits that will be of interest to you: and not alone the exhibits but the beauty, the advance ment, as to say, of civilization, in color schemes and everything that pertains to that; and, aside from that, I hope you will also, as time permits, see not alone the Exposition, but our beautiful city. I think we have the most beautiful city in the world; we certainly have as nice homes, more asphalt streets and the finest break water in the world; and the Government will certainly be enhanced by all the advantages we now have, and which our good Government has done for the city of Buffalo by placing that very extensive breakwater before our city gates.

In closing, I wish to inform you that, having just heard from the President's belfry, I think I safely tell you that the danger line has passed, and the President will get well. And now, extending to you all the courtesies of our city, and the freedom of our city, you will accept the same, so that when you return to your homes you may have a pleasant remembrance of our city.

Rev. E. T. Abbott, of Missouri, responded as follows to the Mayor's address:

Response to the Mayor's Address.

It is surely a source of exceedingly great pleasure to me to respond to such an address of welcome, on account of its significance. Bee-keeping has not always received the recognition that it should. I think that the Government, at the hands of the Governments of the cities where we have held our meetings, I have thought sometimes that the citizens of the city, and the freedom of the city, you will accept the same, so that when you return to your homes you may have a pleasant remembrance of our city.

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during all of my experience in attending the meetings of the National Bee-Keepers’ Association, and I have attended all of them for a number of years. Now I would like to tell you a story that has been told by the Mayor of Buffalo, who is a member of the Bee-Keepers’ Association and who happens to be one of the best bee-keepers there are in America, and, notwithstanding the fact that America is in advance of Germany in bee-keeping, yet there is more enthusiasm in Germany than in America, and there are more Germans who have a clear and intelligent conception of farm bee-keeping than any other people. There are more Germans who are making it profitable in connection with other agriculture—for I look upon it as a branch of agriculture.

And now I am glad that the people of Buffalo have had the good sense to elect to this high office the gentleman who was so closely in touch with Mr. Parks and Mr. Parks, who are the keepers of the soil, from which all the wealth of the land, and out of which all the glory and beauty of this great city have been built. I say I am glad to know that the people of Buffalo have had the good sense to do a thing of that kind. It speaks well for the future of the country, for what is needed is to bring the country and the city in close touch with each other, to get the farmer to understand that he is not a "hayseed," to get the citizen of the great city to understand that all the brain doesn’t walk abroad on the great pavements; to get these facts, these two facts, clearly before the American people will be worth a great deal; when commerce and agriculture and trade come hand in hand with the man who holds the handle of the plow, when rural pursuits and city commerce move hand in hand and co-operate with each other, then will we have reached that I believe to be the ideal nation.

I am not surprised, of course, that the Mayor welcomes us to the city. We are a great people and deserve to be welcomed; we may be farmers and ordinary professionals, a great many of us, but we are the sweetest people on top of God’s earth. There isn’t any sweeter people that walk the earth, men and women both, than the bee-keepers; they deal in the sweetest, purest, healthiest, noblest sweet that the world has ever known. It is distilled by the chemistry created by the Almighty alone; it is drawn out of the vital energies of the universe. It is formed in a retort created by the hands of the Almighty and gathered by insects that has inhabited the world away back into geological ages, and stored away by them in a way that the skill of man and defies the most expert scientific man to imitate. It is true we are told that they manufacture comb honey out of clover; but that is not true. We add to the ignorant people of the city for the pure article, but we bee-people know that it is a newspaper canard. They do not do that. There isn’t any manufactured comb honey, but you will get in print to-morrow in big letters. But I tell you what they do: The unscrupulous city man takes a little bit of real good honey and puts a great deal of real dirty, stinking mean glucose into it, and puts it into a nice-looking bottle and labels it with a nicer-looking label, “Pure Clover Honey,” and sells it to the people who are green enough to buy it, and this has greatly injured our industry.

Now, to get back to my original proposition, that I was glad the city government was taking notice of us. Here is where the city government can greatly aid us, here is where the national government can aid us, when they come to our rescue and make it impossible for a man to sell anything for what it is not. Here is a work that the government of the city of Buffalo can take in hand and make it a criminal offense to sell a man a spoonful of honey and four spoonfuls of glucose all for honey. Anybody who wants four spoonfuls of glucose mixed with a spoonful of honey has a right to buy it, but call it what it is, a mixture, and let people use it as a mixture, but the bee-keepers protest against having it sold for honey, for it is not honey; it is a fraud, that is what we are afraid of.

Now, friends, I think I have said enough and have taken enough of your time. I think we all appreciate the words of welcome that have been extended to us, and I want to say to you, Mr. Mayor, that we will avail ourselves of them, we shall walk on your streets, we shall go out and see the great Pan-American, and, of course, this has been the greatest exposition of the kind that has ever been held, except one we shall hold in St. Louis, in 1903, the Louisiana Purchase Exposition. We wish Buffalo Godspeed, and all success, but we now, in behalf of the great, large-hearted people of the great State of Missouri, invite you to come and receive our welcome in that State of Jesse James, if you please, but of intelligence, progress and virtue, in 1903. We will have an exposition that will astonish not only the United States, but the world, for they are coming from all over the world, just as you have seen them. I thought Buffalo could never have an exposition like Chicago, but I want to say to Mr. York, who lives in Chicago, that when he gets out to the Pan-American he will see that the last is the best; and it looks now as if we were going to get just as many bee-keepers together as we have got in the past, and if so many of us, and the number, we may make up in enthusiasm for what we lack in numbers, and we will have the best North American Bee-Keepers’ Association to-day and in the history of this society. I thank you for your attention.

Dr. A. B. Mason, of Ohio—I notice here several Ontario Bee-Keepers’ Association badges, and I am so well pleased with it that I am going to move you that we give to all the members of the Ontario Bee-Keepers’ Association just the badges that are present with those badges on, the privileges of this floor, and to participate in all our discussions and answer questions, and to feel perfectly free and at home. I move you that we extend that privilege to them.

The motion was seconded by Dr. Abbott and carried.

Mr. John Newton, of Ontario, president of the Ontario Bee-Keepers’ Association—In behalf of our Association I would thank you for your kindness to us, and this invitation to take in the discussions the same as your own members. I am sure that we will be pleased to do so, and I know that we will feel at home, just as we tried to make your society at home when we had you in our midst.

Pres. Root—We have no set program. We are trying the experiment of having just a question-box, and it possibly may be a good thing. We have some men here who, we know, if they have a mind to, can make it a grand success. A good supply of questions has been handed to the secretary, Dr. Mason, and as we have no committee on question-box, he will read the first one.

Dr. C. C. Miller, of Illinois—I think it would be well to mention in connection with this matter that any member is entirely at liberty to hand in any question that he wants discussed.

AN APIARY OF CROSS BEES.

"Mr. Mason then read the first question, "What is to be done with an apiary of cross bees?"

Dr. Miller—I overheard a lady right here saying, "Kill them." If I had an entire apiary of cross bees I should want, first, to introduce some new blood of a kind that would be more gentle. This, however, is what will come in the experience of any beekeeper who has any number of colonies. We will find that these bees come from one or two colonies, and then all he needs to do is to kill one queen and introduce another queen; and a curious thing about that is, that a queen bee in the same apiary of bees has seemed to be much more rapid than the change in the blood of the bees; that is, if I find one such cross colony and kill the queen, I introduce another, within two weeks’ time, although there would be no change yet in the bees; that is, the same bees would be there; there would be a very decided change in their deportment, and although it seems rather unreasonable to suppose such a thing to be
the case, it looks to me as if the simple presence of the queen had something to do with the disposition of the bees.

Perhaps a further consideration for those who suggest the remedy. Sometimes bees are very cross in an apiary under certain kinds of management. Speaking abstractly, it seems to me that the cross bees I ever saw were the bees in southern California. It seemed to me that they were trained to be cross; I could not get anywhere near the frames but by profound secrecy, and sometimes if I was half a mile away they would come out to meet me. I fell to wondering why they were so cross. I missed the presence of the bee-keeper who keeps there extracted honey. Their hives are any old box, and they leave one or two inches of space between the extracting and the brood frames. When they separate the upper story from the lower one and get ready to extract they break all this comb, and it irritates the bees. The bees are what we would call a very good grade of hybrids, and they are not naturally very cross bees, but tearing the combs to pieces is apt to irritate them or worse.

A. A. Kluck, of Illinois—I have had a little experience with cross bees. In working around them, should they get cross, I would give them a little box that I could not get, then kick the hives. I whip my bees when they are cross, and smoke them till they don’t know anything.

W. L. Cogshall, of New-York—I would not give them that treatment. I may kick the hives, but the bees are subdued before I kick the hive. I had a boy take off 80 top stories last Tuesday without any trouble, because you may have a wrong impression about the kicking—when the bees are subdued, they are just as peaceable as can be, and kicking them doesn’t affect them; to kick off the top story wouldn’t hurt anything.

Pres. Root—I have noticed that in cutting down a bee-tree, as soon as the trees are cut down they go to work cross, but when one takes an axe and begins to chop away at the tree the bees seem to be demoralized. Sever smoking is liable to induce robbery.

**Spring Dwinding and the Remedy.**

"Is spring dwindling a disease? If so, what is the remedy?"

Dr. Miller—How many think it is a disease?

Mr. Kluck—Old bees, is it not?

Mr. Abbott—What do you mean by disease?

W. Z. Hutchinson, of Michigan—My idea of spring dwindling is imperfect wintering. They need to have good food. Good food is the pivot of success. They need to have good food and protect the bees you will not have spring dwindling. I think spring dwindling is the result of poor wintering, and you would not call it a disease, unless an overloading of the system from confinement constitutes a disease.

Mr. Abbott—Doesn’t a cold spring have anything to do with it?

Mr. Hutchinson—I think it would have something to do with it.

Mr. Abbott—I would like to suggest that spring dwindling is frequently the result of feeding. I have known a great many people to kill off their bees with feeding. Take the average farm bee-keeper and he is as likely to cause spring dwindling by feeding his bees as to do them any good, if he feeds them late in the fall. A great many bees are provoked to fly away in the spring by feeding them when, if they were left alone, and not fed at all, would not break the cluster, and the result is they wear themselves out and usually die from the overcurrent of energy that they lay eggs. Some people wonder why it is, and say they followed the bee-books, but the man who isn’t intending to use brains in connection with bee keeping is going to get better off without them, especially when it comes to feeding. Farmers come to me and say, "I thought my bees were a little subdued, but I gave them syrup, and put it under the hive, and I have been feeding them for a long time," when the mercury was standing down below freezing, any phrenics and a man who feeds bees when the mercury is in that condition is simply producing spring dwindling; and if you should define disease as an abnormal condition, I should say it was a disease.

Pres. Root—As I understand Mr. Abbott, feeding in the spring has a tendency to cause the bees to fly out, and they become chilled and do not go back.

Mr. Abbott—Not only that, but the over-activity of the bee exhausts its vitality.

Mr. Hutchinson—I thought it was the result of imperfect wintering.

Mr. Abbott—I don’t believe it.

Mr. Hutchinson—Mr. McEvoy, in Canada, has very good success in wintering his bees, and he crowds them down on five or six combs of solid honey, and does that so that they can not breed towards spring, and if those conditions are good they will carry the feebles till they are full, and will not take any more food. He feeds that in the fall.

Dr. Miller—I confess, to begin with, that I do not know what is the cause of spring dwindling. It is a matter of exceeding consequence sometimes to all of us, and I would like very much if you could give me the cause of it. In the first place, I think we all would be very likely to agree that it is not a disease. It is a condition. Not such a bad condition as a disease, and a condition that has been started are all in the line with the observation of any one who takes an interest in a thing and thinks about it at all. It would be worth something to us if we could get down to find out what is the condition that is produced. Now, it may be true, for instance, that the people who are interested about it will find out that condition, but what is that condition? Will feeding and making them fly out at inopportune times make them go away, or that they have less brood? Is there is of spring dwindling? Is it simply the fact that a number of bees have flown out and become lost? That is not spring dwindling according to my observation. It is something more than that. I don’t know that I know what that condition is, but I will say this much about it, that when you find spring dwindling in colonies you will almost always find that the number of bees present in the hive compared with the amount of brood is always small. This I think is the main fact. Whether in fact, whether the observation of my friends here agrees with that. Is that the common thing? It has appeared to me to be the case that, whenever I had a case of spring dwindling, there were too few bees in the hive to take care of the brood that was there. Now, if this is a common thing, I would like to know it.

H. L. Case, of New-York—A few years ago, in the latter part of April, I lost thousands of bees by what I called spring dwindling. The fall before my bees gathered a large quantity of honey-dew, and the winter was a severe one; it kept them in the hive nearly four months without giving them a flight. Now, I believe the reason I had spring dwindling that winter, or that spring, was that they were accustomed to the conditions were improper for their prosperity; if they had had one or two good flights in the autumn, so that they could have been refreshed, and have a good flight, I think it would have been better. I saved only 20 small colonies, and after the first good day that we had when the bees could fly out I didn’t lose any more bees to speak of. Now, I agree with Mr. Hutchinson, that improper feeding and the conditions through winter, confining them to the hives, and consuming too much food, made them lazy, and they could not get out to relieve themselves, and the result was that I lost some 80 colonies.

Pres. Root—It is very evident that there are a great many causes that induce spring dwindling.

Mr. Kluck—Would the gentleman state the time when the bees gathered that honey-dew?

Mr. Case—It was the forepart of September. I went bee-hunting at the time, and spent much time hunting wild bees, and there was so much honey-dew on the forest leaves in my section that they would not pay any attention to honey, I could not get them not to go into the forest and it would seem as if there was a swarm of bees, and they filled the hives full, from 25 to 100 pounds of honey in the hives, in the course of, as I remember, five or six days, and they sealed it nicely, but I couldn’t do much, and let it go, with the result that I lost 80 colonies.

Pres. Root—How many have had experience with spring dwindling?

Dr. Miller—Now, Mr. President, you would ask how many have had cases of spring dwindling in which little or no brood was present in the hive.

Pres. Root—If I understand the Doctor, he finds a condition which he sometimes sees, and which he observed along in March, when the bees evidently see that their numbers are small, and that they must have some brood to keep up their numbers, and the brood of little or none more than they can take care of, and they spread out too much and die on the outside edges. I have seen the bees so spread out on the batch of brood that they would all die.

Dr. Miller—Further than that, I have had a number of cases where there were too few bees, and as the brood was needed to go to work on, I kept and have apparently had a consultation and decided it was too much for them, and then all swarmed out.

E. A. Breithaupt, of New-York—I had a colony very strong with bees. I sent for a good queen and introduced her the next spring. I happened to be there so that I could watch, and I
looked in occasionally. I noticed, with that colony, that had so many old bees in the field, it began rearing brood much earlier than any of the others, and the queen did not go out. It was a condition of exhausted vitality, as you have just said. They get in a hurry about rearing brood to see if they could not possibly save the colony.

Pres. Root—The remedy, it would seem, would be implied from the discussion. It would be protection, proper feeding, if it be the right time, and those are conditions that we can very well meet.

Dr. Miller—If there is anything like colony disease in your district, when one thing in the remedy would be to have a large quantity of young bees in the fall, and anything that would tend to that—but I confess that I do not know whether my diagnosis is right.

Pres. Root—Proper feeding, proper protection, food properly given—and when I say protection I mean in double-walled hives or indoors, a proper indoor ventilator with sufficient ventilation. All these things may help to offset unusual conditions that we can not control in the way of weather, and then we can do the rest.

J. S. Barb, of Ohio—I had experience in spring dwindling, and I find that double-walled hives are not very much better than single ones. As a general thing, you will have a lot of old bees to start with in the fall, and that condition prevents them from rearing brood in the spring.

Pres. Root—I have noticed that—measurable not to get in condition without protection. Last winter, by oversight, we left out 10 small colonies without double walls, and many of them got down to a handful. Those that were right alongside of them in double walls got through all right. It all depends upon what we understand by disease. If we take Mr. Abbott’s definition of abnormal condition, then it is a disease.

Dr. Miller—Suppose you had a colony with nothing but drones in it, would you call that disease?

Mr. Abbott—A bad one, worse than a convention with no women.

Dr. Miller—How many think that spring dwindling is a disease?

Pres. Root—Let us have a show of hands. How many think spring dwindling is a disease? Now, how many think it is not? Evidently the convention doesn’t think it is a disease.

DISINFECTING FOUL-BROODY HIVES.

"Is it best to disinfect foul-broody hives?"

Dr. Mason—Yes, it is just as important to disinfect a hive as it is to disinfect a disease.

Wm. McEvoy, of Ontario—Why not burn it up?

Dr. Mason—It doesn’t pay. It is cheaper to disinfect it. Understand me, the question is, ‘a foul-broody hive.’

Pres. Root—The question as I understand it involves a diseased hive in which there have been bees that have had foul brood, that naturally was the intention of the question.

Dr. Mason—If the question is the intention may have been, I think that Dr. Mason raises a good point there, and there is a prior question to be answered. When a colony of foul-broody bees has been in a hive, is that hive always a foul-broody hive? That is the point he wants raised.

Pres. Root—Is a hive that has contained bees that have had the foul-broody disease necessarily a foul-broody hive?

Dr. Mason—I am sure that just as easily as saying that.

Mr. Kluck—According to Mr. France, the foul brood inspector of Wisconsin, he claims that a foul-broody bee in a hive is necessary to disinfect that hive. He gave us to understand in our bee-convention of northern Illinois that that was so.

Mr. Abbott—What is the remedy? I have thousands of experience in the test cases for pretty nearly 25 years, and I have never had a single hive disinfected in any way.

Mr. Abbott—Wouldn’t it be a good idea if we would bring out exactly what foul brood is, and what is the nature of the disease, and where it manifests itself? If it is a germ, understanding that, could we develop that germ?

Dr. Mason—That is, where do they locate? We know that the germ of tuberculosis locates itself in some of the glands of the human body, and that if you get the germ of tuberculosis out of the system, then the disease will be gone. That is, where do they locate? We know that the germ of tuberculosis locates itself in some of the glands of the human body, and that if you get the germ of tuberculosis out of the system, then the disease will be gone.

Mr. McEvoy—This man has asked one of the most important questions that I have ever heard put in my life. Honey, to become diseased, must first find its way into the stained-marked cells, that is, a cell where the matter has dried down, or where the bees are making room for more honey, when they move the honey from an unfilled cell to cells not finished; but when honey is gathered from the fields and stored side by side with these stain-marked cells, is the need of a cell that sound. It is the only possible way to spread it. Now, take combs from a diseased colony, I don’t care how badly it may be affected, if the bees are removed from those combs and the honey is put into a new, sound, and that never had brood in, and extracted, and the combs given back to the bees when they are clean, these combs can be used in any hive in the world and not give disease.

Mr. Abbott—Now, then, germs appear in two conditions, the active or the sporadic condition. When in the sporadic condition. A germ, when it is active, can be destroyed—I might say in the egg condition. Now, is the germ of foul brood in the egg condition in this dry brood or that? Is the sporadic condition and carried out with the honey and developed with the honey that is put into this cell when it is in that condition? I don’t understand the terminology? Is it true that, if I understand it and can not carry or communicate itself to another cell, and can only be imparted to another cell that is actively diseased, and such a condition created as will hatch the egg and thus spread it out?

Mr. McEvoy—Or that honey moved to another cell will do it. As far as I ever went, I know that the honey falling from these cells will give the disease.

Mr. Abbott—Now, then, if that spore, as the scientific men would call it, is placed in another cell, evidently it will develop. If that spore was loaded on the side of a hive and in the same possible condition by which that spore would develop on the side of the hive. If it would, why, then, you would have to change your answer?

Sidney S. Sleeper, of New York—Now are these germs vegetable or animal? In speaking of spores, that would indicate that they were vegetable germs; in speaking of eggs, that would indicate that they were animal germs.

Mr. Abbott—I simply wish to say that I used the word egg so that those people who haven’t spent 25 years studying science will know what I mean.

O. L. Hershizer, of New York—Can this dried matter move itself? What I mean is, that when the bees are moved from diseased cells, then one honey is diseasing the other; but as far as it going out from these cells through the hive and entering other cells, I do not think it is possible.

Dr. Mason—What do you mean by its going out?

Mr. Hershizer—What I mean is, that it would sort of rise and go through the colony.

Pres. Root—What he means is, whether the disease would pass through the hive from one cell to another cell?

Mr. McEvoy—It does not do that.

Dr. Mason—I don’t believe it does.

Mr. Miller—I want to confess that if the wildmen would take me out on that, I had gotten it into my head that these things were animals, and that they were eggs.

Mr. Abbott—Germs are animals, sometimes.

Dr. Mason—Are foul-brood germs animals?

Mr. Abbott—I don’t think anybody in the house knows.

Dr. Miller—I think if we talk of them as seeds there will be less danger of misapprehension. Suppose the spore is the germ of this hive. Now, if those spores were there in connection with honey, and the bees would take that honey, then you might get the disease from that hive, but I can’t conceive of it in any other way.

If there are spores there on the sides of the hive the bees are not going to take them up in any way. I understand Mr. McEvoy to hold that view, and it seems to me that that ought to make it pretty clear; and I confess to you that I never saw it as clearly as I do tonight. It may be that we are seeing at one time straightened out before, why he insists upon it in opposition to the views of a great many practical men, that it is not necessary to cleanse the hive, because if the spore is not in the honey of the bacilli are there—they are going to die, aren’t they, Mr. Benton?

Frank Benton, of District of Columbia—And I have no doubt; they might stay there and retain sufficient life to develop. But there is no bee going to take a spore from a dry hive and take it out with it.

Pres. Root—The spores are in an inactive state; the bacilli are in an active state.

Mr. Hershizer—I have frequently, in working around a hive, spilled a good deal of honey and it has run down the sides of the hive. Suppose these
spores were present and the bees would carry them into the cell and there develop into a larva. Isn’t that a case where the disease could develop?

Mr. McEvoy—Certainly.

Mr. Laenhof—Sometimes we are working with a hive where we do not give them the opportunity to secure the honey. Suppose they take the honey that is running down the side of a hive, and take it into a cell where there is a larva, wouldn’t that communicate the disease?

Mr. McEvoy — Ninety-nine parts out of a hundred of it are pure.

Pres. Root—As I understand Mr. McEvoy, he speaks of a small portion of the honey being diseased his recommendation is that all the combs or wax be burnt. In order to be sure, he considers it safe to burn every comb.

Mr. McEvoy—Yes, sir, every comb.

Dr. Mason—I have had a good deal of experience with foul brood, and I do not exactly agree with Mr. McEvoy because he is the best authority we have. I consider it advisable, in my experience, to take foul-brood bees, combs, etc., out of a hive and use that hive without disinfecting. I have kept them and have not had any trouble, but they were out of there with the greatest of care and crush a bee with foul-brood honey in it and leave it there, and when it is so easily disinfected, I don’t see why it should not be done; but if a hive has foul-brood honey on it, or in it anywhere, it is a foul-brood hive and needs disinfecting, and even Mr. McEvoy admits that.

Dr. Miller—I want to ask Mr. McEvoy if he ever tried using a hive again that had foul-brood bees in it.

Mr. McEvoy—Oh, thousands of them.

Dr. Miller—I would like to know definitely. I want to know something detailed in numbers. Did you ever have half a dozen or more of them in that way, or how many? Give us something definite about it.

Mr. McEvoy—I don’t know, I suppose I could put it safely at 5,000.

Dr. Miller—Of that 5,000 how many of them ever succeeded in giving the disease?

Mr. McEvoy—Not one, that I ever knew. Not a single case. That I ever knew.

Dr. Miller—Now, if in 5,000 cases that you have tried there has not been a single failure, I am willing to take what risk there is.

Pres. Root—After I had learned of Mr. McEvoy’s experience, in which he had tested something like three or four thousand hives at that time, I concluded that we would try to cure the disease without boiling the hives, and ever since that time we have found that we could cure it just the same without boiling the hives. Some years ago, when we had them all through our apiary, we boiled all our hives, but we left about 10 of them and thought we would see what would result. I think that there were four or five out of the ten that we left that had the disease, but I have thought since that that experiment did not amount to anything, in view of what Mr. McEvoy says that he has tried it in 5,000 cases.

Mr. Hershiser—I would like to ask how many of these apriaries have been treated more than once and how many times those apriaries have been treated that have had foul brood?

Mr. McEvoy—that is a close question, as you know. It is one thing to handle a disease and it is quite another thing to handle the men. Some men make a perfect cure, others a partial cure, and have to go to several times, and it is just how they do the work. Some of them will blunder once in a while, but it isn’t the cure; the problem was how to do that work; they often put it like this, “Well, how long will I boil the hive?” Now, that depends upon how long you intend to boil the bees; surely, you are not going to do one without another. Are you going to take these bees that have walked all over the putrid eggs, with their dirty little feet, without boiling them? If you are going to boil the hive half an hour, I think you ought to boil the bees an hour. And I don’t know a place in Ontario where they boil now.

Dr. Mason—Foul-broody hives need disinfecting just as surely as do foul-broody bees, and they can as surely, and more easily, be disinfect without boiling than can bees.

Pres. Root—Perhaps it ought to be stated that Thomas William Cowan, and quite a number of scientists across the water, feel that it is very necessary to disinfect the hives, but, as I have stated, we haven’t disinfect our hives since, and we haven’t had any trouble.

Dr. Mason—You haven’t had foul-broody hives, then.

Mr. Miller—It seemed to me that it was a foolhardy piece of business for Mr. McEvoy to insist that there was no necessity for disinfecting, for it seemed to me that there must be plenty of spores, but if you come to think about it, what is going to take those spores where they can do any harm? And the fact remains that if he has had so many cases, and if the results have come from us, we ought to be able to go on and do what he has done.

W. H. Helm, of Pennsylvania—should I like to ask Mr. McEvoy why these are the only two remedies for the disease—by burning the combs or boiling?

Mr. McEvoy—Do you mean that you think that they can be disinfect?

Mr. Helm—Mr. McEvoy—You can use the disinfectant till those combs will fairly smoke, and you try them over again and it will break them. Pres. Root—I talked with Mr. Gemmill and one of the other inspectors, and asked if his experience coincided with Mr. McEvoy’s, and he said it did.

A Member—Do I understand Mr. McEvoy that the combs should be burned up, or made into wax?

Mr. McEvoy—I think they ought to be all turned into wax, and made into comb foundation. It is all right, too.

(Continued next week.)
ants immediately began to move to places of supposed safety. The terror of the ants did not soften my hard heart. Calling the chickens, I soon had the satisfaction of seeing a brown leghorn pullet begin the work of destroying the larvae of the colony of ants that had made their home under my beehive. How she did seem to relish every fat pupa! And how quickly the other chickens learned to like ants' brood!

The queen and her fellows, except for those reared in this manner, are doomed. Perhaps the black ants which fought my bees are not the "small ants" which "neither molest the bees nor are molested by them." At any rate, it seems worth while to report them. Perhaps the wise hive will claim them. Perhaps they will tell me that I ought to have killed the ants long ago. At the risk of needlessly exposing an ignorance which is frankly confessed to be great, I venture to add that this particular hive became queenless during an era of scarcity. When the brood was supplied with two frames containing brood in all stages from the egg to the hatching bee, and that at one time there were two or three well-developed queen-cells in the hive. Is it possible that the ants might have robbed the queen?—Arapahoe Co., Colo.

**Working for Italian Bees—Pure Mating of Queens.**

BY G. M. DOOLITTLE.

**QUESTION**—I have spent much time during the past summer to Italianize my bees, and think they are now all pure Italian. But my Italian queens are kept as hybrid bees, kept in box-hives, so that hosts of drones are reared in these during the summer. Do I wish, if I were rearing queens for my own use, can secure them purely feducated.

**ANSWER.—**There are several plans for the pure mating of queens, but, up to this time, all are more or less faulty. The best of these plans are the following:

In the early spring, as soon as you can find colonies which can spare it, give capped brood to your drone-rearing colonies, and this, together with a little warm feed, given each day, will cause the desired queens to lay in the drone-comb early, through the stimulation given, thus giving you strong colonies of plenty of drones, before your neighbor's colonies rear any drones.

To secure the best results, one or more drone-combs should be placed in the center of the brood-nest at the time you give the sealed brood. As soon as any drone-brood has been capped from 3 days to a week, start to rear queens, and in this way you will have your queens ready for the first drones which appear. The main objection to this plan is, that such rearing of queens comes at a time when it is likely to interfere with your plants; for in all queen-rearing the colony is thrown out of its normal condition; and whether the old queens are taken away from their colonies to give place for the desired queen-cells, or nuclei formed to take care of these cells, this interference comes at the wrong season and would be bound to bring along the line of rearing the bees in time for the honey harvest, which, as a rule, will be from 30 to 50 days ahead.

If I may be pardoned, I will say that I should consider impure stock, with a good yield of honey, very much more preferable than absolutely pure stock and little or no surplus honey.

Another plan is, to wait till fall about rearing queens, if you can preserve the desired drones, till all of your neighbors have decided shall be drones all mothers, and mass this brood in one hive, tiering it up, if necessary, to accommodate this brood and an abundance of honey; for, the larger the hive and the more honey it contains, the better your chance of having the drones preserved in numbers, because the queenless colony of drones is the queen should be taken away from the colony; and as often as a new queen comes to lay she should be taken away also, and this colony kept supplied with sufficient worker bees to keep it going, for it is the condition of a perous condition depends the freeness of the flight of the drones on every suitable day. If you wish all of the drones which your queens are to mate with to be strong, robust fellows, on some cloudy day when the bees are not flying so as to endanger robbing, look this hive over and hand-pick the drones, killing all which you think are not as such as you would desire. To do this best, take out the first comb and pick out as above, when it is to be put into an empty hive, set on the stand originally occupied; and thus when you have gone over every comb, and such drones as may cling to the sides and bottom-board to the hive, your colony is just where you want it, without any extra handling of frames.

You are now, in a measure, quite sure that the queens reared will come as near perfection as is possible along the line of right mating, and were it not that this plan requires much extra work, it is still a very good one. Instead of colonies, or one, or two, who may be taken a hybrid, or a three nuclei, supplied with virgin queens from the best mother, these being from 3 to 5 days old, to this isolated place, leaving them there from 8 to 10 days, when they can be brought home with laying queens, which will, as a rule, be reared with the desired drones. With a proper rack fixed on any light spring wagon, from 12 to 25 nuclei can be carried to and fro at one time, so that this is not so very laborious as it first appears, and it has this advantage: The queens can be reared at any season, and any queen will be as perfect as itself, as in this way all can be reared in the height of the honey season, when the best queens can be reared with the least work.

Another plan is to rear the queens and drones in the best part of the honey season, and, when ready, take the drone colony and such of the nucleus as havequeens of mating age, to the cellar, or some darkened, cool room, carrying them in before they begin to fly, in the evening, and leaving them there till 4 o'clock in the afternoon, or till all other drones have ceased flying for the day. If each nucleus and the drone colony are fed a little warm diluted sweet just before setting out, and the hives face the western sun, queens and drones will fly something as they usually do in the early afternoon, and the results will prove quite satisfactory.

**The Afterthought.**

The "Old Reliable" seen through New and Unreliable Glasses.

By E. E. HASTY, Sta. B Rural, Toledo, O.

"Unreading" one's self.

Yes, Mr. Weaver, it is sometimes a good plan for the beginner to "unread himself" and go in on his own hook. Bees differ very greatly; and a man often may be taken a hybrid, or have his eyes "unreading". There are some (and very provoking ones they are) that will all get in army formation and march out of the hive whenever they can get out, if you but manipulate their frames a little. Others are like yours. Howsoever, a beginner should take a watch along for such a job, and give them a reasonable number of actual minutes before unreading everything—otherwise his 10 minutes might be about 2 minutes. "All's well that ends well," but the main danger is that the queen may keep and strip of comb full of brood all the while. Even if zinc is used there is some danger of getting some new honey in very undesirable shape.

Glucose can be fed, but don't.

It is somewhat in the line of news to be told that one can feed a ton of glucose to his bees. Editorial, page 574.

Millionaire bee-keepers.

Want the names of millionaire bee-keepers, eh? Well, I'm one—own a million dollars' worth of independence and good hopes—and none of J. Pierpont Morgan's paper brugs in larger returns. People have more in proportion of real millionaires to ours. I take it. Page 574.

The virgin queen survives.

It is an interesting bit of experience from C. Davenport, that when two colonies are lived together, one with a laying queen and one with a virgin, it is usually the virgin which survives. That would naturally be the case where the bees do not ball either of them, but just let them fight it out themselves—virgin too spy for heavy old dowager. Page 552.
HOW THE SICILIAN BEE-KEEPERS DO.

We have closed standing frame hives both with and without outer shells; but the Sicilians are unique in plastering on an outer shell upon movable standing frames. The plastering is to be repeated after each manipulation, I suppose. With a framework taken out of the hive and the bees removed, you can curve the the frame around as in frames horizontally long, so quite possibly a bamboo top-bar might need no comb-guide. Page 582.

CAUSES OF QUEEN-REARING FAILURES.

And so Doolittle suspects that wrong moves in transferring the larva are responsible for most of the failures—the quite moderate percent of failures—in rearing queens by the Doolittle method. It is a shrewd test experiment which he suggests—e.g., take the larva from some natural cells which the bees undoubtedly cherish and see if you can put others in successfully. Page 582.

HUGGING TO DEATH.

We know that the same facts can oft be read in different ways. We are pleased to hear (pleased in one sense of the term) that bees are not trying to worry the drones to death—only hugging them in the affectionate effort to disembrace them from suicide. And if, to disembrace Mr. Archibald from the suicide of extracting from combs with brood in them, just the right body would didactically and effectively hug him—well, it would be a good deed. Page 587.

POSITION OF NECTAR-GLANDS.

I think Prof. Smíchek is hardly wise in his choice of words when he says that nectar-glands are concealed. The conditions prevailing here. They are present in the spots which bees are being lured to touch unwittingly, and concealment comes in as an undesirable result. Page 588.

"ENJOYING LIFE"—SELFISHNESS.

I like the talk from Gleanings in Bee-Culture, on page 589, about the philosophy and plan of human occupation and life; but, still, I greatly wish some one could give, intelligibly and victoriously give, just a little different turn to the phrase "enjoying life." I wish it associated with the enjoyment of life be a kitten running after its own tail. And in just that sort of a quest multitudes of well-bred, intelligent people make their lives into wrecks—make themselves unfit persons to be benefited. Much work is to be stayed in over night. We must have some banner before us which does not have "self, self, self," written all over it.

The Home Circle.

Conducted by Prof. R. J. Cook, Glaremont, Calif.

EDUCATION.

What a wealth of philosophy, and what a mine of truth, are to be found in the familiar scriptural adage, "The little foxes that spoil the vine." Is it not equally true that some little word, or apparently trivial event, makes a life a man? A fond teacher in my early boyhood—one of those rare persons who ever lived in the love, respect, admiration of all whose lives they touch—said a word that aroused in me a quenchless ambition for that which else I would never have secured. That word was "College." She said, what I have seen illustrated in many lives since that time, "If you wish it hard enough, you can get a college education; a thorough education would be worth more than a gold mine to you." I wish some happy parent, or some fortunate teacher, or some other good angel, could blaze this truth into the mind of every bright boy and girl the country over. We should wish most kindly and most earnestly that all our children should covet the very best gifts. Certainly high among the best treasures of any life is a rich, broad culture of the mind. Only one thing transcends it, and that is a rich soul-culture.

Were I to be a ditcher, or a stone-crusher in the hot sun by the road, I would wish education to be my companion then and there. The education would not only soonest lift me out of the ditch, and away from the stone-pile, but it would do even better, it would help me to enjoy the life with the spade and the hammer. One thoroughly educated can find real pleasure in the opening ditch or the break-

ling stone. Shakespeare was, as always, wise. Those with eyes to see can find books in the running brooks.

A good friend writes commending my "Home Circle" teaching, but wishes that a girl had not been taught, not Sunday, was the sacred day. Another wishes I could be consistent and vote for prohibition. I have no retort for either. We may well remember Paul's word, "Some esteem one day better than another; some esteem all days alike," Paul did not do this with a thrust at a party. He said, "Be well persuaded in your own minds." That is very wise advice. Let us all study both these questions, and all others that divide public opinion as thoroughly as we may, then decide as ca-

refully as we have studied, and then act upon our convictions. If we do this we shall please God, I am sure. If this results in our keeping Saturday, then well; if in keeping Sunday, then well. If it makes us vote prohibition, God will smile; if in our vote otherwise, God will frown. I do not demand perfection of any of us. "Only one, your father in heaven, is perfect." He does demand earnest, honest study, as a requisite to right judgment. The good education makes the hard study easier, and the succeeding judgment more cor-

rect.

THE Good education does, or ought to, do a better thing. It makes us charitable, tolerant towards others who have also studied and decided differently. It recognizes that all fail of deciding wisely and rightly at times; and instead of a word of criticism to them, we shall examine our own views, lest, perchance, we may be in error.

I keep Sunday, and generally vote the Republican ticket. I believe I please God in doing so. If my friends have studied it as they may, and have decided as conscientiously as the importance of the questions demand, then they, too, please God. God be praised for the best mind-culture. That not only helps us to right decision, but makes us kindly, charita-

table towards him who is led to different conclusions. The first of the most blessed things of our day is the greater tolerance which we give to those who think not as we do. Edu-

cation, clarified and sweetened by the Christ spirit, is the glorious parent of this broader charity.

LANDSCAPE GARDENING.

In my institute work of late, I have been happy in being associated with a bright landscape gardener and horticultur-

ist. His lectures have been of the highest interest, and I should control in all laying out of home grounds, whether in the restricted city lot or in the more spacious environs of country.

First, "Avoid straight lines.

Second, "Preserve open lawn centres.

Third, "Plant in groups, not singly."

I have listened more pleasantly as we have followed two of these rules in our own landscaping. We have no straight lines. Our walk or drive is softened as desirably as the other lines. Our little white clover lawn is all the richer and more thrifty in having all to itself. A tree or shrub in a lawn almost always looks as if it fell out of place. Its foliage looks sick and sickly. My plants are isolated in natural groups. They are not regular. On my small place I doubt if grouping would have given us more pleasure. Of course it would if more artistic, more after Nature's pattern. Is this true in such confined limits?

"DEAR DAUGHTER DOROTHY."

This is a charming story for the children. Like that fasci-

nating book, "Captain January," it should be in all our home circles where children abound. The book makes a child do impossible things, but in such a realistic way that we for-

get that it could not be realized in life. It is charming, too, to see how perfect is the union in thought and feeling between father and daughter. I can see my father's arms dangling to hang on memory's walls. I urge every home circle to get these two books, and read them aloud in the home circle. If the scene in "Captain January," where separation is pro-

posed, brings tears, and raises the heart throb-ward, we shall all be the better for it.

I remember how our whole household, years ago, gen-

erated dampness under the eyebrows, when we read "Uncle Tom's Cabin" aloud in the old home. It went hard to cry. Such scenes were always more interesting to the hearty class than to read. They were good tears, and were not without influence in the stormy days of the early sixties.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-

keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last.
FOR GETTING NEW SUBSCRIBERS.

Red Clover Queens FOR 1902 Free
Long-Tongue Variety—Warranted Purely Mated.

We have already arranged with the queen-breeder who furnished Long-Tongue Red Clover Queens for us during the past season, to fill our orders next season. Although fully 95 percent of the untested queens he sent out were purely mated, next season all that he mails for us will be warranted purely mated.

We want every one of our present subscribers to have one or more of these money-maker Queens. We have received most excellent reports from the queens we supplied during the past season. And of course our queen-breeder says he expects to be able to send out even better Queens, if that is possible. He is one of the very oldest and best queen-breeders. His bees average quite a good deal the longest tongues of any yet measured. The Breeder he will use is direct from Italy, having imported her himself. Her worker-bees are large, of beautiful color, very gentle, scarcely requiring veil or smoke. Orders for these fine, “long-reach” Warranted Queens will be filled in rotation—first come, first served—beginning as early in June as possible. It is expected that orders can be filled quite promptly (even better than the past season), as a much larger number of queen-rearing nuclei will be run. (But never remove the old queen from the colony until you have received the new one, no matter from whom you order a queen.)

All Queens will be guaranteed to arrive in good condition, and will be clipped, unless otherwise ordered.

A Warranted Queen for sending us Only 2 New Yearly Subscribers

In order that every one of our subscribers who wants one of these Warranted Queens next season can easily earn it, we will book your order for one queen for sending us the names and addresses of two new subscribers to the American Bee Journal and $2.00. FURTHERMORE, we will begin to send the Bee Journal to the new subscribers just as soon as they are received here (with the $2.00), and continue to send it until the end of next year, 1902. So, forward the new subscriptions soon—the sooner sent in the more weekly copies they will receive.

This indeed is an opportunity to get a superior Queen, and at the same time help swell the list of readers of the old American Bee Journal.

We are now ready to book the Queen orders, and also to enroll the new subscriptions. Remember, the sooner you get in your order the earlier you will get your Queen next season, and the more copies of the Bee Journal will the new subscribers receive that you send in. We hope that every one of our present readers will decide to have at least one of these Queens.

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General Items

Had Good Honey-Flows.

My bees have done well this year. We had a good honey-flow the last of June and the first part of July from mesquite, catclaw, and alfalfa, and now have a good flow from alfalfa and wild flowers.

The American Bee Journal has been a great help to me in my bee-business. I do not see how I could have done without it.

J. S. Bridestine.


Hairy Vetch as a Honey-Plant.

In response to the request for information regarding the hairy vetch as a honey-plant, I can say this:

About six years ago I received from the Agricultural Department at Washington a package labeled, “Sand or Hairy Vetch.” I sowed a small plot with the seed, and it has grown there ever since, coming up every spring from seed grown there the year before, I suppose. It yields a fine forage, and blooms all summer—beautiful blossoms—but I never saw a honey-bee on one of the blossoms in all these years. Bumble-bees and butterflies.


Farming by Lottery.
The recent drought has emphasized the element of chance in farming under ordinary conditions, whereas on

AN IRRIGATED FARM crops never fall or are damaged by bad weather in harvest. The yield is larger, quality better and prices of the products higher.

Our Irrigation Settlement Plan
affords an opportunity for securing a well-located, irrigated farm at half the usual prices, on easy terms, with ABUNDANT WATER, RICH SOIL.

HOME MARKETS at good prices. Wheat yields, 56 bu.; oats, 100 bu.; potatoes, 300 bu.; alfalfa, 5 tons per acre regularly each year.

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The Monette Queen-Clipping Device is a fine thing for use in catching and clipping Queen wings. We mail it for 25 cents; or will send it FREE, as a premium for sending us ONE NEW subscriber to the Bee Journal for one year. Address, GEORGE W. YORK & COMPANY, Chicago, Ill.

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will sell tickets each Tuesday, Thursday and Saturday during (October to Buffalo Pan-American Exposition and return, at $6.00, good in coaches, return limit 5 days from date of sale. Tickets with longer limit at slightly increased rates. Three through trains daily. Chicago Passenger Station, Van Buren St. and Pacific Avenue. City ticket office, 111 Adams St., Chicago.

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We can furnish you with The A. L. Root Co's goods in wholesale or retail at their prices. We can save you freight, and ship promptly. Market price for honey in bulk is $2.00 per hundred pounds.

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World-wide reputation. 75 cents, each; for $4.00. Long-Tongued 3-Banded Italiens breed from Thieves, these tongues measured 100 inches. These are the red clover bustlers of America. 75 cents each, or $4.00. Safe arrival guaranteed.

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One-Pound Square Flint-Glass HONEY-JARS
with patent airtight stoppers. Cheapest and best. Shipped from New York at $5.90 per gross. Send for catalog to J. H. M. COOK.

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This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only $1.00. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" so far binding is necessary.

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that poultry pays a larger profit than any other business, that anybody may raise it, and that the training or previous experience of the Relliable Incubator and Brooder will give the best results in all cases. Our 20th Century Poultry Book tells just why, and is a hundred times better than you should know. We sell the book for 6 cents. Write today. We have 15 years of thoroughbred poultry. RELIABLE INCUBATOR & BROODER CO., Box 92, Quincy, Ill.

Please mention Bee Journal when writing.
Development of the Queen.

In gleanings in Bee-Culture, Dr. C. C. Miller discusses the matter of queen development. After considering the time from the laying of the egg to hatching, and to the sealing of the larva, he says:

The most important of the questions, from a practical standpoint, is: "How long from the laying of the egg to the emerging of the queen?" In the American Bee Journal, Vol. I., page 191, in a review of the three articles on the Dzierzow theory, by the Baron of Berlepsch, after detailing some experiments, he says:

"These experiments show that the opinion generally entertained, that the queens emerge between the 17th and 18th day after the eggs are laid, is correct."

The time of writing this, however, antedates the publication of the Journal, 1901; and elsewhere in general throughout the volume 10 days is accounted the proper time. Indeed, page 306, Dr. Cowan gives a special case in which the time was only 15 days. Sixteen days has of late years been accounted the normal time. I think, in general, in all the books excepting Cowan's, which gives 15 days. This year I thought I would refer the two latter questions to the bees, so as to get a positive answer in at least one case. July 18, at 10 a.m., I took from No. 85 its brood, leaving in the hive foundation and one comb containing some sealed brood. This comb having been kept for more than a week, I thought, there was no possibility of a queen laying in it. Four days later I gave this comb to No. 25, after having removed from No. 35 its queen and brood. July 28, at 10 a.m., when the oldest brood could not have been more than eight days old, I found 20 sealed queen-cells on the comb, and seven unsealed. The proof is clear and positive that those 20 cells that were sealed contained larvae not any more than eight days from the laying of the egg. It is reasonable to suppose that the seven unsealed cells contained younger larvae. Desiring to save all the cells, I did not wait till all the occupant had emerged. From the laying of the egg, and opened the hive at 9:45 a.m., Aug. 2, I was doomed to disappointment, for seven young queens had already emerged. In this case there could be no question. The cells were sealed in eight days, and allowing three days in the egg, there were five days of feeding; and the queens emerged to days from the laying of the egg. These figures agree with those of Mr. Cowan. It should not for a minute be supposed that there is any kind of variation. But it is probable that, under normal conditions, they may

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25 Cents Cash paid for Beeswax. This is a good time to sell in your Beeswax. We are paying 25 cents a pound—CASH—for best yellow, upon its receipt, or 27 cents in trade. Impure wax not taken at any price. Address as follows, very plainly:

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ALFALFA HONEY
This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.

Basswood Honey
This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms. It has a similar flavor than Alfalfa, and is preferred by some who like a distinct flavor in their honey.

Prices of Alfalfa or Basswood Honey:
A sample of either, by mail, 10 cents, to pay for package and postage. By freight—two 60-pound cans of Alfalfa, 8 cents per pound; four or more cans, 7½ cents per pound. Basswood Honey, ½ cent more per pound than Alfalfa prices. Cash must accompany each order. You can order half of each kind of honey, if you so desire. The cans are boxed. This is all

ABSOLUTELY PURE HONEY
The finest of their kinds produced in this country.

Read Dr. Miller's Testimony on Alfalfa Honey:
'I've just sampled the honey you sent, and it's prime. Thank you. I feel that I have something of a heroine to sell several thousand pounds of honey of my own production and that buy honey of you for my own use. But however loyal one ought to be to the honey of his own region, there's no denying the fact that for use in any kind of hot drink, there one prefers the more wholesome honey to sugar, the very excellent quality of alfalfa honey I have received from you is better suited than the honeys of more marked flavor, according to my taste.

C. C. MILLER,
McIlhenny Co., Ill.

Order the Above Honey and then Sell It.
We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.
be relied upon as coming near the average as anything that can be given. The question may arise, why is it that 16 days for the full development of a queen from long development will be retarded. In the American Bee Journal, Vol. 1., page 148, Father Langstroth reports a case in which a queen in a nucleus was 21 days in coming to maturity. In my early days of bee-keeping I knew no better than to have several queens started in nuclei, and I had cases like that of Father Langstroth. But in full colonies I have had many, many incidental proofs that 15 days is the limit. I ought not to change our belief from 16 to 15!

Hiving on Foundation.

Foundation, full sheets of it, is something that a newly hived swarm does not like; at least, Messrs. Hall and Alspaugh, of Ontario, assert that such is the case; that they are much more likely to swarm out when hived on full sheets. Mr. Alspaugh says he believes that bees don’t realize at first what foundation is for—that they don’t comprehend at first that they can make combs of it. When they find themselves in a hive filled of full sheets of wax placed 1½ inches apart, they say ‘I see no good in this; I am not going to be a there is no opportunity to build comb here with the space all divided in this way. Let’s get out of this and return to our honeycomb in an empty box, which gives the bees an opportunity to cluster contentedly in a natural manner, and then set a hive, furnished with sheets of foundation, over the box. Gradually the bees change from the foundation, discover its nature and their opportunities, and box below will be deserted—but sometimes not until quite a little comb has been built.”—Beeker’s Review.

Introducing Queens.

Mr. Ally has introduced thousands of virgin queens by the following method: The nucleus is placed on the hive, and 72 hours—then the entrance is closed with a plantain leaf, the bees given a dose of tobacco-smoke through the feeders. The hive, and the queen immediately run in through the same place, and the hole is closed. By morning the leaf is dry, the queen has flown away, and offers no obstruction to the bees. He uses the leaf to keep the bees in, and so to prevent the new queen from the swarm, for they are not likely to enter the hive as they are entering the hive.”—Arthur C. Miller, in the Bee-keepers’ Review.

Prevention of Increase.

Although not prevention of swarming, it is given after this fashion in the Bee-keepers’ Review:

Hiving swarms so as to prevent increase, and secure good results in honey, is managed as follows by Mr. J. B. Hal, of Ontario: The first swarm is hived upon half a stand, and the old hive placed by the side of it. On the eighth day all the bees (queens and all) if the honey is in a separate chamber, or the bees are hived in this place. On the eighth day before the old stand; any recipient where the nectar is mashed down, and

Standard Belgian Hare Book!

BY M. D. CAPRI

THIS book of 172 pages presents a clear and concise treatment of the Bel- gian rabbit, as well as its growth, origin and kinds; the sanit- ary and constructive character of the rabbit, breeding, furs, and furraising, the varieties, their care, scoring, etc., in which they may be recovered, together with a section on all the rabbit raisers’ diseases, and their cures and their diseases and their safekeeping. A first edition of 500, 20c., was sold in advance of publication.

Price, in handsome paper cover, 25c., postpaid; or with the American Bee Journal one year—both for only 11.50.

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$13 to Buffalo Pan-American and Re- turn—$13, via the Nickel Plate Road daily, with limit of 15 days; 20-day tickets at $10 for the round-trip $13 for the round-trip on Tuesdays, Thursdays and Coaches. Through service to New York and Boston and lowest avail- able rates. For particulars and Pan- American folder, write to Y. Calahan, Gen- eral Agent, 111 Adams Street, Chicago.

WILL SELL my half interest in one of my armies containing 200 colonies, for $6,000, or C. R. K. Have too many hives in the fire to attend to the request. At your command.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Oct. 10.—There is a very good trade in honey at 8¢ per pound; that which will not grade 1c. Lot fancy sell at from 13¢ to 14¢; some small lots of fancy have broken 17¢, and the dark honey has broken 13¢ to 15¢; the dark honey of various grades ranges from 7¢ to 9¢; the honey from both broods is of a good dark color and is full of flavor; it is very well at 55¢ to 60¢ for white, according to quality and flavor; white clover and basswood bringing 7¢; light amber, 55¢ to 60¢; Beeswax steady at 26c. R. A. BURNETT & Co.

CINCINNATI, Aug. 16.—The honey market is rather dull on account of the weather. Extracted sells only to manufacturers at 50¢ per 100 pounds in cartons, 9¢ to 10c; better grades alfalfa water-white from 64¢ to 70c; white clover from 80¢. Fancy white comb honey sells from 135¢ to 150c. C. H. W. WEBER.

BOSTON, Aug. 8.—Fancy l-pound honey in cartons, 10c; A. No. 1, in glass bottles, 13¢ to 15¢; A. No. 1, 14¢ to 15¢; very little No. 2 being received. Light extracted to 60¢. BLAKE, SCOTT & LEE.

Baltimore, Aug. 27.—White clover honey is in good demand and is firm at 70¢ to 72¢ per pound, with 50¢ on the New York market. White, 73¢ to 74¢; 100¢ to 120¢. O. B. MILLER.

OMAHA, Aug. 8.—Comb honey is arriving in express in small quantities from Colorado and selling at $3.50 per case. A retail price for the fancy white, 13¢; domestic clover, 10¢. E. L. DAVIS.

SEATTLE, Aug. 10.—The market is quite steady at the present time. The fancy white, 13¢; domestic clover, 10¢. L. J. MULLEN.

NEW YORK, Oct. 18.—Comb honey is in good demand and finds ready sale at the following quotations: Fancy wild, white, 13¢; domestic white, 15¢; amber, 12¢; buckwheat, 10¢ to 11¢. Fancy clover and alfalfa water-white, 90¢ to 100¢. A. H. STEEL.

DURHAM, Aug. 7.—There is very little doing here in new crop of honey. Some small lots of near-by produced comb honey are on the market and selling in a narrow range at 75¢ to 80¢ per pound. Light extracted at 60¢ to 65¢. No. 2 grade. C. W. HEDRICK & SKEEOLEN.

DENVER, Aug. 9.—Honey is very sluggish at this time and very little selling, a few small lots being received during the past week. Fancy white, 105¢; domestic clover, 95¢; domestic water-white, 65¢. P. F. JONES.

NEW ORLEANS, Aug. 13.—Comb honey is in good demand, and we find the price 70¢ per case. Fancy white, 13¢; domestic clover, 10¢. F. A. GERMAN.

DALLAS, Aug. 9.—Honey is steady and for the most part is in a narrow range. Fancy white 13¢; domestic clover 10¢. A. D. DURMEN.

SAN FRANCISCO, Oct. 9.—White comb, 105¢; domestic clover, 90¢; alfalfa, 85¢; extracted, white, 60¢; light amber, 45¢; brown 40¢. M. H. HUNT & SON.

Catnip Seed Free!

We have a small quantity of Catnip Seed which we wish to offer our readers. Some consider catnip one of the greatest of honey-yielders. We will mail to one of our regular subscribers without charge 250 seeds. We are introducing ONE NEW SUBSCRIBER to the American Bee Journal for a year with $1.00; or will mail any one an ounce of the seed for $1.00. We want from subscribers all over the country—both for $1.30; or will mail an ounce of the seed alone for 35 cents.

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Catnip Seed Free!

We have a small quantity of Catnip Seed which we wish to offer our readers. Some consider catnip one of the greatest of honey-yielders. We will mail to one of our regular subscribers without charge 250 seeds. We are introducing ONE NEW SUBSCRIBER to the American Bee Journal for a year with $1.00; or will mail any one an ounce of the seed for $1.00. We want from subscribers all over the country—both for $1.30; or will mail an ounce of the seed alone for 35 cents.

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Rocky Mountain Bee-Plant Seed!

(Coleome integrifolia)

...FREE AS A PREMIUM...

The A.B.C of Bee-Culture says of it: "This is a beautiful plant for the flower-garden, to say nothing of the apiary, as the bees are always on it from two to three feet in height and bears large, clusters of bright pink flowers. It grows naturally on the Rocky Mountains, and in Colorado, where it is said to furnish large quantities of honey." We have a few pounds of this Coleme seed, and offer to mail a 3-feed package, as a premium to any one subscribing for ONE NEW SUBSCRIPTION to the American Bee Journal, with $1.00; or 3

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CONVENTION NOTICES.

Chicago.—The Executive Committee of the Chicago Bee-Keeper's Association has ordered that the next meeting be held all day and evening, Dec. 5, 6, at the Briggs House club-room. This is arranged on account of the low rates to be had for railroad transportation, and nearly 300 bee-keepers are expected Chicago, and should result in the largest attendance we have ever had. C. C. Miller and Mr. C. P. Danday have promised to be present. Let all come.

GEORGE W. YORK, President.

Colorado.—The Colorado annual meeting promises to be a genuine success. The program has been well planned and a number of excellent papers are almost ready for publication. It has come to be a privilege and an honor to read a paper before the meeting of the Society. We have had in the past few years so many who are invited to write or speak for instruction and entertainment of the members in the board of the secretary. On two or three nights a big magic lantern will illustrate talks by famous students of bees and the bee industry. And then we are going to have an exhibition of the choicest honey in the United States (made in Colorado, we know) and wax, with bees enough to show "The Beekeeper's Garden". If you want to know more, or have forgotten the dates Nov. 18, 19, 20, write to the undersigned, here. Denver. D. W. WORKING, Sec.
We have a Large Stock on hand and can ship promptly.

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Hives, Extractors
OR ANYTHING YOU WANT THE
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JAMESTOWN, N. Y.
W. M. Grimes, East Noltingham, N. B., carries a full line of our goods at catalog prices. Order of him and save freight.

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River Forest Apiaries!
FILL ALL ORDERS
By Return Mail.

Italian Queens Warranted

Untested, 73 cents; Tested, $1.00 Select Tested, $1.50. Half dozen or larger lots as may be agreed on. Address,

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RED CLOVER QUEENS

BLACK ROCK, N. Y., Sept. 3, 1901.

FRIEND ERNEST:—I will try and tell you what you want to know about that queen. I got her of you in 1899 as a premium with GLEANINGS. I never saw a small colony of bees build up as that one did. In the spring of 1900 they came out in fine shape, wintered perfect. I raised them up in May and gave them 8 frames more so the queen would not want for room. I never saw such a colony of bees as they were in June, and they were actually storing honey when other bees in my yard were starving. No! they were not robbing. I never saw those two best colonies of mine trying to rob. THEY CERTAINLY WORK ON RED CLOVER. This is no guesswork, as I have seen them. As you know, the past two seasons have been very poor, and what honey my bees did get in 1900 candled soon after cold weather set in, I packed this colony in a chalk hive and left them out, thinking that such a strong colony would winter perfect. The snow came on the middle of November, and those poor bees never a fly until the last of March or the first of April. When warm weather at last came I thought they were dead, as they did not seem to be flying much, so I did not pay any attention to them until in June. I noticed they were working a little, so I opened up the hive and found them in the upper story. I took the lower story out and left them in the one body. The queen was laying nicely, and I thought they would make a good colony to winter. Along the last of July I noticed that they needed more room. I gave them super, 31 boxes, and in a few days they had it full. They have made 72 boxes of as nice honey as you ever saw, and are drawing out some starters now, Sept. 2.

Very truly yours,

Geo. B. HOWE.

Prices of Red Clover Queens.

Gleanings in Bee Culture 1 year and Untested Queen ........................................... $2.00

" "  " Testeed Queen .................................................... 3.00

" "  " Select Tested Queen ........................................... 6.00

If you want something good you can not do better than to order one of these queens. All orders are filled promptly. No extra postage on these to foreign countries.

THE A. I. ROOT CO., Medina, Ohio.

Langstroth on... 
The Honey-Bee

Revised by Dadant—1900 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helpt on the way to success with bees.

The book we mail for $1.25, or club it with the American Bee Journal for one year—both for $1.75; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

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THE
The Bee-Keeper's Guide;
Or, Manual of the Apiary.
—BY—
PROF. A. J. COOK.


A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without The Bee-Keeper's Guide.

This 16th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

Given for TWO New Subscribers.

The following offer is made to present subscribers only, and no premium is also given to the two new subscribers—simply the Bee Journal for one year:

Send us TWO NEW SUBSCRIBERS to the Bee Journal (with $1.00), and we will mail you a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both for only $1.75. But surely anybody can get only TWO new subscribers to the Bee Journal for a year, and thus get the book as a premium. Let every body try for it. Will YOU have one?

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The Novelty Pocket-Knife.

Your Name on the Knife. When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown below.

The material entering into this celebrated knife is of the very best quality: the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The holsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire: the linings are plate brass; the handles are inlaid with celluoid, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your Pocket-Knife will serve as an identifler, and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side. The accompanying cut gives a fault idea, but cannot convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife. We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE new subscribers to the Bee Journal (with $1.00). We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

GEORGE W. YORK & CO.
St. Chicago, Ill.

**Please allow about two weeks for your order to be filled.**
National Association Elections are held annually in December, that is, the election of general manager and the successors to three members of the board of directors, whose terms expire with the end of each year. The executive committee (composed of the president, vice-president and secretary) are elected at the annual meeting of the organization.

Referring to this subject, though more particularly to nominations in advance of the election, Editor Hutchinson said this in the Bee-Keepers' Review:

Nominations in advance of the election of a general manager, and the directors of the National Bee-keepers Association, would be very desirable. As it is now, when a member receives a voting-blank, he does not know for whom any other member will vote. In his desperation he votes for the man whose term of office is about to expire. As a result, each officer succeeds himself, year after year. Should it ever become desirable to elect a new man, it would be well-nigh impossible with the present system. This question was discussed by the directors present at Buffalo, but they were unable to devise a plan that seemed wholly satisfactory, and it was finally decided to have the matter taken up in the bee-journals for discussion.

The foregoing was sent to F. B. Root, one of the directors, for his criticisms or suggestions. When considered briefly, he replied: "I believe that the more prominent and wiser members should manage its important affairs."

Long Tongues Per Se.—In the Bee-Keepers Review for September, F. B. Simpson disclaims the intention of teaching that long tongues are of no value per se. It was said on page 63 of this journal that it was doubtful if he meant to teach just that thing. But his words—"I believe the long tongues are of no value only so far as they represent an increase of rigor—seem to teach just that thing, at least a Straw in Gleamings in Bee-Culture, and an "Afterthought!" in this journal, show that others so understood. But a man who is doing as good work as Mr. Simpson may easily be forgiven for failing in a single case to make himself rightly understood.

Deficiencies of Bee-Books.—Every now and again the novice makes the charge against his text-book that it lacks the very thing he most wants to know. The text-book on bee-culture that is perfect is yet to be written, and the probability is that it will never be written. Yet it is doubtful that more truth about bee-keeping could well be gotten into the same space. It must be remembered that no matter how full and complete a bee-book may be within the limit of a certain number of pages, there can not of necessity be full minute upon all points that may arise. New complications will always be arising that will raise questions which can only be answered by some one of experience, and for the very purpose of answering such questions a department in the American Bee Journal and in some other journals is constantly maintained. The readers of this journal need never hesitate to make free use of the department of "Questions and Answers." Especially are questions allowed, and even solicited, from our regular subscribers who have made careful study of the text-books.

Study carefully your text-book, and become familiar with it; for the question department is not intended to take the place of the text-book, and after you are familiar with the contents of any good work on bee-culture, you will ask intelligently questions whose answers will be useful to many others. But don't ask too much of the text-books, and don't expect a study of them ever to leave you without some question that needs answering.

Warming Combs.—When Wm. McEvoy gives additional combs of honey in the spring, he takes the precaution to have these combs warmed before being put in the hive, by keeping them in a very warm room until they are warmed clear through, as he relates in the Bee-Keepers' Review. If one stops to think, this will appear a rational proceeding. The combs in the hive, whether full or empty, will be of about the same temperature as the cluster of bees, so far as the combs included in the cluster or touching the sides of cluster. Now suppose the cluster is divided to receive a fresh comb of honey, or even if it be placed close up against the cluster, it is easy to see that the bees would be thereby chilled, and perhaps serious damage done. Mr. McEvoy is doing a wise and paying thing to warm the combs that he gives. Of course these combs are given in the evening, and then there will be little fear of robbing.
tars (vetch) from the wheat without destroying the latter. Vetch is usually sown with timothy or some other tall-growing plant which aids it to stand up.

If any of our readers know vetch to be a nectar-yielder in their locality, we should be pleased to have it reported; also time of sowing, and how to grow it successfully.

**AMERICAN BEE JOURNAL.**

**The Buffalo Convention.**


(Carried on from page 86.)

**FUMIGATING COMBS WITH BISULPHIDE OF CARBON.**

"How soon may combs that have been fumigated with bisulphide of carbon be given to bees without killing the bees?"

Mr. Benton—I have frequently used bisulphide of carbon and used the combs an hour after that; but if you put a whole colony of bees in, there would be a chance of killing the bees. I don't think there is any danger in a few hours. It evaporates very rapidly.

Mr. Abbott—I don't think that bisulphide of carbon would affect anything in 3 minutes after if it is not confined. Bisulphide of carbon won't affect anything if it is not confined; and if you can pour all the bisulphide you please on a comb in the open air and it will all be gone in three minutes, and I don't see how you could kill the bees without it being confined.

Mr. Benton—The odor would be disagreeable; I don't think it would kill them.

Mr. Abbott—I use it for keeping the moth from eating up the paste that I paste my papers with. I pour a little in a saucer and in a few minutes the moths are all killed. I do not hesitate to open the can and breathe it, but if it was confined I wouldn't want to stay there.

Dr. Miller—I would like to ask this question: Does bisulphide of carbon kill the eggs of the bee-moth?

Mr. Benton—I think it does. I never have had them develop in combs that were thoroughly subjected to bisulphide of carbon. I would stack up the combs side by side in a heap of bisulphide in there and let it stand several days; some of those combs that had stood two or three months in hot weather; there were eggs there I know because other combs developed.

Dr. Mason—I had some extracting-combs that I noticed the worms working in, and I put the combs up and put a teaspoonful of bisulphide of carbon in a dish on top of the frames, and in two or three days when I examined them there wasn't a sign of any worms but dead ones.

Dr. Miller—We have been using sulphur, and now we are told bisulphide of carbon is better, and we want to know about how much better. Now, in using sulphur, if the combs have in them the larvae of the bee-moth, I wish Mr. Benton would tell us a single word that we can do with them. As far as these worms, when they have attained any size—say if they are half an inch or an inch long—you may sulphur them so thoroughly that you will turn them all green, and those big fellows will still be alive and happy after they come out again. Now, will the bisulphide kill those old chaps?

Dr. Mason—It will kill every one of them. We have tested this that summer that had wormy combs in it, and when I discovered it they were great big fellows, and in an hour's time after using the bisulphide every one of them was dead.

Mr. Barb—I would like to ask Mr. Benton whether he applies that bisulphide above or below.

Mr. Benton—On the top, because it is heavier than the atmosphere. I put an empty super there and set a little tin can in there—possibly half a pint, or a small can, for quite a stack of hives. Mr. Abbott—Did I understand Dr. Miller to say that sulphur gas will not kill the big worms? I have never seen anything that I could not kill by sulphur gas. Seriously, I think you are laying down a proposition that seems to be contrary to all scientific investigation. If there is anything that threatens the life of a live in sulphur gas, I have yet to see it. I used to be in the patent medicine business, and we had a vat in which if you had hung anything from an elegant down to a mosquito it would kill it.

Dr. Miller—I don't know of any way to get it sufficiently strong by ordinary means.

Case—My business down in Ontario County a few years ago was raising hops. I found a colony of bees one time, when I was drying hops, that the worms had destroyed, and I says, "Now I have a chance to fix you." So I took the combs that were a mass of worms, and put them into a small sack and put them into that in which there was perhaps 20 feet square, where we burn all the way from 25 to 50 pounds of brimstone in about three or four hours, and I took pains to hang them on the wall with a stick so that I could get them up as near as possible to the ceiling to get the benefit of the brimstone; and I left them there all night and burned the brimstone myself, and when I took them out in the morning the worms were alive.

Mr. Abbott—Was that kiln air-tight? Mr. Miller—There was an air-tight bottom, but the air is full of brimstone.

Mr. Hutchinson—Has any one used gasoline for killing moth-larva? Mr. Root—We have used it for killing ants. We made holes in the nests and poured gasoline in instead of bisulphide of carbon to kill ants.

The following is a letter made in an obscure (?) journal, (I think it is called Gleanings,) the statement was made that it had been used to kill the larvae of the bee-moth, and in connection with that the editor stated that he had used it to kill ants.

**Weekly Budget.**

Mr. R. A. Henderson's Apary is shown on our first page this week. He is in this (Cook) county. He began last spring with 11 colonies, and he says, "With the American Bee Journal and A B C of Bee-Culture as my guide, I increased to 45 colonies, by rearing and buying queens; and took off 1500 nice, finished sections." Mr. Henderson succeeds because he puts sense and enthusiasm into his work with bees. Of course, his good location makes up the rest, as nothing else could replace the lack of that.

Mr. A. L. Booten, of the A. J. Root Co., is soon to visit the West Indies—Barbadoes, Jamaica, Cuba, Trinidad, etc. Also Rambler (John H. Martin) is to "trip it" through Cuba with bicycle, camera, etc. There is no more enterprising concern on the continent than the publishers of Gleanings in Bee-Culture. And that elegant periodical shows the wonderful amount of work and expense constantly bestowed upon it. It richly deserves all the success with which it is meeting these autumnal days.

Mrs. Clara West Evans, one of the subscribers of the American Bee Journal, has been nominated as a candidate for superintendent of schools for Allamakee Co., Iowa. The local newspaper where she lives, besides giving an excellent picture of the nominee, has this to say among other endorsements:

"Mrs. Evans has the health, energy and ability which fit her for the duties of superintendency of schools, and we selected her best to meet the requirements of that office. As a business woman she is thorough, honest and reliable. After the death of her husband, three years ago, she assumed the management of his business, and by reason of study and close application, ranks to-day as one of the most successful apiarists in the State of Iowa. She has held various offices of trust and responsibility in church and lodge wherever residing."

Some people don't believe in women going into politics. Neither do we—in the kind of politics most in evidence to-day. But some day politics will be cleaner. It would be cleaner now if only men and women of the stamp of Mrs. Evans were allowed to have influence. A woman who in her own industrial and social life has more manhood and womanhood in our officials—less party blindness and more righteousness in the voters.
Dr. Mason—Will the sulphur fumes kill the eggs?

Dr. No, sir.

Dr. Mason—Well, the bisulphide will, and there is no sense in using sulphur when you can get the bisulphide.

Now I pile up the hives as high as I can reach, eight or nine I don’t think I poured over two teaspoonsful in, and it killed every worm.

W. J. Craig, of Ontario—I have been much interested in experiments with the bisulphide, and have piled the hives up in the same way, but I found that the eggs developed into a grub inside of a day or two. But I have piles of them.

At the same time, when I used the drug in an air-tight vessel it killed the grubs and destroyed the vitality of the eggs as well, but with piling the hives up I find that only the grubs were destroyed.

Mr. Benton—Of course, it would be absolutely air-tight.

Mr. Craig—I am sure that I used two ounces of the liquid to ten supers, and I put it top and bottom.

Pres. Root—Then you probably had only one ounce on the top, if you divided the amount as a rule? I mean as a large margin. Would it be sufficiently, would it, Mr. Benton?

Mr. Benton—I think it would be, if of good quality.

Mr. Craig—We have found a good deal of difference in the quality of the bisulphide. Sometimes we have had it good and sometimes bad.

Mr. Mason—I have been able to state that it is extremely explosive, and if this was used in a room one should never go into the room with a lighted lamp, or candle, or pipe, or any fire whatever, for there is very little with great caution. I called attention to it in a publication of the Department of Agriculture about five or six years ago. I would like to know whether it had been mentioned before for this purpose.

Pres. Root—I don’t remember seeing any mention of it.

On motion the convention adjourned until 9 a.m. the next day.

SECOND DAY—WEDNESDAY FORENOON.

The meeting was called to order by Pres. Root at 9 o’clock.

ANNUAL PROCEEDINGS IN PAMPHLET FORM.

"Should the proceedings of the National Bee-Keepers Association be published annually in pamphlet form for distribution to its members?"

Mr. Hershiser—I feel very much interested in the work of the Association and the extension of its membership, for the reason that in order to carry out its aims it is necessary to have a fair and reliable publication available on hand to use when necessity requires.

In order to get members it is necessary to show them that they get something out of it. Most everybody when approached to join an association like this, the question immediately occurs to them, What is there in it for me? Now, there are a great many bee-keepers in this country and in others that has been members of the Association, but they are not members simply because they do not see that they are going to get anything out of it. They don’t expect it to be prosecuted for keeping bees. The chances are very remote for people living in country districts to be prosecuted; it is only in the case of some difficulty arising between neighbors. Now, if you could give a bee-keeper the idea of getting something out of it, it is very much easier to get him to join the Association; and anticipating that these proceedings would be published in pamphlet form, I have induced seven or eight people to join the Association with the idea that they were going to get something valuable from it. As far as I can see, the question as to the advantage of bee-keeping by the different bee-keepers from the different parts of the country are very valuable if the bee-keepers can get them. I think that it would be a great advantage to have these proceedings published in pamphlet form, and every member to get a copy, and, if that is the case, I think that that is the best means of extending the membership and making the Association strong, and getting the two or three thousand members that so many of us ardently desire.

Franklin Wilcox, of Wisconsin—In addition to what has just been said, I might say that I think that every member of the Association that pays his dues is entitled to a copy of all the proceedings of the Association. He should have it in some form. The question as to whether it should be published in pamphlet form is the question for the members to solve. It is published, as here-tofore, in the American Bee Journal, or any other journal, and each member of the Association furnished with a copy of that journal. Whether a subscriber or not, it covers all the requirements, in my mind, and would save some expense. The expense of publishing it in pamphlet form is more.

Mr. Hershiser—I would say in answer to the question of expense, that it is for that reason we want to go to the expense. If it is unfavorable to go to that expense, then we want to go to that expense.

Pres. Root—As I understand, the American Bee Journal containing the copy of the report has here-tofore been sent to every member.

Mr. Wilcox—That covers all the requirements, as far as I can see.

C. J. Baldrige, of New York—Last year I didn’t get the American Bee Journal.

George W. York, of Illinois—I think last year I offered to send all the copies of the Annual Proceedings and containing the report upon receipt of 10 cents. Perhaps some of the members didn’t get notice of it.

Mr. Hershiser—I think that would cover all—ten cents—and have it published in the American Bee Journal; and those who aren’t members could get it for 10 cents.

Mr. Wilcox—I had no idea when I made the offer that the proceedings would run through so many numbers. I wouldn’t care to make such an agreement again, but I might say that I agree with Mr. Hershiser, that it ought to be published in pamphlet form, and I know that the expense would not be any more than what I have been paying—perhaps it is much higher. It is much more pleasant to have the pamphlet and have the proceedings sent to each member. And, Mr. Hershiser, I think that the officers of this Association should publish the pamphlet, and charge 10 cents for each copy, and let the Association pay the printing expenses of that pamphlet, and charge the members 10 cents for each copy, and let the Association pay the printing expenses of that pamphlet, and charge the members 10 cents for each copy. I think that the proceedings of this Association are of sufficient interest to the members to have them published in pamphlet form, and each member should pay 10 cents for each pamphlet.

Mr. Mason—It is not a question of expense.

Mr. Hershiser—I think that the officers of this Association should publish the pamphlet, and charge 10 cents for each copy, and let the Association pay the printing expenses of that pamphlet, and charge the members 10 cents for each copy. I think that the proceedings of this Association are of sufficient interest to the members to have them published in pamphlet form, and each member should pay 10 cents for each pamphlet.

Mr. Abbott—This matter is subject to the discussion of the Board of Directors.

Mr. Mason—I may say that heretofore the Association has shared the expense of the stenographer with the American Bee Journal. The Philadelphia convention the bill was paid by Mr. York alone, and this year also he pays the stenographer. If the Association expects to get any of it out of the general cause of bee-keeping by paying their dollars.

Pres. Root—Of course, you understand that the discussion is advisory for the Board of Directors.

Mr. Mason—I may say that heretofore the Association has shared the expense of the stenographer with the American Bee Journal. I believe that such reports give tone and character to a meeting, and I think that in the time as though we were a kind of Cheap John affair, simply because we trusted the papers to circulate our literature and be paid alone. I have intimated as much to the general manager, but he and some of the Board of Directors seem to think that a Cheap John arrangement is just as good and cheap as any arrangement. There are some beekeepers who are keeping bees according to the old methods that prevailed 50 years ago, and 50 years ago we would not have needed any report of that kind in order to promulgate our interests, but the time has come now when we need a report, bound and separate, and distinct from any paper, any journal or anything else, and as a newspaper man I know that there can be enough advertising put into the back page of the Journal necessary, to pay for issuing the pamphlet; in fact, I am not so sure but I can find an advertising solicitor who will make the solicitation and get the sale for the sake of the advertising that he can get in it. I understand that we are near the thousand mark in membership, and we are going to begin the next edition, and if you have not given your dollar to help pass this thousand mark, we would be glad to have you do it now. I am glad that this matter has been brought up. We can get character and influence outside of the bee-keeping fraternity by having a thing of this kind. For instance, we can get famous men who are driving that honey. I want to sit down and write to him with regard to it. I say to him: "Dear Mr. Smith, I mail you today under another cover a copy of the Proceedings of the last National Bee-Keepers Association. It includes the names of officers, and the constitution, and explains our aim and purpose, and shows how they can be done. Now, don’t want to make any warfare on your business, but you will notice that we are a thousand strong, and unless you stop your advertising we shall have to bring the law to bear.
on you." A business man sometimes is known by a letter-head. If I get a letter from a business house on a Cheap John piece of paper I generally chuck it up and go no further attention to it. But if I get a neat letter, printed nicely, on good paper, written in good style, proposing something in a business manner, I say, 'there is a firm that stands for something,' and I write to them. These things tell in the world, and we want to use the things that are used by others also, spending of a few dollars for a report will do more, in my opinion, to help the bee-keepers of the United States than anything else we can possibly do. The bee-keepers are not the only people who are interested in the arguments presented now, as well as some other things, that the use of such a report might be an excellent investment; that, even if it does cost something, it will bring in more than goes out, and on that same line I endorse the thought that we don't want it on the Cheap John line. We have taken a stand and we shouldn't get a clean report. I believe if we are going to go on the dignity, we would better keep it clear of everything that isn't a public notice.

Dr. Mason—Mr. York informs me that a thousand copies of the proceedings can be published in pamphlet form, and a copy mailed to each member for 50 cents. N. D. West, of New York—If we get the pamphlets printed, would it not be a good plan to have more printed than our present edition? We might obtain them for a certain stated price, the amount to be thrown into the treasury to help maintain this organization? Also, is it possible the report is in pamphlet form, we would expect it and want it in the American Bee Journal just the same. In regard to the advertising in the back part of the book, I do not see that that would materially injure our pamphlet, if it was gotten up in a neat and attractive shape. It is necessary for us to save all advertising in this form. In regard to these things, and yet we do not want to do anything that would be any injury or injustice to the pamphlet itself; but I am looking forward to a time today that would like a pamphlet that belong to this Association, and which might be an encouragement to get others to join the Association later on.

Mr. Hershiser—I know that this convention recommended the Board of Directors to print the proceedings of this convention in pamphlet form, and to issue a sufficient number to supply each member and, I think, at a reasonable number as they may think best.

Dr. Miller—I second that motion.

The motion was carried.

Mr. President: The President of the Buffalo Society of Natural Sciences, was then introduced to the convention, and gave the following address of welcome:

Dr. Smith's Address of Welcome.

Mr. President. Ladies and Gentlemen:—I trust you will continue to remember the generous and noble disposer, who adulterates honey, but the one who is doing all he can for the advancement of information and of science in the city of Buffalo. It was with very great pleasure that we received information from the National Bee-Keepers' Association that they would meet in Buffalo, as we desired very much to entertain this organization, and hence we wish to state to you that these rooms are yours during your stay here. We have made a plan and a list of several other rooms in connection therewith, in which your directors and committees may meet, and, of course, as can be seen by the roll, we would have you here stay agreeable and pleasant and we will be very happy to do.

Nearly 20 years ago the citizens of Buffalo subscribed nearly three quarters of a million dollars for the erection of this building. It was to be the home of the Public Library, of the Academy of Arts, of the Historical Society, and the Fine Arts. Since then the Fine Arts have outgrown the limits of the building, and a public-spirited citizen of Buffalo, Mr. Alforth, has provided them with a very beautiful building, which you will notice as you enter the Pan-American grounds. This will be the headquarters of the Fine Arts. Their board of directors has been taken by the Public Library, which was formerly supported entirely by private subscription and membership, but with the growth of it has grown so great that the city has fathered it, and now devotes nearly $75,000 per year for its maintenance. The ground upon which this building stands was given to the city.

Of course, this is simply an idea of what the spirit of the citizens of Buffalo is in regard to educational and scientific work. Everything is being done by the city for the finer arts, and further the work of such organizations as this. The presence of the bee-keepers is simply another step in the interest that is felt in this city in the subject of bees. Nearly ten years ago one of our most lovely members, the Hon. David F. Day, a man of great learning and of ability, a botanist, perhaps that we can in the United States and in the world, suggested that it would be a very interesting and valuable thing if the subject of the honey-bee was studied more deeply as nearly to the understanding of the public.

The matter was canvassed by the board of directors of the Society of Natural Sciences, and that possibly the general public was too busy with other affairs, and had lost interest in such matters, and that it would be better to begin with the young. After considerable consideration, the question of giving an exhibition, in these rooms, of the honey-bee, to the children of the advanced grades in the elementary schools was taken up.

The Society made the offer to the Superintendent of Education, and to the Board of Education, and it was very agreeable to both.

We had long known Mr. Sleeper, who was familiar with the bee from A to Z. I entered into correspondence with him, suggesting that he bring here some of the public demonstration to these children of the different classes, answer questions, and give them an idea of the interest, the usefulness, the marvellous instinct of the honey-bee. Mr. Sleeper very kindly accepted this invitation, and came on here in winter and these rooms were thronged with the pupils of the public schools in the 8th and 9th grades, with special classes from the high school, and with classes from the various private schools. At that time we had in the city also a school of pedagogy in which advanced teachers were given courses. This school also agreed to repeat, and I have exhibited very carefully. The result was a profound success of the enterprise. I don't think that any departure made, Mr. Smith and Superintendents of Sciences, brought it more valuable returns in the way of interest of the public in its work. We extended that system of educational work, and we sent, for instance, collections of Indian relics, of animals, of birds. We have classes here from the schools that meet to study birds. But it began with the honey-bee. It was a case where the opening of the bee opened the ball, and our department in this line is the most successful of the branches of the Society of Natural Sciences.

Mr. Sleeper, I may say, almost made himself a martyr to this cause of science, in that one of the very coldest days he was due here to lecture at the Public Library, and at that time the station and in getting them in here he was taken with pneumonia, and lay at death's door for some time. It was a case of necessity that he did not, and we had then to call upon Mr. Hershiser, who very kindly offered to continue the course of lectures, owing to the illness of Mr. Sleeper. This department will steadily be continued.

You see, therefore, that we owe a great debt to the bee-keepers, and in inviting you among us, and being able to offer you some little entertainment—a place to meet, or some little thing we can, I give you an idea of the debt of gratitude we owe to the bee-keepers. I have also given you a little suggestion of what is being done here, and I have in my course a study of the honey-bee. Of what great interest the study of this subject is to the general public, and I hope to see the time when every school shall have in its course a study of the honey-bee, with a practical demonstration. It is a wonderful creature and the subject is fraught with the greatest scientific interest in all its details.

The diseases of the honey-bee are something that every scientific views with the greatest interest, and you gentlemen with practical knowledge of those subjects can do so much to advance the scientific inquiry in regard to the diseases that are common to the lower orders of insect life. Of course, the same general line of diseases to kill the honey-bee kill many of the insects that are destructive to vegetation, and a whole world of inquiry is opened up by the study of this one little insect creature, which is a part of the animal kingdom. I wish to thank you most kindly for your attention, and again I wish to welcome you most heartily to our rooms.

(Continued next week.)

Requeening Every Year is coming more in favor all the time with Adrian Getsa, Bee-Keeper at Review. All bee-keepers quite commonly prefer to leave to the bees the task of requening. With young queens he has fewer drones and less swarming. But some will object that annual requening gives less chance for thorough establishment of a reputation for queens to breed from.
No. 1. APICULTURE AS A BUSINESS.  
Plant-Growth Conditions in the Arid and Irrigated Regions.

BY R. C. AKIN.

FOR two years the general honey crop has been rather limited. The great forage-plant of the West—alfalfa—is not much grown outside of the irrigated districts. Drouths to the extent of 10 years are not uncommon and the main source of the East—white clover—and the Eastern short crop has made a demand for honey from the irrigated districts.

I observe that the people are prone to jump at conclusions, both in general and in particular; and, regarding honey-production and apiculture as a source of a living income, an analytical discussion dealing with facts and figures touching the industry as a business seems timely and much needed. Among the things that lead me to this discussion, are the rash ventures made by inexperienced ones going into the business without due investigation and consideration. But, how are we to reach these people? My thoughts through bee-paper channels will entirely miss the most of these rash enthusiasts, for they do not read such literature, many of them possibly but little of any kind, especially of a scientific nature. However, many now in the business are to be esteemed, and who would exceed our liars, some who are planning to extend their business, or, perhaps, to change locations, may be benefited by a discussion such as I am about to undertake.

ALFALFA.

Two things that need to be understood better are sources of honey and the dependence to be placed in them. There is a great diversity about the nature of these. Westerners share in it—that the two main sources of the irrigated districts—alfalfa and sweet clover—are a certain supply, never failing. This is one of the things that must be considered in the business calculations. If an annual yield of a given number of pounds per colony can be obtained, we have somewhat to build upon.

When I came to this place the farmers here were making an effort to grow red clover, and many fields of it were to be found all over this district, although alfalfa was the main crop. Their two efforts have proved quite a crop of red clover honey, then the clover ceased to exist. So far as I have observed, any and all the clovers do exceedingly well. I have never seen anywhere such immense growth and blossom. While clover then and now is the tap-root, it is decidedly a clover soil, white and red clover will never succeed in general. Our climate is so dry—that so many months in the late summer, fall and winter without sufficient rain to keep the ground moist—that the clovers do not get started or, if started, are soon killed out by drought. Irrigating water begins to get scarce in August, and in September and October we can scarcely get any. Just now—October—there is but a very limited water supply. I get many inquiries from the East about our country—this answers many.

In winter and spring—particularly late winter and early spring—is when most of the snows fall upon the mountains. When snows fall upon the Precipitation in the Missouri and Mississippi valleys, we are having ours, too, but ours mostly falls upon the mountains. The general trend of air currents is from west to east, and the high, cold mountain tops condense and precipitate moisture from the Pacific; thus the moisture is, as it were, strained out of the air before it gets to us, hence the country at and near the mountains on the east is a dry one.

Beginning at the "foot-hills" (first hills of the mountains, and I use distances on a magnificient scale), is the dry or arid region. This arid region continues arid, and gradually changing to one of more humidity as distance increases from the mountains, until when the Missouri valley is reached, it is no longer arid. The Missouri species fall becomes sufficient to make farming a reasonable success. Precipitation varies as air currents vary because of high or low mountains and other physical arrangements of the country.

The reader will comprehend that in the spring, as the weather begins to warm, the accumulated snows begin to melt and flow out of Great Rockey mountain. The altitude of the "Rockies" and you will understand that spring up there is late. Comparatively little water gets down before April, the greater part coming in May and June. We depend upon spring rains to start the crops growing, and, by that, the clovers and alfalfa—on which the fat bee bees feed. Of course, there are other reasons, however, for for starting crops without irrigation, but not necessary to discuss them here.

Remembering, then, that there is but little water to apply the soil in early spring, rather from early fall till late spring, you will see how almost an impossibility it is for white and red clover, or any shallow-rooting plant, to live here. The red clover fields planted here 10 to 12 years ago are now winter-killed and there are none on hand.

Only such as send long, thick tap-roots deep into the ground, and such plants as by nature are fitted to withstand drouth, these only can survive here. As an illustration, buffalo grass will become almost perfectly dry, yet retains vitality and responds when moisture comes again.

These conditions necessarily limit our flora to such plants as are peculiar to arid districts, and the principal of these, aside from the California region, are alfalfa, sweet clover, and cleome. The former is grown of necessity, because the honey is desired, and clover cannot be grown here. Sweet clover is just in its element of soil and climate here, and while an unwelcome addition so far as the farmer is concerned, yet it flourishes along ditches and roadsides where it is not needed, and moistures, if it is not cultivated out. While sweet clover endures much dry weather when once started, it is not by nature an arid-region plant. It grows most luxuriously by ditches and water-courses, and around the bridges and wells, because the alkaline soil is its natural soil, and its long tap-root can reach deep to moisture, it makes quite a growth in quite dry soils, though depending upon rains to start the new plants. It is a biennial. Alfalfa is of the same nature as sweet clover, but will not stand quite so much moisture in the way of a wet, soggy soil. Alfalfa is a perennial, whereas the other clovers are more truly biennials, hence the former once established grows on and on indefinitely, roots becoming large to 20 feet long, penetrating almost straight down. Alfalfa never reaches its best until after the third year.

Now, while in some localities there is more or less bloom that gives a surplus honey, so far as the irrigated regions are concerned as a whole, we have but three sources of honey—alfalfa, sweet clover, and cleome. The first is the famed world over, the second is a common and well-known plant in all beedom—so far as its reputation goes—and the third is probably confined to the mountain regions, including all arid districts. Cleome is truly an arid-region plant, growing where neither alfalfa nor sweet clover will. Not one of these plants is absolutely sure as a honey-yielder. Each needs its peculiar conditions to make it succeed, both in making a growth, and in nectar-yielding. My own field of the three sources; first in importance is alfalfa, second sweet clover, and last cleome—this latter not in quantity to give a surplus with the great numbers of bees to work upon.

As to conditions necessary for the plants, I will briefly give my opinion, but consider this only as an opinion, for I am not certain. Alfalfa needs to be well irrigated, and have a rich, healthy growth, then bright, hot weather while growing. It does not mind drought. Alfalfa, or sweet clover is much the same as alfalfa, though to yield well I think it needs a more humid air, and probably less heat, showery weather seeming best. Cleome yields pollen in the morning, is visited by the bees before alfalfa is scarcely touched, and evidently does best with cool, moist weather. While cleome will grow almost from the dry, hard road, yet I believe it secretes best with rather cool weather and occasional showers. Not living in a region of great abundance of cleome, I am not so well acquainted with it.

I have harvested much alfalfa, also quite freely of sweet clover, and a little cleome. Because of irrigation keeping some fields of alfalfa in prime condition every year, we seldom fail to get more or less honey from these. It in no way requires paying for water, for until 12 years ago we have not taken at most more than six fair to good crops, and of these, generally speaking, I may say we were alfalfa, two red clover and two sweet clover. But, while two were almost exclusively alfalfa, four were mainly so,
Introducing Queen-Bees by the Improved Method.

BY W. W. M'Neal.

It devolves upon me to write farther of the method of introducing queen-bees, recently submitted for the benefit of the readers of the American Bee Journal, and which was referred to Wm. M. Whitney.

I wish to say that I have no ill feelings whatever towards my opponent; neither is it love for discussion that brings me before this intelligent audience of bee-keepers. I only desire to take issue here, and in many instances, on a practical principle involved which honey-producers cannot afford to ignore.

Mr. Whitney now professes to be very much surprised (see page 99) at my taking issue with him, and says all his statements are antagonizing one of the grandest truths which has been given to the bee-keeping world. If he knew the position he took was not "tenable," then what motive had Mr. Whitney in taking the position at all? If the assertion be true—"love, hatred, prejudice, and selfishness" are unknown qualities in the make-up of the honey-bee, how does Mr. W. harmonize this with his former statement that the honey-bee is "prompted by the highest type...of love and patriotism?"

This, however, is not the point directly at issue and I must not linger here. I did not "take seriously" the words of my esteemed fellow-bee-keeper, though it seems that he is in fact, to place a lower estimate upon his writings than I was wont to accord him.

Now, what I specially wish to ask of Mr. Whitney, and all who are interested in apiculture, is to try the method I give you for the safe and practical means of introducing a queen-bee. In the name of progress, I ask of you, at least, to try the plan and see if it is not good.

I have tested it and find that I can introduce a queen-bee safely into any colony where a queen-bee can be introduced by any other method; and, in many instances, more successfully than by any plan of caging. I know others can do what I have done if they pursue the same course. One does not need to be an "expert"; in fact, the system is practically self-sufficing in itself.

The fact that these teachings are not recorded in the pages of any of the recognized works on bee-culture does not signify that they should not be there. I hope no one of the readers of the American Bee Journal is so impractical as not to be able to recognize a good thing till it is written in some text-book.

Instead of throwing cold water on a principle that has real merit, why doesn't Mr. Whitney come out and do the practical thing, and advise the beginners against the folly of purchasing such valuable queens as he seems to have in mind? What use has a beginner with a queen so valuable that he cannot make use of her?

Cats with which queens may be exchanged, and the time thus gained, when time means honey, eventually stored by bees reared from eggs laid by the queen during the interval the adviser of the caging method would have had in his cage

When the queen of a strong colony is taken away and introduced into another by caging her, I believe that it will be safe to say that a week's time will be required for the queen to reach her former proficiency in egg-laying. Now, all this causes the new queen to appear at her worst at the very time when she should be in her best physical condition. The colony thereby becomes impatient from the inability of the strange queen to fill all the place of the one taken away, and shifts its hopes to the rapidly-developing larval queens; thus, in a measure, she becomes a prisoner awaiting execution by her younger rivals.

To show farther the utility of immediate introduction of the queen, let me relate that I have found no difficulty in thus introducing queens into colonies from which the old queen has not been removed. This is no "idle dream," and what I have done you can do.

Where a colony occupies two sets of combs, take the old queen and a frame or two of the brood and place them in the upper story over a queen-excluding honey-brood. Now close the hive and smoke the colony from the entrance while pounding lightly upon it to frighten the bees thoroughly. Do not use enough to drive out the bees, but a moderate smoking while pounding will eliminate them so efficiently that the stranger queen may be allowed to run right into the hive from the entrance; and she will occupy the lower apartment as wholly as if the former queen had been driven away.

These are facts, and I give them as freely as the air we breathe, because I want to help as I have been helped.

Suppose you do make one or two unsuccessful attempts, is that sufficient cause for you to cast the thought aside as being destructive to the best interests of both the bees and bee-keeper?

Let some one even yet not understand, I repeat in all simplicity: Have your stranger queen at hand when you take away the reigning one. Disturb the colony as little as possible while catching the old queen; when she is found, close the hive and smoke the colony from the entrance, pounding on the hive, of course, while doing this. Do not smoke or pound alternately, for two or three minutes only; then allow the new queen to run into the hive by holding the cage up close to the entrance so that she may not escape in the air. Send a puff or two of smoke into the hive, but don't pound on the hive any more. The object is to frighten the bees as much, and the queen as little, as possible. See?

Next, I want to let a good job alone for a few days and do not disturb the colony. A frightened queen is almost certain to run up against her doom, be it in her own hive or in the midst of stranger bees.

I cannot continually call your attention to these living truths; so again I ask that they be tested upon the earliest opportunity; test them thoroughly, and I know that they will stand with you as they have stood with me.

Scioto Co., Ohio.

Questions and Answers.

CONDUCTED BY DR. C. C. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—Editor.)

I have subscribed to the Bee Journal and invested in the "A B C of Bee Culture" in the hope of being able to answer my own questions, but, unfortunately, I find myself farther at sea than ever, from the fact that the experience of nearly every bee-keeper is directly at variance with that of every other, and even the directions given by the same apiculturist contradict themselves constantly.

For instance, my first instructions were, "Keep your colonies strong," so, having several small colonies, I commenced to look up some general directions. I came to "I would advise deferring the uniting of bees until we have several cold, rainy days in October;" but farther on I find, "Beware of having weak colonies to be united in the fall. Much safer to have them all united long before the cold weather begins," and I am at a loss what to do—"defer until winter," or "unite long before winter?"

Again, I intended to introduce an Italian queen, so I ordered one and got directions to "remove the old queen at least three days before introducing the new one," but I did this, but the queen was killed. So I ordered another, and read that the proper way to introduce a queen was to "get the old one out, thoroughly frighten the bees, and run in the new one before bees can really see the new queen," and this, and also failed. Now, should you wait three days or not wait at all? The advocate of each plan says he has succeeded with 99 out of 100. I have failed twice out of twice.
The trouble with bee-books seems to be that either they tell everything except what you want to know, or they presuppose you know all about it and merely add an intelligent sort of a summary. I am the author of one; if I may be allowed to express the idea, that it is a pleasure to answer your questions, and I may say to you that whenever you reach the point where you can answer all your own questions, you have a whole lot of it that I'd like to have you answer. But it is to be a secret between you and me that I don't know all about bees.

Now I'll see what can be done toward reconciling the apparent contradictions that seem to trouble you. Your no-colony rule, and if any of the four words in it should be emphasized, it should probably be the first, making it read "Keep your colonies strong." Now, if you keep all colonies strong there will be no need of long-range planning. Your bees will always be likely to have some colonies that are not strong. If you use the nucleus plan of building up colonies, of course they will be weak at the start, building up as the season progresses, and there will be none that fail to build up satisfactorily; some colonies will become queenless and weak; indeed, there are different ways in which good beekeepers may have, each year, colonies so weak that they should be disposed of. But you must try to prevent having weak colonies late. A plan of having strong colonies to be united in the fall. Better unite not later than August, while bees are gathering and not inclined to quarrel, and while brood-rearing and other work is going on, so that the united colonies will have plenty of settled bees to divide into one harmonious whole before cool weather comes.

"Much safer to have them all united long before winter comes." By the carelessness, ignorance, or, perhaps, of some entirely satisfactory reason, October may come, and you find you with some colonies so weak that they will stand a poor chance of getting through the winter. It doesn't do any good to say reproachfully that you ought to have been in August in the first place. Your question is what to do now. They are not gathering and so are inclined to be quarrelsome, and if united at a time when very active a good many may be killed. A few days' waiting will make no material difference, for everything is at a standstill; so I would advise deferring the uniting of bees until we have several cold, rainy days in October. Then the bees will be inclined to be somewhat dormant and little inclined to fight; and, besides, they will be more likely to cling to any nursery with which they may have been united from which they were taken. Now, don't you think I have made a pretty good job of reconciling what seemed to you contradictions?

If it comes to the matter of queen introduction, I'm afraid I can't satisfy you so well. All the different ways of introducing queens, with various modifications and adaptations, would make a book of itself; and constantly new plans are being given that are said to be infallible, which, upon further trial, are not found to be always sure. I know of only one way that may not fail one time in a hundred, or oftener. Take two or three combs of just emerging brood (no sealed brood, which would only die of starvation), close them in a hive with the new queen, that no strange bee can enter, keep the hive in a warm place if weather makes it necessary, and, after five or six days, open the hive on the stand which it is to occupy. You will see that there is no chance for the queen to be molested, for not a bee is present which has ever been fed on any other queen, and, of course, every worker born in the hive will be loyal to the queen present. Other plans have their exceptions. You tried two plans, each of which had succeeded 99 times in a hundred, but you have been unlucky on the one time in a hundred, or else there was some little thing in which you did not minutely follow out instructions. One plan may put the new queen in the hive at the time of removal, the other in the hive after several days; and one plan may be as successful as the other, providing the proper instructions for each are fully carried out.

In the summertime it is some comfort to you to know that you are not the only one who has made a failure. There are others. But as you gain experience your failures will become less in number. Yet, unless you do better than I have done, you will be satisfied occasionally in introducing a queen as long as you live.

The Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses. By E. E. Hasty, Sta. B Rural, Toledo, O.

LONG TONGUES AND LONGEVITY.

Having duly "banged" the long tongues, I begin to think we must choose some big gun and bang him against "longevity." Peers like certain brethren approve the work of certain colonies in the yard and credit it to longevity, when they have never tried to know anything definite about it beyond their own imagination. Has any careful, scientific-minded bee ever published any set of experiments showing two side-and-side colonies as differing much in longevity? We may not find all bees rigidly alike in term of life, but at present there is too much possibility of it for such jumping at conclusions. Perhaps we ought fairly to consider longevity in a colony is really such a lack of constitutional health that a large percentage of the young bees emerge alive but worthless. Page 599.

Mr. Dantan an Exemplar Vacationist.

For bee-keepers on vacation bent, C. P. Dantan is an excellent exemplar. Go to some nice town which has not been spoiled by tourists. Page 537.

Editors and Correspondents that "Spat." And so our editors must not "spat" so much, but just follow Paddy W. T. S., and hit every head in sight. Page 508.

A Pace for Guessers.

Thank you, Comrade Miller, for setting a good pace in the matter of guesses. We don't agree to replace them with new ones in case they fail to give satisfaction. Page 602.

Setting Mulberry Cuttings in July.

Mulberry cuttings to be set in July, Dr. Peiró says. Some of us do dull as to think that all cuttings should be set in the spring, of course, and we would make a total failure of it, very likely—and then scold the man who said mulberries could be raised easily from cuttings. Page 605.

A New "Bee-Society."

I'm afraid that the bee has a life-membership in the Gothic name-up-and-be-abed till-I-noon Society—this in respect to accurate mathematics, and in respect to neatness, and possibly in respect to some other things. Page 605.

Bee-Escape in Corner vs. Center.

I am no authority at all on bee-escapes, but my conjecture is that escape in corner is a great improvement on escape in the center of the board. With a quiet mass of bees above and below, which feel in communication with other—why should they do anything special to change so satisfactory a situation? Looked at theoretically we should suppose that the main thing is to make them want to get easily credited as short-lived in a colony is really such a lack of constitutional health that a large percentage of the young bees emerge alive but worthless. Page 599.
FRAUDS, MUMBUGS AND SUPERSTITIONS.

Is there anything in this world of ours that is grander, and more delightful to the soul, than genuine truth, entire absence of pretense, perfect ingenuity? On the other hand, is there aught that is more repellent, more discouraging in society, than fraud, humbug, superstition, all—or anything that maketh a lie? Among all these blessed fruits of our high development of science is that uneartihour frauds, revolting humbugs, and dotderones superstitions. She stamps her great, honest foot hard on whatever maketh a lie. How generously education touches her patrons to bless and to help. Is not one of her brightest objects that she so summarily dumps out of the mind its superstitions?

PATENT MEDICINES.

No doubt Holmes voiced a grand truth when he said that it would be a blessed thing if all the medicine of the world was dumped into the ocean; but, he added, it would be awful on the fish. As a learned and experienced physician, Holmes was entitled to speak. If he had but prefixed mediocrity was “patent” how much more of truth would have been uttered. It is fearful to note the great floods of advertisements of patent medicines that fill the pages of our newspapers. Millions of dollars are poured annually into the cesspool of the newspaper. It is awful to think of the amount of these vile compounds that are gulped down by a too trusting and suffering people. A synonym for patent medicine would be FRAUD, in capital letters. It is, indeed, for an absolute, unheralded forth as cures for all maladies? And are not all the tricks of the most artful, skillful and expert advertising agents employed to get these concoctions of the Evil One into the hands and stomachs of poor, suffering humanity? The poor, deluded victim of the patent-medicine vendor gulps down the atrocious potion, all ignorant both of disease and remedy. It seems strange that any one possessed of judgment and reason can ever be duped into patronage of the patent medicine chest. The discouraging feature is that sickness destroys sentiment and reason as they destroy her first legacy. Will we not all, in our various home circles, lift our loudest voice against this greatest fraud of the century?

THE MOON.

At our Farmers’ Institutes a very frequent question is asked, even in cultured Southern California, to-wit: Should the farmers observe the moon’s phases in planting and tilling? Of course, I always say plant when condition of soil, cultivation, and season of the year are right; and only watch the moon to see when to take evening rides with the “nude wife” or one’s best girl. And yet when I say this, I see many a head shake which speaks dissent. It is passing strange how any such superstition can hang on where once gets a foothold in one’s beliefs. This belief, so utterly void of any scientific basis in truth, I suppose comes down from our credulous forefathers, and from the fact that good tillers who practice watching the moon usually have good crops, as they surely would had they never heard of the moon, or noted whether they saw it over the right or left shoulder. It is good to talk all such absurdities over with the children and bury them in whose innocent laughter, for such burial is rarely followed with resurrection.

FRIDAY, AND THE RIGHT SHOULDER.

It seems impossible that in our day, when science shows the absolute absurdity of all such nonsense, that anyone would be disturbed by seeing the new moon over the left shoulder. Yet such is often the case. The person is usually advanced in years, for the science of today is hard on such tomfoolery. I have known not a few, some of them men of intelligence, who would never commence a new work or enterprise on Friday. They usually bluff to own the fact, and do not pretend to have any reason for the opinion; but superstition is usually so inwrought in their make-up, that they feel that it will be dangerous to disregard this old law. Such persons still dread ghosts, and are haunted by the hundred and one other nonsensical beliefs in signs and sayings that are utterly without foundation, and which, like belief in witchcraft, will soon by only known to history. It will be a good ridden. There are so many grand beliefs that take hold of our very lives and help us to better thought and nobler action, for us to waste thought or energy on all such baseless claptrap.

ROAD-SIDE TREES.

What is there in this world that is more worthy of admiration than a fine avenue of trees? There is one of peppers and another of blue-gums not far from Claremont. I always drive to these and through them when I have visitors. Often the visitors will exclaim, in surprised delight as we turn upon these lovely vistas, Can anything be finer than such avenues of trees? Ask the students who have enjoyed the clime of Cambridge and New Haven. Would not our home circles be philanthropists of the best kind, if they would undertake to secure such avenues along all our highways? I believe that if we combine utility and beauty, we show still better sense and judgment. So in the East, why not add to the honey-resources by planting great rows of line lindens, or the equally unobtrusive tulips? In the South the tulip and the Judas-tree are not only beautiful, but each comes each season with beautiful flowers laden with most delicious nectar. In California the eucalyptus is very handsome, a strong grower, stands drought well, and by a judicious selection of species we can have blossoms and nectar each month of the year. All have showy flowers, which, in some species, are very beautiful.

USE OF PROPER WORDS.

I have learned to have such respect for our good and genial friend, Mr. Hasty, that I rarely skip anything he writes, and as rarely find fault to criticise. So I was surprised that he suggests to let a dead use of words alone, as it will be useless to combat it. I say, Never. If a word is wrongly used, so as to mislead or work mischief, “go for it” with all the might, coat off, and shirt sleeves rolled up.

Yesterday our pastor spoke of coral insects. He might as well say “weedy birds,” or “hairy snakes.” Indeed, he would not have been as wide of the truth. Coral animals belong to a branch wholly distinct from that of insects. The old word “strain” rarely peeps up now in descriptions of honey. Why? Because it was a mischievous misnomer. We hit it hard blows, and, happily, knocked the very life out of it. “Larva” is correct. “Worm” means a thing wholly different. The added syllable with truth to stand on should not vex anyone. The recent bulletins regarding our beloved President did not confuse the terms digestion and assimilation. Of course not, the physicians know and practice the right use of words, and do they not show good sense?

I should like to hear from our good friend, Dr. Miller, on this point.

Why Not Help a Little—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.
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Better Report This Year.

I have a better report for the season of 1901 than for 1899 and 1898. The bees came through in very poor shape, short of stores and bees, half of the colonies with practically nothing; but they built up in June nicely, making up my loss in the spring by working about 30 pounds of surplus honey, spring count; and all hives were well filled for winter, with good honey; and nearly all colonies had young queens. C. H. CHITTENDEN.

Middlesex Co., Conn., Oct. 16.

Honey a Light Yield.

The season here was good until the drought set in July 10, when the excessive hot weather cut the flow short. The dryness of the air has caused the honey to be of heavy body and low quality. I started with 18 good colonies in the spring, increased to 24, and have taken off 540 pounds of comb honey—about 30 pounds to the colony. It is a rather light yield, a little above an average with my neighbors. Bees are in good condition for winter. JOHN CLINE.

Lafayette Co., Wis., Oct. 23.

Crop Not as Good as Expected.

The honey crop is not as good as was expected by the bee-keepers of this section. With a late, wet spring the bees did not swarm very early, and, therefore, were not ready to catch the first honey-flow. However, the honey flows well, and in the last two weeks of the season, at least in some parts of Pennsylvania, Buckwheat honey was almost a failure this year. The weather at the time it was in bloom, a good sale for comb and extracted honey. Bees are in fine condition for winter.

W. H. HcMM.


Poor Year for Honey.

This has been a very poor year for honey on account of the drought, but I think most of the bees are well fixed for winter. I started with 8 colonies, spring count, and increased to 12. I have got about 27 pounds of honey this season. Our spring honey-flow lasted only about two weeks, then came the drought; but I think the fall flow will prove sufficient for wintering.

W. H. Ellis.

Calhoun Co., Iowa, Oct. 12.

Crop Nearly a Total Failure.

Through smelter smoke, drought, and grasshoppers the bee-industry in this county, as a rule, has been nearly a total failure. I have 56 colonies at Pleasant Green, where they have lived for three years, and have not done well, but this season, owing to the grasshoppers eating the corn off bare to the ground, I have not taken off a pound of honey. There are several hundred pounds lighter—perhaps 15 to 15 pounds to each colony less than they were last year.

No. 1 comb honey is worth $8.00 per case, and extracted is worth 6 to 7 cents a pound, according to quality. The Omaha report of Percey Bros., in the American Bee Journal, is a burlesque as far as Utah is concerned.

E. E. SLOVEST.

Salt Lake Co., Utah, Oct. 22.

The Honey Crop and Prices.

We note in the American Bee Journal of Sept. 29 some dealers quote Utah comb honey at 10 cents for No. 3, and 9 cents for No. 2. This is a mistake. We have this season a quarter of a crop of what it was last year to make case, pay, etc. Sharples Cream Separators. Book "Business Directory" at 25c. Winslow, W. Chester, Pa.
Dittmer's Foundation!  

Retail—Wholesale—Jobbing.

I use a PROCESS that produces EVERY ESSENTIAL necessary to make it the BEST and MOST desirable in all respects. MY PROCESS and AUTOMATIC MACHINES are my own inventions, which enable me to SELL FOUNDATION and

Work Wax Into Foundation For Cash

at prices that are the lowest. Catalog giving Full Line of Supplies, with prices and samples, free on application.

H. S. DITTMER, Augusta, Wis.

Please mention Bee Journal when writing.

IS THE KING OF FOUNTAIN PENS.
Fills and cleans itself.

Has been endorsed by over one hundred of America's foremost maga-

zines, and received recommendations from celebrities the world over. Without doubt the pen of the age.

AGENTS WANTED.

Catalog and Terms.

POST FOUNTAIN PEN CO.,
150 W. 14th St., New York City.

Please mention Bee Journal when writing:

THE WORLD
SWEETENED
with California Honey

Bee men active; bees more so.

Send for sample copy.

PACIFIC BEE JOURNAL, Los Angeles, Calif.

SPECIAL—This year and next, $1.00.

42A01

Please mention the Bee Journal.

Queen-Clipping Device Free....

The NONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queen-wings. We mail it for 25 cents; or send gold P.O. Order for a pre-

mium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00 or for $2.00 will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & COMPANY, Chicago, Ill.

year, and prices have been from $2.65 to $2.95

for cases of 24 sections, which means 13 to 15 cents per pound.

Of extracted honey we have half a crop of what it was last year, and producers are hold-

ing firm at 6 cents. This, of course, is too high for Eastern markets.

Knowing what we do about the crop condi-

tion of comb honey in the Western States, and

what information we have gathered from the bee-papers, we consider comb honey good property this season.

VOGELER REED & PRODUCE CO.,
Salt Lake City, Utah, Oct. 11.

Dark Combs and Color of Honey.

"Dark old combs give to honey a darker color. This is the experience of some—others say. Why this difference of experience?"—Bee-keepers' Review. May there not be a difference as to careful observation? Will not the length of time the honey is in the comb also make a difference in color? Some keep a black comb with water, and immediately throw it out, and the water will be clear. Let it stand for several days and it will be like ink.—Gleanings in Bee-Culture.

"Reviewlets" from the Bee-keepers' Review.

Too many Irons in the fire, is a bad condition of things. I saw it illustrated in several instances during recent trip through Ontario. So many made excuses about the appearance of things, and of the way in which they were worked, and of how they were behind, and always driven with work, all because they had so much to do; as one man said, he was "tired out all of the time." For instance, Mr. McEvoy has an apiary of about 100 colonies, several acres of berries, and is inspector of apiaries for Ontario. All need his attention at the same time, and he was free to acknowledge that had he turned his attention to bees, years ago, his financial success would have been many times greater. Those men who had bees alone, and a lot of them, were making the most money with far less worry.

A Hiving-Box made from a cheese-box was one of the handy things that I found in the apiary of Jacob Alpnaugh, of Ontario. Two staples on the side of the box are for slipping in the end of a long pole, whereby to raise the box up under the cluster on the limb of a tree. The bottom of the box is covered with muslin. The cover is also of muslin, but it is fastened at only one edge, opposite the side where the staples are, and can be drawn over the top of the box by means of two strings passing over the edge of the box and down the pole. When then the warm to get down, the box is put upon the pole, the cover slipped back, the box raised up under the cluster. The comb gives a sharp jar by means of the pole. This causes the bees to drop into the box, when the cover is quickly drawn over, thus means of the string, making them close prisoners. The box, bees and all, may be slipped off the pole, and set to one side in the shade, where it may be left until the bee-keeper has leisure to

It Brings More Eggs

Get a Bandy Green Rose Cutter and double your egg yields. Try our new Cata-

logue tells all about feeding green rose and then getting the money for eating it.

Sold Direct

$5

“Get 20 days old,


Please mention Bee Journal when writing.

Standard Bred Queens.

Acme of Perfection. Not a Hybrid Among Them.

IMPROVED STRAIN GOLDEN ITALIAN.

World-wide reputation. 75 cents each for $4.00.

Long-Tongued 3-Banded Italians

bred from stock which have 150-100 inch. These are the red clover hustlers of America. 75 cents each, or 6 for $4.00. Safe arrival guaranteed.

FRED W. MUTH & CO.

Headquarters for Bee-keepers' Supplies, S.W. Cor. Front and Walnut Sts.

Catalog on application.

CINCINNATI, O.

Please mention Bee Journal when writing.

The Emerson Binder

This Emerson stuff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents, or we will send it with the Bee Journal for one year—both for only $1.40. It is a fine thing to preserve the copies of the jour-

nal as fast as they are received. If you have this "Emerson" no further binding is neces-

sary.

GEORGE W. YORK & CO.,
144 & 146 Erie Street.

CHICAGO, ILL.

Prescription Free!

You will find it in our new catalog. It tells all about the request to us to make it. PAGE MOVES. WIDE PEN CO., ABRAM MILL

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$13 to Buffalo Pan-American and Re-

turn $13,

via the Nickel Plate Road daily, with limit of 15 days; 20-day tickets at $16 for the round-trip; 5-day tickets at $6 for the round-trip on Tuesdays, Thurs-

days and Saturdays, the good only in coaches. Through service to New York and Boston and lowest available rates. For particulars and Pan-

American folder of buildings and 28 grounds, write John Y. Calahan, Gen-

eral Agent, 111 Adams Street, Chicago.

37—41A01

20 HENS

working steadily at one time can-

not raise so many chickens at

sold at retail.

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Very exactly what you get when

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Everything used by bee-keepers.

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GUSTO BONFILS

1800 Broadway, New York City.
25 cents Cash ★ ★ This is a good time to send in your Beeswax. We are paying 75 cents per pound on CASH—for best yellow, upon its receipt, or 27 cents in trade. Impure wax not taken at any price. Address as follows, very plainly, GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

Buffalo Pan-American Tickets via the Nickel Plate Road, $13.00 for the round trip good 15 days; $16.00 for the round trip good 20 days. Three daily trains with vestibuled sleeping-cars. Meals in dining-cars, ranging in price from $5.00 to $1.50. Address John T. Calahan, General Agent, 11 Adams St., Chicago.

If you want the Bee-Book—That covers the whole Agricultural Field more completely than any other published book in the world. For the price of $1.25 to Prof. A. J. Cook, Claremont, Cal., for his "Bee-Keepers' Guide." Liberal Discounts to the Trade. Please mention Bee Journal when writing.

BEST EXTRACTED HONEY—FOR SALE ALL IN 60-POUND TIN CANS.

Alfalfa Honey ★ ★ This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who knows its value to our health at all can’t get enough of the Alfalfa extracted.

Prices of Alfalfa or Basswood Honey:
A sample of either, by mail, 10 cents, to pay for package and postage. By freight—two 60-pound cans of Alfalfa, 8 cents per pound; four or more cans, 7½ cents per pound. Basswood Honey, ¼ cent more per pound than Alfalfa prices. Cash must accompany each order. You can order half of each kind of honey, if you so desire. The cans are boxed. This is all ABSOLUTELY PURE HONEY. The finest of their kinds produced in this country.

Read Dr. Miller's Testimony on Alfalfa Honey:
"I've just tasted the honey you sent, and it's prime. Thank you. I feel that I'm something of a heretic, to sell several thousand pounds of honey of my own production and to urge the selling of honey of others. It is imperative that people know to the honey of his own region, there's no denying the fact that for use in any kind of hot drink, where one prefers the more wholesome honey to sugar, the very excellent quality of alfalfa honey I have received from you is better suited than the honeys of more marked flavor, according to my taste."
McIlroy Co., Ill.

Order the Above Honey and then Sell it.
We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, order the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.
center of the frame to prevent any sagging of the top-bars. Mr. Miller likes a battery for imbedding the wires; the only objection being that he becomes too hot and the wax requires rework-

Find Queens without the tedious operation of picking them, in a bulb, at a cost, some sure, short-cut method would be very desirable. The nearest approach to this that I know was advertised in the Journal by the famous H. F. Howard of Ontario. He first removes the cover from the Hideld hive, puts on a break-

Sweet Clover And Several Other Clover Seeds.
We have made arrangements so that we can furnish Sweet Clover seed at a very low price, either by wholesale or by retail, at the following prices, cash with the order:

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Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by weight.

**GEORGE W. YORK & CO.**
144 & 146 Erie St., CHICAGO, ILL.

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Honey and Bee Wax

MARKET QUOTATIONS.

CHICAGO, Oct. 10—There is a very good trade in the market today, and the demand for five cents per pound which will not grade No. 1 or fancy sells at from 130 to 140c; some small lots of fancy have brought more than 15c; light dark honey graded 126 to 128c; the dark honey of various grades ranges from 100 to 150c; the dark honey of exceptional quality sell well at 55 to 65c for white, according to quality and size; while white clover honey brings from 50 to 60c,

Cincinnati, Oct. 25.—The honey market is rather dull at present. Extracted honey is selling at from 66c to 68c per lb; white clover honey from 66c to 68c; white honey from 65c to 66c. CH. G. WEBER, & Co.

ALBANY, N. Y., Oct. 25.—Honey in good demand, at present the price is 65c to 68c per lb, according to quality and size.

OMAHA, Oct. 25.—New honey is coming in by express in small quantities from Iowa and Ohio, and selling at 70c to 72c per lb in case in a re-

Peytons Bros.

New York, Oct. 25.—New beemoney is coming in, and demand is pretty good, and sells at the following rates: Fancy clover—white, 70c per lb; No. 1, 65c; No. 2, 60c; No. 3, 55c.	

Peyton Bros. & CHANTLEY.

Detroit, Oct. 25.—White clover honey, 140 to 150c; No. 1, 130 to 140c; No. 2, 120 to 130c; No. 3, 110 to 120c; No. 4, 100 to 110c; No. 5, 90 to 100c. Extracted clover, white, 60c per lb. Bee wax, 25c per lb.

San Francisco, Oct. 16—White clover, 105 cents; black, 85 cents; dark, 60 to 80 cents. Extracted clover, white, 50 cents; black, 40 cents. Prices are ruling steady, with no very heavy spot offerings and a fair inquiry, more especially for extracted. A shipping vessel, clearing the past week for England, 70 per cent. of the cargo is clover and 30 per cent. of the clover are 140/145c; the demand being quite brisk, a firm market is anticipated. Inquiries for extracted are heavy, but the buyers still seem to have their ideas too low. In a small way 90 to 100c, prices after the holidays.

Peyton Bros.

California! If you care to know of its fruits, Flowers, Climate or Resources, send for a sample copy of California’s Favorite Paper—

The Pacific Rural Press.

The Pacific Rural Press, is the Agricultural paper of the Pacific Coast. Published weekly, and artistically illustrated, $2.00 per annum. Sample copy free.

PACIFIC RURAL PRESS, 330 Market St., San Francisco, Cal.
We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS* OR
Hives, Extractors
OR ANYTHING YOU WANT IN THE
BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of this American Bee-Keeper free. Address, THE W. T. FALCONER MFG. CO., JAMESTOWN, N. Y.

W. M. GREDISH, East Nottingham, N. R., carries a full line of our goods at catalog prices. Order of him and save freight.

Please mention Bee Journal when writing.

River Forest Apiaries!

FILL ALL ORDERS
By Return Mail.

Italian Queens Warranted

Unquestioned, 75 cts.; Tested, $1.00; Select Tested, $1.50. Half dozen or larger lots as may be agreed on. Address, RIVER FOREST APRIARIES, RIVER FOREST, Oak Park Post-Office, 30 AIL Cook Co., ILL. Please mention Bee Journal when writing.

THE NICKEL PLATE ROAD
will sell tickets each Tuesday, Thursday and Saturday during October to Buffalo Pan-American Exposition and return, at $6.00, good in coaches, return limit 5 days from date of sale. Tickets with longer limit at slightly increased rates. Three through trains daily. Chicago Passenger Station, Van Buren St. and Pacific Avenue. City ticket office, 111 Adams St., Chicago, 36-41 A4T.

A New Bee-Keeper's Song—

"Buckwheat Cakes and Honey"

Words by EUGENE SECOR.
Music by GEORGE W. YORK.

This song was written specially for the Buffalo convention, and was sung there. It is written for organ or piano, as have been all the songs written for bee-keepers. Every home should have a copy of it, as well as a copy of

"THE HUM OF THE BEES in the APPLE-TREE BLOOM"

Written by EUGENE SECOR and DR. C. C. MILLER.

Prices—Either song will be mailed for 10 cents (stamps or silver), or both for only 15 cents. Or, for $1.00 strictly in advance payment of a year's subscription to the American Bee-Journal, we will mail both of these songs free, if asked for.

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24th Year Dadant's Foundation. 24th Year

We guarantee satisfaction. *** Why does it sell so well? ***

What more can anybody do? BEAUTY, PURITY, FIRMNESS, NO SADDING, NO LOSS.

PATENT WEED-PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised.
The classic in Bee-Culture—Price, $1.25, by mail.

Beeswax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

Please mention Bee Journal when writing.

Texas Bee-Keepers.

We beg to announce the opening of a branch office and warehouse at 493 W. Houston St., San Antonio, Texas. Rates of transportation from Medina in less than car-load lots are high, and it takes a long time for a local shipment to reach Southern Texas points.

Low Freight and Quick Delivery—than San Antonio. It has four great railroads—the Southern Pacific R. R. east and West—the International and Great Northern R. R. from Laredo up through San Antonio and Central Texas, the San Antonio and Arkansas Pass R. R., and San Antonio and Gulf R. R. It also has the American, Wells-Fargo and Pacific Express Companies.

Our Managers. We have secured as managers Mr. Udo Toepferwein, formerly of Leon Springs, and Mr. A. Y. Walton, Jr., both of whom are well known to the bee-keepers of South and Central Texas. They are also thoroughly familiar with practical bee-keeping and all matters associated with it, and any orders sent to this branch will receive prompt, careful attention.

Our Catalog. To secure these two necessary advantages—low freight and quick delivery—and to be better prepared to serve the interests of our Texas friends, is our reason for establishing this new branch office. No other point in Southern Texas is better adapted to serve as a distributing point than San Antonio. It has four great railroads—the Southern Pacific R. R. east and West—the International and Great Northern R. R. from Laredo up through San Antonio and Central Texas, the San Antonio and Arkansas Pass R. R., and San Antonio and Gulf R. R. It also has the American, Wells-Fargo and Pacific Express Companies.

Our Goods. As usual our motto is to furnish the best goods of the most approved pattern. We do not undertake to compete in price with all manufacturers. Bee-keepers have learned that it does not pay to buy cheap supplies, for a saving of 10 cents on the first cost of a hive may be a loss of many times this amount by getting poorly made and ill-fitting material. Every year brings us many proofs that our policy of "the best goods" is a correct one.

Our Catalog. Very few changes in prices will be made in our new catalog, so do not delay your order, but send it at once. You will be allowed a refund if lower prices are made, and in case of higher prices ruling in the new catalog, if any, you will secure the benefit by ordering now. Catalog and estimates may be had by applying to the address given below.

Our Invitation. Whenever you visit San Antonio you are invited to call at our office and make it your headquarters. Here you will find a display of Apiarian Supplies not equaled elsewhere in Texas. You will also find on file the leading bee-journals to pass pleasantly your leisure time.

Spanish Catalog. Some of you may read Spanish, or have a bee-keeping friend who does. If so, call for our Spanish catalog. It's sent free.

FACTORY AND HOME OFFICE: THE A. I. ROOT CO., Medina, Ohio.

Branch Office: THE A. I. ROOT CO., San Antonio, Texas, 438 West Houston Street, TOEPFERWEIN & WALTON, Managers.

GEORGE W. YORK & CO. are headquarters for ROOT'S BEE-KEEPERS SUPPLIES in CHICAGO. Send to them for their Free Catalog.
TEXAS HORSEMINT—A PLANT THAT HAS LONGER FLOWER-TUBES THAN RED CLOVER.
(See page 706.)
Weekly Budget.

We (this time the "we" includes Mrs. York) had a splendid visit last week, for a day and two nights, at Dr. C. C. Miller's, in McHenry Co., Ill. We expect to have more to say about it later. Dr. Miller is well, and enjoying life better than most young men who are on the other side of 70.

Mr. Geo. W. Riner, of Lucas Co., Iowa, writes us that he expects to be present at the meeting of the American Bee-Keepers' Association, on Dec. 5. He will then be on his way to New York—his old home—where he commenced bee-keeping in 1868, six miles north of Auburn. Next spring he expects to go to Colorado with his 200 colonies of bees. Rev. Jasper—the colored preacher—said: "The sun do move," Surely, bee-keepers "do move," too. They are more and more going to locations where they "can keep more bees." Success to them all.

Mr. J. W. Ferree is the four-brood inspector for Los Angeles Co., Calif. "Rambler" has this to say about him, in gleanings in Bee-Culture:

"Mr. Ferree is a genial bachelor, a member of Mr. Bresee's church; will go a long way to serve a friend; generous every day in the week; polite and condescending to the ladies; always shows an even temper; and the mantle of four-brood inspector could not have fallen upon more worthy shoulders."

Mr. Ferree has inspected 148 apiaries, 830 colonies: 284 four-brood colonies. He estimates that there are 100 bee-keepers and 20,000 colonies in Los Angeles county. Mr. Ferree seems to be the right man in the right place.

The Apiary of J. M. Paxton, of Brooks Co., Ga., is shown on page 711. He commenced bee-keeping in 1899, buying an apiary of 29 colonies of Italian and black bees. In May he bought the bees and honey crop of about 1000 sections of comb honey. He had little or no experience in bee-keeping, but sent for the book, "A B C of Bee-Culture," and did fairly well the first year. The bees were kept about one-half mile from his home. He paid $150 cash for the bees and outfit, and sold about $230 worth of honey the first year. He moved the bees home the following winter, and lost five colonies, having 22, spring count. He increased them to 41, and sold $113.50 worth of honey that year, which was a very poor one for bees in that part of the country.

HORSEMINT—Monarda punctata. — The engraving of this honey-plant, shown on the first page, was kindly loaned to us by Gleanings in Bee-Culture, from which periodical we also take the following paragraph:

"Horsemint begins to bloom in May, sometimes a little later, June, depending on the rainfall of the season, and is always in flower in the spring. The honey is compared with that of the basswood of the North, on account of its peculiar strong flavor which it resembles; it is of light color; one of the best honey-plants of the South, and tremendous yields have been obtained. I have just gone out to procure some of the flowers, and send some to you herewith. Perhaps you remember what you said about a chance for long tongues who could be taking the shot at the horsemint on our porch. I have been interested in this question, and can not see how honey could ever get everything that is nectar out of those long tubes. What do you think of that? It Red clover not alone for long tongues."

Editor Root took the picture while in the South, and also wrote the above paragraph there.

PEARS IN CALIFORNIA. — Mr. B. S. Taylor, of Riverside Co., Calif., writing us Sept. 16, said:

"I enclose a small picture that will give some idea of how pears grow in California. The branch was taken from a small tree growing in my front yard. I think they are the Bartlett, but I am not certain. It is one limb, and there were 67 of them in the two clusters at the time photographed, though about 20 had previously fallen off."

Surely, California is a wonderful fruit country. We think we never saw such clusters of fruit growing anywhere as are shown in the picture. It wouldn't take long to pick a few bushels of them when growing so thick. (See page 714.)

Mr. John H. Martin (Rambler), of California, writing us Oct. 26, said:

"I am packing up and going to move over into Cuba to sow there through the winter. By so doing I secure a continuous honey-plant for the next four or five years. Field No. 1, in southern California, from April until July; Field No. 2, in central California, from July until October; Field No. 3, in Cuba, from October until April."

Rambler ought to be the sweetest rambling man in all the world—continuously sweet.

But isn't it rather risky for him to go over into Cuba? Some of those chocolate-colored young ladies in that "Pearl of the Antilles" will be making "goo-goo eyes" at him, and then we will Rambler be!

And just think, if a Cuban girl should be able to accomplish what no Californian belle has been able to do!

Rambler, you'd better come to Chicago.

The Thanksgiving Number of the Ladies' Home Journal is replete with good fiction and interesting and novel features. It opens appropriately with an article which tells "Where the President's Turkey Comes From." Then there are delightful stories by Heczkia Rutterworth and Laura Spencer Porter, and a new love story called "Christine," by Frederick M. Smith. Cleveland Moffett has an interesting story about lra D. Sanicky, the great evangelist, and Edith King Swain recounts the famous ascents she has made in various parts of the world. Will Bradley's original designs for a house begin with the breakfast-room, and Wilson Eyre, Jr., presents plans for a country-house and a garden. Mr. Bok gives much good advice to young married couples in his editorial. Another most timely feature is, "Why Should a Young Man Support the Church?" by the Rev. Francis E. Clarke. Many home-made Christmas gifts are shown, and the first of "The Journal's Amusing Tales" appears. The regular departments are exceptionally good, and the illustrations superb. By The Curtis Publishing Company, Philadelphia. One dollar a year; ten cents a copy.

Note.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one of these buttons as it will enable people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of more bee plants, and at any rate it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."
The Chicago Convention.—One of our correspondents, who evidently is interested in the next session of the Chicago Bee-keepers' Association, writes as follows:

"Mr. Editor:—In the notice of the convention to be held in Chicago, Dec. 5, it is said that the railroad rate is $1 for one fare plus $2.00 for the round trip. That is given as the reason for holding the convention at that time. But if this is a convention of Chicago bee-keepers, a rate of that kind would not be any benefit to them, nor indeed to any one living within less than 70 miles of the city. Is it to be understood that Chicago includes all the surrounding States?"

PLAIN BEE-KEEPER.

No, Chicago has not expanded to quite that extent. But there's nothing small! Chicago bee-keepers, and residence in Chicago is not essentially requisite to membership in their society. Indeed, at their previous meetings, bee-keepers from a considerable distance have generally taken a prominent part. The live-stock show will bring to Chicago quite a number who are more or less interested in bees, and the low railroad rates will, it is hoped, attract others. There is no reason why there should not be the same gathering of bee-keepers in Chicago Dec. 5 as were formerly gathered at the meetings of the Northwestern Association, so pleasantly remembered by many as among the most successful bee-conventions ever held.

Fastening Frames for Hauling may be accomplished by driving a nail partly in at each end of each top-bar, or by slipping wedges between the top-bars at each end. R. F. Hobermann gives, in Gleanings in Bee-Culture, a plan that may be better, as follows:

A separator cut into four pieces will do. Lay this across the ends of the frames and drive a small tack through this into the bar, and they will not only keep from moving sidewise, but the piece across will prevent the frame from swinging at the bottom.

Glucose-Feeding.—A remark in "The Afterthought" calls forth the following:

Mr. Editor:—On page 61, Mr. E. E. Hasty, referring to an editorial on page 57, says: "It is somewhat in the line of news to be told that one can feed a ton of glucose to his bees." Do that mean that it is news that bees will take so large an amount, or that they will take glucose at all? No. It is hardly news that bees will take glucose at all—sometimes. They are not likely to feed upon it voraciously when good, honest nectar is within easy reach. Whether under any circumstances a very large amount could be fed at one time may be questioned. The editorial does not distinctly say what our sharp-eyed "afterthinker" seems to understand it to say, namely: "that one can feed a ton of glucose to his bees." It says that a certain bee-keeper tried to feed that amount. That does not say whether the whole of that amount was taken by the bees. Even if that amount was all taken, it would not necessarily be such a very large amount for each colony, when it is noted that the colonies were numbered "by the hundreds."

Glucose as bee-food is reported in Le Progrès Apicole as producing diarrhoea in some cases and constipation in other cases. Some across the Atlantic report no inconvenience to the bees from its use, while others report heavy losses by death where glucose has been fed. These discrepancies are accounted for by the inconstancy of the product, some samples being pure, or nearly so, while many others contain free sulphuric and hydrochloric acids, etc., and often traces of arsenic.

The safest thing for bee-keepers to do with glucose is to let it entirely alone. "Trench not, taste not, handle not," is good advice.

Price of Honey receives further attention in Gleanings in Bee-Culture, without however materially altering light. At least there seems no reason to change the view heretofore given in these columns, and it may be well to repeat that one will not be likely to go far astray if one closes promptly with any offers made at last year's prices. A note from Dr. Miller has some bearing on the subject. He says:

"I'm sorry to say I had not time enough to call on you either on my way to Jacksonville or on my return. I did, however, make a pop-call on R. A. Burnett in passing. He promptly introduced the subject of prices on honey. I had considered his theory that rumors of a big crop helped to increase sales without lowering prices, and thought it utterly untenable. I do not know that I have entirely changed my views, but I must confess that after hearing his five cases right out of his experience that seemed to support his theory, I don't feel so sure of my ground as I did. It seems, however, that in the long run the greatest good to the greatest number ought to be secured by having 'the truth, the whole truth, and nothing but the truth.'"

"The Life of the Bee!" by Maurice Maeterlinck, translated by Alfred Sutro, is a unique work. It is not intended to supplant or to supplement any of the text-books as a text-book. The author says: "It is not my intention to write a treatise on apiculture or on practical bee-keeping." The man who has mastered the contents of one of our excellent text-books will learn nothing new from this work. But he will find the everyday facts about bees, with which he is already familiar, painted in such exquisite fashion that they will seem almost new to him.

The book contains 427 pages, with an undue amount of white paper, for the page measures 7½ by 5 inches, while the printed portion is only 4½ by 3¼.

One wonders at such spelling as "labour," "favour," "savour," and "waggon" in a book fresh from the press, and still more to find "swarm" used for "colony," and "hive" with the same meaning. But these are minor matters, and we must remember that the book is a translation.

The author says: "I shall state nothing, therefore, that I have not verified myself, or that is not so fully accepted in the text-books as to render further verification superfluous. My facts shall be as accurate as though they appeared in a practical manual or scientific monograph." Yet the practical bee-keeper will hardly forbear some doubt as to the accuracy of some of the supposed facts. Dezerion's hive, "still very imperfect, received masterly improvement at the hands of Langstroth;" when, as a matter of fact, Langstroth completed his invention before ever hearing of Dezerion's hive, and no after-improvement was made. (Page 15.)

Our author will delight the heart of the Rev. W. F. Clarke, when he teaches that the bees "ensure the preservation of the honey by letting a drop of frame settle in from the end of the sting." (Page 43.)

Sixty or seventy thousand as the number of bees in an average swarm will stretch the credulity of the average bee-keeper, to say nothing of our good friend, the editor of Gleanings in Bee-Culture. (Page 46.)

In speaking of preparation for swarming, the author says: "The bee-keeper has only to destroy in their cells the young queens that still are inert, and, at the same time, if nymphs and larve abound, to enlarge the store-houses and dormitories of the nation, for this unprofitable tumult instantaneously to subside, for work to be at once resumed, and the flowers revisited; while the old queen, who now is essential again, with no successor to hope for, or perhaps to fear, will renounce this year her desire for the light of the sun."

Beautiful as is the language in that sentence, and much as the practical bee-keeper would like to believe it, he will hardly believe it a general rule that when preparations for swarming are made, all he has to do is to destroy queen-cells and give more room to secure the abandonment of all further thought of swarming for the season.

Do swarming bees carry with them a certain amount of pollen?" as stated on page
The Buffalo Convention.


(Continued from page 394.)

Response by Dr. C. C. Miller.

Just a little while ago Pres. Root said to me that he wanted me to say a few words in response to Dr. Smith's address of welcome, and my heart sank. I said that I didn't know that I could put on dignity enough for that; but when I found that I was to respond to plain, unadulterated Smith, I made the task easy for me. So I say that there has come to me something of a surprise. If there is one thing above others that I don't want to see the time taken up with in a convention of beekeepers it is an address of welcome and the response thereto; and in trying to make a response the thought generally will be, now what shall I say that is different from what has already been said? In what has been said today there has been an intellectual word of welcome, recognizing with a great deal of intelligence and probability what we are trying to do for the world, so that I do really feel that we are welcome. We are welcome to this room, which is something that we are really receiving something of real value, and the words that have been spoken of encouragement as to our work has been something that is of value, and I do hope that fruits may stand upon the shall be.

Now, if you please, allow me to turn the tables just for a moment and speak a word of welcome—let me make an address of welcome. For we have heard such words from such men; we do welcome a feeling of recognition, of intelligent appreciation, and I want to say, as a citizen of the United States, a word that I have said in private, that we welcome our brethren from across the line. I don't know whether the Canadian brethren know how kindly we feel toward them. I trust that the feeling of brotherly affection that these words of welcome that our plain friend Smith has spoken to us will make us feel this stronger than we ever have felt it before; and that in the moving of a kind Providence the good work that may be done will be a pleasant thing for us to remember all the remaining days of our lives.

The convention was then favored with a song by Miss Ethel Acklin, of Minnesota, entitled, "My First Music Lesson."

Mr. N. D. West, one of the inspectors of black brood and foul brood, of the State of New York, then read a paper on the subject as follows:

Black Brood, Foul Brood, and Bee Inspection in New York.

The bee-keepers in several counties of eastern New York have had a hard fight with a new contagious bee-dis-

ease. Dr. Howard, of Fort Worth, Tex., has made many examinations of diseased brood sent to him by myself and others. West has said, the disease being new and differing from the old time foul brood, he would, for convenience, call it "Black Brood." It is very similar to foul brood, which we have known for years, and the treatment for its cure is about the same, but it does not yield so kindly to treatment, and it spreads more rapidly.

With us the black brood started at Sloansville, in the northern part of Schoharie County, some six or seven years ago. Many whole apiaries died, and the disease kept spreading on and on until it had reached other counties, and it seemed as if all bees must die. The disease spread rapidly, and some of the surrounding apiaries for many miles. It was known as "foul brood," and surely it was a foul brood.

Finally, Charles A. Wetling, Commissioner of Agriculture of the State of New York, appointed Mr. Frank Boomhower as his agent for bee-inspection, to exterminate the disease in Schoharie County.

Mr. Boomhower went to work and inspected apiaries, and he caused a great many colonies to be burned, hives, honey, bee-stands, etc., wherever was needed. The bee-keepers did not object. Many apiarists who knew they had diseased bees would not object. It was considered the bee-inspector an enemy who delighted in destroying their bees because the law gave him the opportunity to do so.

Quite late in the fall, Mr. Boomhower laid off from his work as bee-inspector. In 1899 the bee-law was passed so that it was the apiarist's chance to cure his own bees, and if he was successful the bees will not be destroyed. Commissioner Wetling has since appointed four agents as bee-inspectors for the State of New York. These agents are inspecting apiaries and are instructing the beekeepers as best they can how to treat their apiaries. They have discovered that the diseased colonies are weak. If their owners will treat them properly, and do all they can to prevent the further spread of the disease according to instructions given by the agent, the diseased colonies are not destroyed.

This diseased territory, having Sloansville for its center, is about 60 miles east and west, and about 45 miles north and south. Many apiarists have

Green were the leaves at sunset:
To-day they're scarlet red;
Like men they play their proper part.
Then fall to earth bed.

Gleanings in Bee-Culture.
so learned to treat and handle their diseased colonies that our apiaries are improving. The prospects are better. Bee-keepers in the midst of the disease, who once thought the trade would sink, are now beginning to believe that, with good management, much can be accomplished. The black bees do not get diseased as quickly as do the honey bees, and they stand it better when they do get diseased. Disease is much more common among Italian bees, when very strong, and having a good, young queen, and the honey bees are more susceptible to the disease than the black bees. The black bees have not the disease as much as the honey bees. The number of colonies of Italian bees, and their condition, is much better than that of the honey bees.

But the season has much to do with the progress and curing of the disease. I find that bee-keepers have been much more interested in treating diseased black bees and effecting a cure this year than ever before, on the territory where I have been working. Bee-keepers should not allow any colony, no matter how weak and die or get robbed on their surface. All colonies should be kept strong during the summer, and in the spring and fall seasons the apiaries should be prepared for disease. Good queen, and all weak colonies removed from the apiary where disease exists.

Colonies treated for black brood, by some method, is all right. Every method should have plenty of honey bees, and there should be plenty of honey in the field, or the bees should be fed with a syrup or good honey cake. One reason that disease sometimes occurs is the failure of them to moisten the honey. A comparison of reports of the agencies for the work begun on the first of May to the 21st of July, 1900,

- Number of colonies visited
- Number of colonies examined
- Number of colonies destroyed

The Commission will be pleased to receive letters from those in this State who have bees, and it is anxious to do anything in its power to increase the products of apiculture.

The names and addresses of the four New York State Inspectors of Apiculture are as follows:

- M. Stevens, Pennsville, N. Y., for Oswego County.
- Charles Stewart, Sammounds, N. Y., for Fulton County.
- F. Wright, Aphon, N. Y. or Albany County.
- N. D. West, Middleburg, N. Y., for Schoharie County.

Pres. Root—This matter of black brood is before you. Perhaps before we go on to the general discussion we should hear from Mr. Stewart, one of the inspectors.

Charles Stewart, of New York—I don’t know as I have anything to add to what Mr. West has said except that we find throughout the locality where black brood is at its worst that it is a case of the survival of the fittest. As he said, the yellow race of bees is in much better condition than the blacks or the Carniolans. Then, too, it is a survival of the fittest among bee-keepers. Those who were negligent or careless have lost nearly all their bees, especially those who have black bees. Those who have been thorough in their work have been successful. I think the other inspectors will agree with me that the disease has not spread as it has formerly, owing to our work about April 1st, and our going about and cutting off all colonies that were weak, seeing that they were destroyed and put out of the way, and no robbing took place in spring time. It seems that black brood has spread in my section but very little during the past season, and all who are practical bee-men are greatly encouraged and feel that they now have the disease under control so much so that many talk of buying bees again and going back into the business.

Pres. Root—It is very gratifying to know that the disease has now been got under control, and I believe is now under control. A question I would like to ask is: Do you have any difficulty in distinguishing black brood from foul brood, or is there a difference, and, if so, what is the difference between the two diseases?

Mr. Stewart—There is a difference. You will notice, particularly in the stage in which the brood dies. In the late autumn, foul brood—a large percentage of it—died after it was capped and was usually very stringy. I am speaking now of foul brood. Black brood looks much the same as the disease before it is capped, the greater part of it, not much dying after it is capped. Occasionally you will find a combination of both. Sometimes you will find a combination of black brood and foul brood, and again, a combination of black brood and sickled brood, and we have sometimes a confusion of diseases, but the main difference between black brood and foul brood is the time at which the larva dies, and its ropiness; also that the black brood is much more contagious than the old-time foul brood.

We have some apiaries in various places where they have had foul brood for five or six years, and, perhaps, it has not spread to adjoining apiaries; whereas, if it had been black brood, you are sure to have spread over a whole county, showing that the black brood is much more contagious than the foul brood.

Pres. Root—Is it necessary to disinfect the hives in the case of black brood?

Mr. Stewart—We always advocate that, using corrosive sublimates or naphthaline, or something of that character. It is if it is simply shaking them once on the same hive, and they are healthy up to date; but this, perhaps, is not a working method among bee-keepers, because some of them are a little careless and they would not be successful, and we would be censured for it, so we advocate shaking twice and also disinfecting the hives. We think it is safer to be over-cautious than not to be careful enough.

Edwin B. Tyrrell, of Michigan—Does the black brood spread in the same manner as the foul brood?

Mr. Stewart—It is spread by the honey being robbed from one colony by another, but sometimes it is spread we hardly know how. I have had an instance called to my attention in a locality where the bees were all healthy, you might say, and found only once or twice one hive injured, and afterwards one man that had a large apiary found combs of honey near him that somebody had thrown out for the purpose of infecting his bees; but he had no enemy, or someone you have never injured in any way, yet he feels that he has lost his own bees and is a little envious of you because you are in a flourishing condition, and occasionally, it spreads in that way. It is something I dislike to mention, but it has been brought out, and such a case will occur occasionally. It is spreading in other ways, because it will spread quite a distance, two or three miles, when you can discover no robbing. Perhaps it is by a bee flying from one colony to another, or there may be carried by the bees to the flowers and other bees get those germs from the pollen. We know we are able to tell you, but we don’t know now, that is something no one can tell.

A Member—I would like to know something about the treatment of these diseases.

Mr. Stewart—We have had very successful treatments. We have been shaking them on to comb foundation, and in about four days taking those combs away and shaking the bees on to another set of foundations, and by destroying the hive, or using another hive. The bees from that time on will be healthy unless they reach some infected honey.
F. J. Miller—Do I understand that it is simply the McEvoy treatment for foundation that Mr. Stewart object to? Mr. Stewart—With the difference that we recommend being on the safe side by disinfecting the hive by boiling or some other means of burning. Mr. Case—How can you manage to get the bees from the combs or the starters on which you first shake them, on to the foundation that you are going to use? Mr. Stewart—You could simply put them in a box in a cellar until they have thoroughly used up the honey in their honey-sacs, and then put them on comb feeders, as I said the other day, and add the honey along with the bees. The difference is small, but if you are using a lot of bees, it is very important.

N. N. Belzinger, of New York.—I have found it better to use the McEvoy combs, or put them in a box in a cellar for 48 hours, or something like that.

Mr. McEvoy—I agree with Mr. West on that point, when he puts them in the cellar he feeds them.

THE USE OF COMB FOUNDATION.

"Is the use of foundation profitable in the production of comb and extracted honey?"

J. Greiner, of New York—I would say that the best, and most profitable, use of comb foundation, in the production of comb honey as well as extracted honey, and the question in my mind is, do we want to use comb honey with comb foundation as we could without? That is the only point why I hesitate sometimes in advocating and using comb foundation in sections, it is the very best comb foundation that could be procured; and yet I will say that I do not use the flat-bottom foundation—there might be excellent reasons of that. I have used the regular comb foundation as it is manufactured by other manufacturers. I can detect the comb foundation in almost all my comb honey, and my wife very seriously objects to my using comb honey or bringing such in the house for use, on account of this comb foundation. I think we really should say it was profitable to use. Of course, in the production of extracted honey, if you don't have the combs there is no other way. If you have to shake the bees off the way to do is to use comb foundation.

Dr. Mason—Wouldn't the bees build it if they didn't have any? Mr. Greiner—They would, but it would not be as profitable, and we want as tough combs as possible. In the brood-chamber certainly it is profitable in more than one way to use comb foundation. You get splendid combs, and a good deal quicker, and the drones are easier to get out of the cells, but there is no other way that we can prohibit the rearing of drones than by this method.

Dr. Miller—I don't doubt at all the importance of the question. I do doubt the advisability of taking much time in discussing the reasons for the differences of opinion. It occurs to me that if Mr. Hutchinson were here, he might answer these divergent questions asked and simply get opinions how many think so and so, and it occurs to me that if Dr. Hutchinson were here, he might answer these different questions that are required, and ask us where we will put ourselves on record, I believe it would be of use. Simply get the number of those who think they want to use foundation, and so on.

Mr. Hutchinson—Is it profitable to work for extracted honey, to hive swarms upon full sheets of foundation in the brood-nest? How many would favor hiving swarms on comb foundation in the brood-nest when working for extracted honey? Evidently, most of us use full sheets. How many would use comb foundation? How many would use starters? Is there any one here who would use starters in the supers only? Mr. McEvoy—I would make a half sheet of it by using it saw-tooth fashion.

Mr. Hutchinson—How many would fill their sections full of foundation? You see most of us use full sheets of foundation. Is there any one here that would allow the bees to build their supers combs in producing extracted honey?

Mr. Wilcox—The foundation costs me nearly a dollar a hive, and by using a few sheets of foundation starters they will build a few short combs; it is more economical in the brood-chamber. I use old combs in the supers.

Mr. Betsinger—I voted for using full sheets of foundation in the sections. Now, I don't know anything more about that than you before did. The question is why I use them.

Dr. West—We haven't got the time to tell why. We have got to take the expression in this way.

Mr. Hutchinson—I will fill them full in my locality, because they can finish the combs so much quicker and take care of the harvest. I think if the honey-flow was slow it might be more profitable to allow them to build combs in the sections, but when it comes in with a rush, and they can fill the super in three days, the time to build the combs and gather the honey, and for that reason it is profitable to use foundation, because they can get storage room quicker; but I have found it to be a mistake. I want to say that the use of foundation in the brood-nest when hiving swarms and working for comb honey, in my locality, I have taken this opinion off a year ago and put them on the new, and have the same bees working in the sections again in 20 minutes, with all the enthusiasm of a comb of honey, and all the combs that go in must go in those sections, and they will build brood-combs, and as fast as they build the queen will fill them with eggs, and I have gotten as nice honey as by allowing them to build their own surplus combs. But, as far as results are concerned in surplus honey, I can get more by allowing them to build the new ones on the brood-nest. I would confine a swarm to about five combs.

Mr. Abbott—As we seem to be establishing a practice here, I cannot see anything to gain by it, cannot see any advantage to be gained by it. I do not think I can see anything in it—a lot of people holding up their hands that they would do this and that. A National ‘bee-keepers’ meeting is such a thing, where a certain amount of information and instruction and information at the same time, and to hear from these people who are not in the habit of talking, I want to hear Dr. Miller and we want to be able to satisfy.
Contributed Articles.

Difficulties in Breeding for Long-Tongued Bees.

By C. P. Daidant.

There has been considerable discussion of this subject for some time past in all, or nearly all, the bee-papers. There was a time when a heated debate, and would throw myself head first into the battle on the side which I thought right. But that time has gone, and, although I still love to have my say, I much prefer to say it when the two sides are through and the matter seems very nearly settled one way or the other. Yet it is much pleasanter to discuss bee-culture now-days than it was in years gone by, when each man thought those who did not agree with him on any particular question on the natural history of the bee must have a special spike against him. Hot words and epithets in scientific discussions are becoming a thing of the past.

The question of long-tongued bees is not new. When the Italian bees were first imported into America, many apiaries, it was held by many that they could gather honey from the red clover, while the black bees could not. I remember an old neighbor who had bought Italian bees of us, when I was hardly yet a man, and came one day in great glee to tell us that his Italian bees were working on the second crop of red clover. "And," said he, "the black bees see them at work on it and try it, too, but they can't get anything out of it. Their tongue is not long enough." I went with him to see this wonderful performance, but it seemed to me as if both the Italians and the black bees were industriously at work and shared alike, for, although some bees seemed to fly about over the field without any result, others would stop long enough on a blossom to show that they harvested something. And this seemed to be quite uniformly the case with either race. And our old friend could hardly be relied upon for something very positive, as he was in the habit of ready believing what he earnestly desired. But, later on, I have seen, without doubt, many Italians at work in a field of red clover, while the black bees were totally absent. In that case there was either a difference in length of tongue or a difference in tastes and abilities. Yet the actual results in pounds of harvest could hardly be proven to the advantage of the red clover, for, even without pollination, we have always seen a better result with the Italian bees than with the black. But it can not be doubted that there is a perceptible tendency to longer tongues in the Italian race.

The discussion of the long-tongued bees will have the result of causing investigations in that direction, and breeding as much as possible from the bees showing the greatest disposition to harvest honey from flowers with long corollas, or from the breeds of bees producing the largest results. After all, is not this what we are seeking?

But, can we expect to get a set type, an invariable breed of long-tongued bees, readily? Can we make sure of a distinct race, in a word, upon which we may positively rely to harvest honey from red clover whenever the honey is in it? I think not. It seems to me that, handicapped as we are by the almost impossibility of controlling the selection of the male in the fertilization of queens, we cannot for a long time expect to duplicate our best breeders and produce an invariable race. But, aside from the difficulty due to this obstacle, we have before us the tendency of all beings to return to the original type.

Those who have persistently worked for years—for a lifetime—to the change desired in breeds of horses, pigs, cows, chickens, and in fact in the improvement of any domestic animals, or plants, or trees, those men know how little can be accomplished in a single man's life. If you take a breed which has already well-marked traits in the direction you seek to follow, you can only hope to make a very slight improvement by years and years of persistent effort. Have any of my readers ever tried to produce a new kind of potatoes, or a new grape, by artificial fertilization? If they have they will remember how many worthless specimens they have brought forward, and how few good ones. Many of us have made such trials in the hope of producing something far ahead of our neighbor's stock, but how many disappointments?

So it must be with the bees, and worse, since we cannot control the reproduction as we control that of most of our domesticated animals.

But, nevertheless, it would be an error to discourage those who try, for they are certainly on the right road. It is not only by repeated trials and by selection, long-continued, constantly discarding the inferior subjects, but constantly keep-

[Continued next week.]
An Experience with Black Brood in New York.

BY P. W. STAHLMAN.

SOME time ago I promised to report my experiments on black brood, the following being the first season of my work with this disease in the Netherlands. In the fall of 1899 I moved two colonies of black bees (apparently clean and free from any disease) from an infected apiary. Both were very populous, and when the honey was removed and the examination made, the sealed brood in three combs was found in No. 1, and a few cells were rotten; No. 2 was found to contain some sealed brood also, but free from disease. The first examination was made on the 20th of Nov., and our presence was known to the bees, as the bees were kept in the cellar for about six days and fed with bottled honey. While this was going on, I cut from the combs of the same hive five pieces of combs, six inches square, on an average, containing neither honey nor pollen, and fastened these pieces of comb in a new hive, contracted to about five frames, and then turned the bees onto these combs, only to find about two weeks later another case of disease again in its first stage.

I now took what few bees were left (perhaps two quarts or more) and put them on starters of comb foundation, and contracted to three frames, leaving them in the same hive, just as it was, and using the same combs, and all was well. I think I was more successful in the first experiment, as the disease never appeared again. This was taking bees from their winter quarters to treat them at once. Today (Aug. 19) the swarm is a "dandy," and I have installed a famous Italian queen to produce the next year. No. 2 bred up to contain nearly six frames of brood, but when I put the last outside comb, full of honey, in the center of the hive, the whole thing was struck with the disease, and, of course, to be destroyed. The bees were shaken off the combs in front of their hive, on a large newspaper, and as soon as they crawled into the empty hive the newspaper was burned. In all cases the shaking was done at nightfall. The colony was left to work at liberty for four days, and then, without smoke, the hive containing bees (which contained no frames) and what comb they had built, was quietly set on the ground and a clean hive containing starters, a la McEvoy, was placed on the old stand, and then the bees were suddenly jarrt out of the box and were left to enter the prepared hive and go ahead.

All was well for about seven weeks, when, from some cause or other, the disease again began to appear. After a few days the colony, which was strong, was again treated in the same way, and today, after seven or eight weeks, it is clean and good. The combs were cut out and destroyed, brood, honey and all, and two tea-kettles of boiling water was poured over the frames and hive, giving it a thorough scalding, and, of course, the disease is gone. No. 3 being also a treated colony, our friend and I (whom I had treated in the same manner) cast a swarm. This swarm was hived on these scalded frames, with starters, the same cover and bottom-board and all the usual paraphernalia. The result was a healthy and populous, open for inspection to anyone, as the season was especially good for experiments.

It has been a wet season, and not of the best for honey. My colonies, four in number, are now headed as follows: No. 1, a queen from Kentucky; No. 2, one of a California stock; No. 3, a daughter from the Kentucky queen, and No. 4, a Carnolian. By this I mean to keep them free from disease next year, and increase my colonies. It takes Italian bees to fight black brood. Black ones are "no good."

Hance Co., N. Y.

Questions and Answers.

WINTERING BEES ON THE SUMMER STANDS.

I wish to ask about wintering bees on the summer stands. I have the "Langstroth on the Honey- Bee," but I can't find much about wintering bees on the summer stands in it. I am going to winter two colonies on the summer stands; they are eight feet apart and have plenty of stores; they are in eightframes. Have wintered hives in the cellar and two winters. How must I pack them and when? The winter here is usually cold, sometimes 30° below zero. Last year I put the bees into the cellar Nov. 26, and took them out Apr. 2. The hives face south. What shall I pack with?

MINNESOTA.

Answer—You must have overlooked what is said in Langstroth, beginning at page 326, and especially pages 336 to 344. If you have always been successful in cellar-wintering, it is doubtful that you can do better outdoors. The packing should be done early enough so that you will not suffer from any very severe freezing. Langstroth recommends for packing material, chaff, straw, forest leaves, woven rags, and corks. The last is probably the best, but it is not always easy to be obtained. Even corkslings are quite popular, and are not generally difficult to get.

Introducing Queens.

A queen I ordered some weeks ago arrived in good condition. I introduced her according to directions, the colony being queenless one day. After 24 hours the bees had done nothing to the cage, the weather being rather cold; so I pulled off the card at the end. The following day, it being still colder, the queen was still in the cage, and almost frozen. I then took her out and dropped her among the bees. A few days ago I examined the hive but found no queen, eggs, nor unscaled brood. Was I at fault in my way of introducing, or how do you account for the disappearance of the queen?

OREGON.

Answer—Were you entirely certain about the disappearance of the queen? Many a time has an experienced beekeeper looked in vain a long time without finding a queen, especially a queen that is not actively engaged in laying. Of course, you may now be sure, some weeks later, for if present she would be laying. Dropping an almost frozen queen among the bees was hardly the wisest thing. From what you say it would appear that the queen was more or less separate from the bees, otherwise she would not have been chilled. The result probably would have been different if you had put the cage right in the cluster of bees so that there would be no question as to warmth, and then at their leisure the bees would have liberated the queen.

Baked Sweet Potatoes for Bees—Finding Black Queens.

1. Are baked sweet potatoes good bee-food? They are almost entirely sugar and starch, and the bees eat great holes in them.

2. Is there any way of finding the queen in a colony of black bees besides shaking them all off the combs in front of the hive in the evening like clover? We have hunted mine over a hundred times and never could find one.

3. Why are queens dearer in the spring than in the fall?

LOUISIANA.

Answers—1. I don't know. C. should suppose they might answer a very good purpose if consumed while bees are not actively flying, but they might be had for winter stores.
2. The usual way is to look over the combs till the queen is found, and I suppose that is the way you mean you have done a hundred times over. After you have looked over the combs two or three times without finding the queen, it is hardly worth while to continue. Close up till some future time, not sooner than half an hour, and you may then find her the first thing. Another way is to put the combs in pairs. Put two of them into an empty hive, the two close together but an inch from the wall of the hive. Put another pair at the other side of the hive. Displace the rest in the same way, sending a couple of empty combs, only leaving one pair in the hive on the stand. Now look at the first pair, lifting out the frame nearest you. If the queen is on either of these combs, you may be sure she is on the side next the other comb, so to say out of the way of views. As you lift out the comb glance over the side of the comb left in the hive, and if you do not see the queen on that comb look quickly at the comb in your hands on the side from you. If unsuccessful in your search through the different pairs, let them stand for a time, and you will find the bees showing signs of uneasiness when the queen is missed. The pair that has the queen will remain quiet, and your search will now be brought down to those two combs.

3. Like other commodities, the law of supply and demand affects the price of queens. Queens are plentiful in the fall; it is easy to have them in nucleus, and it is not easy to winter them except in full colonies.

**Queens Killed in Introducing—Saving Queenless Colonies.**

1. About Sept. 5 I ordered half a dozen queens, but did not get them until the 28th. The breeder sent no directions for introducing, so I followed as closely as possible the directions in the little booklet put in with the package, one being killed when received; 48 hours after I put them in I looked in and found a lot of queen-cells which caused me to feel uneasy, and I examined the front of the hives and found two dead queens. I think all the others were killed, as there were cells in each hive. Why was it they were all killed?

The bees had a good lot of honey and were getting honey from asters.

2. What can I do at this season of the year to save the queenless bees?

**Answers—**

1. It is impossible to tell what may have caused the loss without more particulars, and it is not certain that full particulars would allow an answer to be given.

2. You can buy queens to introduce to the queenless colonies, and as they will have been queenless a considerable time they ought to accept queens readily. If, however, they have reared young queens already, they will make trouble. It is possible you have colonies with laying queens that are weak in bees, and it would be a profitable thing to strengthen them with these new bees.

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**The Afterthought.**

The "Old Reliable," seen through New and Unreliable Glasses.

By E. E. Hasty, Sta. B Rural, Toledo, O.

MONUMENT FOR THE BEEFLY-ESCAPE IDEA.

But Mr. Alpang's adaptation of the bee-escape to keeping a room clear of flies—that seems to have gotten beyond theory to practical success. Who knows but some one sometime will vote him a monument for that? And he needn't use the monument for a good long spell yet, either.

MELTSE, HONEY, TURP, ETC.

Yes, and do you see that not only Dr. Strickland, of Tennessee, but also the Battle Creek Sanitarium, of Michigan, are pushing methods as a substitute for honey? Well, "Every tub on its own bottom;" but the venders of the good old tub need hardly be expected to lead in singing hallelujahs to the poor new tub. Page 611.

CONDUCTIVITY OF HONEY.

Honey is queer about its conductivity. Perchance it is partly because of the speed with which both the absorption and exhalation of water from it goes on. If we try to cool warm honey, recently cooled air (practically sure to be damp) at once envelops the surface. Surface soaks the vapor, and in changing it from gaseous to liquid condition sets free the latent heat—practically manufactures heat. If we try to heat cold honey we are liable to find that a thin film at the surface has got very thin in the other sense of the term. This liquid water is easily changed into vapor (at the surface) and so practically manufactures cold at a rapid rate. The amount of heat which an ounce of water vapor will change to the latent state, and so disappear or cool, is thus almost beyond all possible calculation, the how and the why of it that is takes such an amazing spell to get cold combs fit to extract. Hang them far apart—up to the top of the room—and give them two days if you possibly can spare. Another good way is to extract what you can while in a half-warm condition, warm them some more, and then extract again.

WATER AS A CONDUCTOR OF HEAT.

"Water, if kept from circulating, is as bad a conductor of heat as copper." That's a big sentence. Better we keep it on probation awhile before we swallow it whole. An ounce of water distributed in the caff of a cushion is pretty effectively kept from circulating. Would it, or would it not, affect the cushion like mixing in an ounce of elder-dow? I'll choose the down for my bees. But when it comes to honey, I'll admit without argument that honey is a poor conductor—and the lack of mobility in its particles helps it to be so, very likely. Page 613.

POSITION OF BEES IN WINTERING.

"Observer" does well to call our attention to the fact that wintering each individual bee in a four-inch cluster must furnish heat twice as fast as a bee in an eight-inch cluster. Also we have thought that spacing the combs is a help towards the further part of the argument, feel about ready to tumble to his argument that it is not a help, but a disadvantage. But the bees of massed in a "Hill's device," with their backs up against a warm, dry cushion, and getting honey from below. "Observer" does not handle that case, I should say. Page 613.

BULK COMB HONEY vs. SECTION HONEY.

Mr. O. P. Hyde, bees do not create honey out of nothing. If your bees store twice as much bulk comb honey as of section honey it must follow that somehow or other, actual or potential, there is a waste of one-half by the section-storing bees. That's not the way bees do at my yard. Yet I'm not sure but some strains of bees will do just that when you try to get them to work in sections. Page 616.

CRABBEDNESS AND DYSPEPSIA.

"Zatsa," Prof. Cook? Does crabbedness breed dyspepsia? The popular impression is that dyspepsia breeds crabbedness. Perhaps the bottom fact is that they mutually foster each other. Page 618.

SCREEN HIVE-TOP AS A ROBBER BOTHERER.

Take off the cover of the hive, and fasten on the screen top as if for moving. We had several excellent devices to bother robbers before, and this evidently adds another. I have plan to have our quiver full of them—and wit enough to select quickly the right one to shoot in sudden need. Page 621.

THE QUEEN AND LAYING OF DRONE-EGGS.

The sharpness of the queen's desire to have some drone-comb to lay in is alluded to by Mr. Atchley, on page 630. Probably many of us have noticed this. He thinks the queen finds it easier to lay drone-eggs. How about the probability of laying drones? If you are at all proficient you may have at least a near approximation. May be supposed that a sort of nerve exhaustion has been run up by the long laying of myriads of unfecundated eggs, and that the laying of unfecundated eggs does not make so large a demand on nerve force, nor exactly the same kind of a demand. She is taking a rest not by quiescence, but by change of action. Even ye sapient editor may write, and write, and write, until it is a rest to saw dry hickory wood. Howsoever, it is also not unimaginable that the Queens lay laying eggs industrially because there are no more spermatic particles ripe enough to use.

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**AMERICAN BEE JOURNAL.**

Nov. 7, 1901.
The Home Circle

Conducted by Prof. A. J. Cook, Claremont, Calif.

KINDLY INFLUENCE OF FLOWERS AND BEES.

I want to thank Prof. A. J. Cook for the "Home Circle" in general, and in particular for what he said about flowers, on page 624. The ladies-wife and daughter—of this ranch are great lovers of flowers, and have about 10 plants of different varieties in the house; but I never thought of seeing any particular moral effect on the behavior of our farm dog—a thoroughbred shepherd (15 years old now), that has always been very strict about keeping his flock on the roads and barking at any stray dog or cat. I think this is a very nice way of seeing to it that we all keep our property in good order, and do not have strays on the premises; but it is a fact that he never barks at people when they turn into our yard; on the contrary, he always goes out to meet them, wagging his tail, to strangers as well as friends, as much as to say, "That is right; come right in; you will find a welcome." He even allowed a thief to carry off a sapper of honey from my apiary one night a few years ago. I don't want that trait of his to be known very widely.

Instead of giving flowers the credit of "begging a more kindly, genial spirit," I have been inclined to come at it from the opposite way, that people who are naturally kind-hearted and genial, exerting themselves to cultivate those traits are the ones who, most naturally, take to flowers. It doesn't matter which way you take it, the influence is good both ways.

But what about bee-keeping and the influence for good that the "busy bee" exerts over those who engage in this business? It may be a little on the order of "compulsory education," but it is certainly a great school in which to learn patience and self-control-elements very essential toward the possession of a genial, kindly spirit. Who ever knew a beekeeper and real lover of bees who lacked those traits? As a rule, I find them the most sociable people I meet; even though perfect strangers to each other, it does not take long to get acquainted when they are engaged in keeping bees. There seems to be that fraternal feeling existing between beekeepers that does not obtain with people of almost any other calling.

I got out my paper and pencil to make a report of my doings with the bees the past season, but my mind persisted in running off on that track, all on account of that article of Prof. Cook's, consequently my report will have to wait.

Mitchell Co., Iowa.
A. F. Foote.

INDIO, THE SUBMERGED.

There is a very curious thing about the soil of California. Dr. Hilgard—the distinguished student of our State University—puts it very graphically. He says that we have several farms under the other, he means that our soil is away down. If we should bring a four foot soil to the top it would be immediately productive; or, if we would expose a soil four or five feet down, by removing the top soil to that depth, it would at once grow—if watered and cared for—a full crop of grain. This is why California is so immensely rich in its soil. It is an arid region and the soils have not been leached of the valuable fertilizers.

I now show you how I illustrate this truth. When I came here I graded my lots. I cut down two feet or so at one place. I commenced removing the surface soil as I would have done in Michigan, moving it to one side, expecting to return it when I had the grade to my liking. A neighbor, seeing my work, queried as to my plan. I explained that I needed not take that trouble; that the subsoil and sub-subsoil, etc., were equally fertile with the top soil. I acted on his suggestion, and, though I planted a part of my lots on this subsoil, yet all my returns were most as an overseer station on the "Espee" railroad. A little more than a year ago it was discovered to be an artesian valley. Wells were bored at slight expense, and a great flow of the most beautiful water was the result—wells costing but $250 or $300 gave, in some instances, 40 inches of water. The water is said to be of the very best quality.

The climate at Indio is, in summer, exceedingly warm—118° F. in the shade being not exceptional. Yet it is so dry that people do not mind it, and those suffering with pulmonary troubles find here a paradise. The microbes of tuberculosis find this place too hot, "throw up the sponge," and their victims rejoice in new found health and vigor. Thus we see that Indio is a veritable green-house, a pant conservatory. Cantaloupes and water-melons grow here in a perfection that makes Rocky Ford, Colo., famous, Oh, but they are sweet and delicious! Melons just like the dry heat of Indio, and, if well watered, give a sugar content that makes them savoury beyond compare. They come into market in June and July and thus antedate all other regions, except it may be Florida, and when it comes to quality, Florida simply is not in it. Last year—Indio's first year—she sent 2,360 carloads of these luscious pulp to market, mostly to Chicago. The crop sold for upwards of $25,000, and the cultivators received over $10,000. Single acres produced, it is stated, over $250 worth of extensively productive cantaloupes.

Here, as elsewhere, the traffic took all she dared to. But with reasonable traffic rates, we see that Indio has a great prospect ahead. Even with the present exorbitant express charges, the desert orchards are the most promising of all the new regions, and the Lower Salton region and the excellent water makes this endeavor improbable for much of the section—then Indio, so late a desert waste, will in the future be prized as a valuable addition to our great land. In the past it lacked a two instigate in this yearling town. The people are bright, intelligent, and full of hope and enthusiasm, which latter we visitors caught in good measure.

I am glad to give this picture, as it makes us all in love with our grand country, more to marvel at its inexhaustible resources. If the veriest desert can blossom out with scores of carloads of cantaloupes, what may we expect when our
water systems are fully developed? Let us talk around the home tables, at the social meet, on the street corner, everywhere, in favor of more energetic action on the part of the government to conserve and develop our invaluable water-supply.

JOSEPH AND HIS BROTHERS.

Wasn't that Sunday-school lesson of yesterday a most interesting one? A divided home, a partial father, a proud boy, and envious brothers. No wonder all this gave birth to bitter cancer and hatred, and stayed not until murderous intent against a brother stole into those jealous hearts. Aren't we glad that we have so many homes where discord is not known? Isn't it good that Uncle Sam set his great, splendid foot on polygamy in our fair territories? Don't we all rejoice that the Christ spirit is so rife among us that partial fathers and mothers are rarely found? All the children in the most of our homes receive the best that is to be given by food, loving parents. Can we give too much thought, study, or even money, if it tends to cement the love of brothers and sisters for each other? No doubt, Jacob's misdeeds and trials developed a character that has enriched the world. We believe that even Joseph, as true and chaste as he was, was ennobled by his great trials. That trials and afflictions may have a most blessed ministry in the building up of a proud character, who can doubt?

MOCKING-BIRDS.

The mocking-bird is one of our delights. Closely related to thrush and cat-bird of the East, it out-sings either. Ours is the very same that charms the bird-lovers of the Carolinas. It sends out its sweetest carols morning, noon and night, and even at midnight it wakes to sing. Its heart is full as it watches its little fledglings. Five growing, promising little birdlings! No wonder the wondrous song makes musical the very sunshine, and gladdens all our hearts. I rejoice that my evergreens, down by the barn, are so vigorous. Soon they will harbor more of these lovely singers. A happy pair, in these October days, give us lovely music the entire day through.

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GREETING ITEMS

Fairly Good Season.

Bees did fairly well the past season, considering the droughts. White clover did not amount to anything, bringing in only 25 to 50 clover bales. Spring count, and increased to 60, and have taken off, up to date, 2,000 pounds of honey. 1,000 of which is comb, and have sold most of this from my honey-room, at 12, and 15 cents per pound. I kept further increase back by caging the queen in the parent colony. After 9 days I destroyed all cells, and then released the queen. Honey is what I am after, and not the bees. Marshall Co., W. Va., Oct. 21.

Purity In Queens.

I saw an answer to my article on page 520 as to the purity of drones. Mr. Hartly, on page 617, does not understand, and said I did not believe that a queen that would produce black and golden drones was pure, and he goes on to say that if they are pure, the mate, in many cases, is brilliant in color, while the female is plain looking. But support that take do not agree with Leghorn chickens that are pure, and we will then produce white chickens still. What I meant was that our bees will, in general, produce all golden or black or black drones, and not two kinds from the same mother. I meant that if our queens and bees are three, then our drones should be one color. I am not after three banded queens, but I wanted to know if it could be possible that they were pure.

R. C. ABERNATHY.

Farms Co., Tex., Oct. 16.

Honey Crop Not Extra.

The honey crop has not been very extra here. I got 41 tons from 38 colonies, spring count, only 500 pounds of this being comb honey. “The Home Circle” is very delightful reading. H. A. H. ALLEN,


Poorest Year in Seven.

This has been a very poor year for bees in this part of the country. Although reports have been good, I fear they have been made only to keep the price of honey down. I have 180 colonies, and had 12 swarms the past season. I have experienced on other occasions, and will not have half a crop this year. I am in one of the best localities in the country. I have not in the past seven years and this has been the poorest we have ever had. I have taken the American Bee Journal for one year, and like it very much.

W. M. WILSON.

Tulare Co., Calif., Sept. 10.

Where Bumble-Bees Winter—Poor Season.

On page 108, I notice a letter from Thomas Wallace in regard to bumble-bees in winter. I suppose the majority of people think they go South, but it is not so. During the spring I was grubbing stamps, when I found proof to the contrary. I found one nearly 1 inch below the surface of the ground. I caught it by the wings when it started to “sees,” like all bumble-bees, and in 15 minutes it flew away. I found them the same way the latter part of September. The first thing bumble-bees work on is the gooseberry, and I have seen them fly until that blossom is in bloom.

The hornets, also, winter between the bark of old, rotten trees, for I have found them there very late in the fall. They were weak, the same as the bumblebees. I think they must winter here, the same as grasshoppers, snakes, toads, frogs, etc., which are never seen in winter. Last winter I found a snake which was covered with white leaves, where I was chopping cord-wood. I cut it in two with

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the ax, but there was no life in it; but just as
if you would eat a sausage in two. So I think
the bunny had been at work here. There was
not. I think it would be quite a hop for the frogs,
toads and grasshoppers. I have noticed sev-
eral kinds of frogs and toads this winter. My
\( \text{PRO} \)\( \text{CESS} \) and AUTOMATIC MACHINES are my
own inventions, which enable me to SELL
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Catching the Bee-Moth.
I saw in the Bee Journal an item from A. E.
Stone, of Arkansas, about bee-moths. I set a
large dish of water, and the landscape
tracts the miller, which flutters about the
lamp until it falls into the water. This pan
and lamp were in such a part of the
(with open door) so that the lamp, turned
to a dim light, reflects a little towards the place
where my bees are located, so that the light
does not reflect to the front or entrance. It
is surprising what a difference it makes if done
at the first appearance of the moth
in the spring.
I. L. MILLER.
Wyandot Co., Ohio, Sept. 27.

Poor Season for Bees.
We had a very poor honey season the past
summer due to early fall frosts, and now
have feed my whole apiary to bring them through
the winter, as we had no fall flow. Being
very busy cutting my corn and waiting on
the wheat crop, I neglected my bees when
they needed attention, and lost half a dozen
coloni\( \text{es} \). A great many colonies in this locality,
send for sample copy.

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The Bees vs. Cane Sugar Question.
This is one which seems quite unwilling
to stay settled. The following editorial upon
the subject is from Gleanings in Bee-Culture:
I have received a letter from Mr. Thomas
Wm. Covent (now sojourning in California),
editor of the British Bee Journal. He has read
through the columns of that paper, has recom-
dend cane in preference to beet sugar for feeding bees. In a letter just re-
ceived, he writes:
DEAR MR. ROOT—: I have just been staying
at a fruit-cannery in the Santa Cruz
Mountains where they use nothing but guaranteed
cane sugar for canning purposes, and
their experience with beet sugar is very similar to
ours in England. It may be that the humid
climate makes something to do with it; but it is quite certain that beet sugar is bad,
not only for bees but also for preserving fruits
in general. In the laboratory it is possible
to get perfectly pure cane sugar from beets so
that, chemically, it would be identical with
that obtained from sugar cane, but in practice
it is found that there are certain

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Is scientific and devoid of the element of chance. Crops are
surely, yields larger, quality better,
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of wintry weather. These early
Wheat yields 50 bu., Oats 100 bu., Potatoes, 300 bu., Alfalfa, 5
Tons, wheat, regularly each year, under the popular and successful
WILSON IRRIGATION SETTLEMENT PLAN.
It is impossible to get a well-located irrigated farm, possessing the
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We share profits with those who can advance all cash. Profits
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OUR NEW 1901 FIFTY-TWO PAGE CATALOG READY.

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25 cents Cash paid for Beeswax. * * * This is a good time to buy and use Beeswax. We are paying 25 cents a pound—CASH—for best yellow, upon its receipt, or 27 cents in trade. Impure wax not taken at any price.

Address as follows, very plainly,

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, III.

1901—Bee-Keepers’ Supplies!
We can furnish you with The A. I. Root Co.’s goods at wholesale or retail at their prices. We can save you thousands and ship absolutely paid for Beeswax. Send for our 1901 catalog.

Send for circulars regarding the oldest and most improved and original Bingham Bee-Smoker.

FOR HARD USAGE
we don’t think you can find anything better.

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BEST EXTRACTED HONEY FOR SALE

All in 60-pound tin cans.

Alfalfa Honey

This is the famous White Extracted Honey from the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey can’t get enough of the Alfalfa extracted.

Prices of Alfalfa or Basswood Honey:
A sample of either, by mail, 10 cents, to pay for package and postage. By freight—two 60-pound cans of Alfalfa, 8 cents per pound; four or more cans, 7½ cents per pound. Basswood Honey, ¾ cent more per pound than Alfalfa prices. Cash must accompany each order. You can order half of each kind of honey, if you so desire. The cans are boxed. This is all.

ABSOLUTELY PURE HONEY

The finest of their kinds produced in this country.

Read Dr. Miller’s Testimony on Alfalfa Honey:
I’ve just sampled the honey you sent, and it’s prime. Thank you. I feel that I’m something of a heretic, to sell thousands of pounds of honey of my own production and then buy honey of you for my own use. But however loyal one ought to be to the honey of his own region, there’s no denying the fact that for use in any kind of hot drink, where one prefers the more wholesome honey to sugar, the very excellent quality of alfalfa honey I have received from you is better suited than the honey of more marked flavor, according to my taste.

Mcfhenry Co., Illi.

Order the Above Honey and then Sell It.

We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

potash salts in sugar from beet which do not occur in those from sugar cane. Leather and beeswax have chemically the same composition, but there is a difference between them.

THOS. WM. COWAN.

It may be possible, as Mr. Cowan suggests, that the humid climate of England may have something to do with the bees. If it is not too much trouble I should like to have him give me the address of the cannery to which he refers—not that I in the least question his word, but because I should like to get a detailed statement from them, explaining why their experience with best sugar has not been satisfactory.

California vs. Australia for Honey.

Why there is so much more honey produced in California than Australia, and why a much larger number of hives can be kept in one place there than in Australia.—In Australia the highest mountain does not reach 8,000 feet, while in California they attain an altitude of from 16,000 to 18,000 feet. The white sage of the valleys precedes the black sage of the canyons, and the bees commence working in the valleys and then gradually fly higher up as the blossoms climb the mountain sides. It is much more luxuriant in the valleys than in regions not so mountainous. There is another fact that greatly extends the period of blossoms. California white sage, unlike the white sage, are in long racemes which bloom centrifugally, that is, the outside flowers, or the lower flowers, bloom earlier than the upper. This, of course, greatly prolongs the period of bloom, and, consequently, the honey season.—The Australian Bee-Bulletin.

Tarred Paper for Packing.

Last winter I had two colonies, each in a ten-frame dovetailed hive, with a half-story full of sawdust above the enameled mat, and the white bees kept the under edge of cover to the ground surrounded by a single thickness of tarred paper. This was secured by strips of wood tacked around where the paper lapped. The entrance, of course, was left open. The results were all that could be desired. The two colonies wintered perfectly, were strong in bees, stores sound and comb dry, and were the first to have supers put on. So well pleased am I with the results that I shall try the experiment on a larger scale this fall.

The tarred paper is virtually air-tight, at least in wind and water proof, but when the sun shines on it its blackness causes it to absorb much heat. I often saw bees at the entrances of these hives when my nose was found stirring in any of the others, and during the winter months I began to fear that the results would be disastrous, but they were quite the contrary.

Of course, this is only with two hives for one winter, and it is not safe to put too much dependence on the method until it has been more extensively tried.—A. C. MILLER in the American Bee-Keeper.

Uniting Bees for Wintering.

A friend inquires of G. M. Doolittle as to the best way to unite two or more weak colonies for wintering. The following conversation upon the subject is given in Gennings in Bee-Culture, Doolittle being the first speaker:

"Well, I will tell you of a plan I have used successfully for a number of years. The first thing to do is to place an empty hive where you wish a colony to stand; and if you can allow that to be where the strong weak colonies are standing, so much the better, as in this case the bees from this one will have any desire to go to any other place, as this is where they have marked their old home." "But how can I set an empty hive there when the stand is already occupied?"

"If you do this work as you should, on some day when the bees are not dying, and yet when it is not cold enough to chill bees generally, say on some cloudy day, or near summer, when the mercury stands at from
50 to 55 degrees, you will have no trouble in securing the bee hive. Stand, and taking your time in arranging the empty hive thereon.

"Having the empty hive arranged, go to the several hives having the colonies which are too crowded, and after two or three days, quite a volume of smoke at the entrance of the hive, at the same time surrounding with the dusk of your hand, or with a stick, on top of the hive.

"What do you pound on the hive for?

This pounding on the hive causes the bees to move, thus causing the honey, which is all full filling, to move, and else the bees may disgorge their load of honey back into the cells again.

"How long should I pound it on?

"One would not an assistant be good at this time?

"One would do no harm; but I generally do it about a minute and a half, as long as the hive is opened. I open the hive first, and by the hive to go in, open the hives and take a frame of comb and bees from one hive and place in the front hive, and take a frame from the next hive, placing it beside the first, and so on alternating the frames from the different hives. Reduce the empty hive filled. In doing this, select such comb from the desire, either for brood, honey, all-water comb, etc., thus putting the united colony on the best comb. Having the hive filled with comb, close it, when you will next take a frame from the first hive opened, and shake the bees off it down in front of the entrance, holding close down the bees are in or as near the entrance when leaving the comb.

Why this close holding and shaking?

"So the bees will take wing as little as possible, that they will not fall to run from the hive but that they can readily run in with the majority. Having them off the first hive, you take the bees off the next frame to the next hive, and so on, alternating in the shaking the same as in filling the hive, thus mixing the bees from the several hives all up.

Why do you wish them mixed up?

"The mixing of the bees takes the disposition away from the hives to another all out of them when filled with honey as above; for when each bee touches another it is a stranger, so that the individuality of each colony is lost, and the combined two, three or four colonies unite within two or three hours to make one colony, in which the bees feel a tenacity from itself all intruders, the same as the separate colonies did before.

"Do you always do this?

"Not quite. As soon as the bees are all shaken off theircombs, gently blow a little smoke on the bees. Then go to the next hive, enter the hive, should any be slow in doing so; and as soon as all are in the hive, place a honeycomb frame inside of it, and light it, standing the bottom out a piece from the entrance so it stands glowing over it.

"Is this done so that the next time the bees fly they will bump up against it, as it were, this causing them to know that it is a new hive; or when several of them mark the place the same as a new swarm does, after which they will adhere to it instead of wasting time over it, which bees have occupied before uniting. And to help in this matter further, it is always best to remove everything from the hive, including home-remains to entice them back."
American Bee Journal
Nov. 7, 1901

24th Year Dadant’s Foundation Year

We guarantee satisfaction. Why does it sell so well?
What more can anybody do? BEAUTY, PURITY, FIRMANESS, NO SAGGING, No LOSS, PATENT WEED-PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

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Very fine pure-bred BARRLED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised, The classic in Bee-Culture—Price, $1.25, by mail.

BEEWAX wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

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Texas Bee-Keepers.

New Branch Office. We beg to announce the opening of a branch office and warehouse at 438 W. Houston St., San Antonio, Texas. Rates of transportation from Medina in less than car-load lots are high, and it takes a long time for a local shipment to reach Southern Texas points.

Low Freight and Quick Delivery. To secure these two necessary advantages—low freight and quick delivery—and to be better prepared to serve the interests of our Texas friends, is our reason for establishing this new branch office. No other point in Southern Texas is better adapted to serve as a distributing point than San Antonio. It has four great railroads—the Southern Pacific R. R. east and west—the International and Great Northern R. R. from Laredo up through San Antonio and Central Texas, the San Antonio and Arkansas Pass R. R., and San Antonio and Gulf R. R. It also has the American, Wells-Fargo and Pacific Express Companies.

Our Managers. We have secured as managers Mr. Udo Toepperwein, formerly of Leon Springs, and Mr. A. Y. Walton, Jr., both of whom are well known to the bee-keepers of South and Central Texas. They are also thoroughly familiar with practical bee-keeping and all matters associated with it, and any orders sent to this branch will receive prompt, careful attention.

Our Goods. As usual our motto is to furnish the best goods of the most approved pattern. We do not undertake to compete in price with all manufacturers. Bee-keepers have learned that it does not pay to buy cheap supplies, for a saving of 10 cents on the first cost of a hive may be a loss of many times this amount by getting poorly made and ill-fitting material. Every year brings us many proofs that our policy of “the best goods” is a correct one.

Our Catalog. Very few changes in prices will be made in our new catalog, so do not delay your order, but send it at once. You will be allowed a refund if lower prices are made, and in case of higher prices ruling in the new catalog, if any, you will secure the benefit by ordering now. Catalog and estimates may be had by applying to the address given below.

Our Invitation. Whenever you visit San Antonio you are invited to call at our office and make it your headquarters. Here you will find a display of Aparian Supplies not equaled elsewhere in Texas. You will also find on file the leading bee-journals to pass pleasantly your leisure time.

Spanish Catalog. Some of you may read Spanish, or have a bee-keeping friend who does. If so, call for our Spanish catalog. It’s sent free.


Branch Office: THE A. I. ROOT CO., San Antonio, Texas, 438 West Houston Street, TOEPPEWEREIN & WALTON, Managers.

GEOGE W. YOROE & CO. 144 & 146 Erie St., CHICAGO, ILL., are headquarters for ROOT’S BEE-KEEPERS’ SUPPLIES IN CHICAGO. Send to them for their free Catalog.
A BRIDAL QUARTETTE—THE HUTCHINSON TWIN DAUGHTERS AND THEIR HUSBANDS.—
(See page 722.)
Mr. E. B. Gladding, secretary of the Leahy Mfg. Co., gave us a short call last week, when on a trip among the bee-supply manufacturers of Wisconsin. He reports doing the largest volume of business the past season in the history of their firm, even exporting a carload or so of supplies to Cuba.

Mr. A. N. Drape, of Madison Co., Ill., called on us recently when in Chicago on business. He brought home a honey crop from his 230 colonies of bees.

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The Cold Snap.—Did it catch you! No doubt it did a good many. The latter part of October was so summer-like that it was easy to think that freezing weather might be far away, and so some last preparations for cold weather were put off from day to day with the thought that there was no immediate need for haste until the weather became at least a little colder. But that "little colder" weather never came. From summer weather there was a sudden jump right into winter weather. Here in the north Illinois we had in the last of October a temperature of 90 degrees. All at once a cold west wind set in the night of Nov. 3, and by morning the thermometer registered 12 degrees.

Now, don't you wish that colony short of stores had been attended to in September? Well, look out another year.

Long Smellers.—A clipping from the Belfast Blazo, which has been received, contains among other things the following:

Mr. Ballard says that a honey-bee can smell clover honey two miles away. He cites an instance that once the nearest clover to his bees was over a mountain in the Hell Hollow district, two miles away, and his bees all went there to gather honey. He says if you go out in the woods half a mile from a hive and burn some honey-comb that within ten minutes the bees will be attracted there from the hive by the sense of smell, if the wind is right. But some of the ways of the honey-bee are past finding out.

This is a case of correct pr. mines, with a false conclusion drawn therefrom. It is true that bees will find a clover-field two miles from their home, and that in a few minutes they will find burning honey-comb within a half mile; but it by no means follows that they can smell anything two miles, or even half a mile, away. It would be just as reasonable to say that when a man went hunting and shot a squirrel two miles from home he saw the squirrel when two miles away. Bees are good hunters rather than long smellers.

Profits of Bee-Keeping are sometimes painted in rather bright colors, even when there is no real intention to mislead. Referring to some remarks on page 570 of this journal, in which some very bright painting in the August number of the American Bee-Keeper was commented upon, the editor of that journal says:

There can be no doubt that the glowing pictures sometimes painted of bee-culture and its profits are open to criticism. The beginning hobbyist—may in this way be led to expect too much; yet, with reference to the question in hand, we think no bee-keeper of experience would be inclined to regard $5.00 per colony as big returns. It should always be borne in mind that any business enterprise is subject to adverse conditions and casualties. Then, there is a limit of one's personal capabilities to be taken into consideration. One apiarist can not properly attend to several apiaries; expense increases in proportion with the number of hives he attends. One colony might easily produce 100 pounds of comb honey. This might readily amount to several dollars in the year. It can be shown that nectar, as a rule, is gathered in equal ratio. One colony might easily produce 100 pounds of comb honey. This might readily amount to several dollars in the year. 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The Buffalo Convention.


(Continued from page 771.)

QUEEN-REARING—IN-BREEDING.

"In rearing queens is in-breeding objectionable?"

Mrs. H. G. Acklin, of Minnesota—There are so many present who are much more extensive queen-breeders than myself, that I would rather hear an expression from them. I think it is objectionable. We get queens from several different breeders and bring into our apiary every year.

Dr. Mason—Then your practice is not to in-breed?

Mrs. Acklin—Yes.

Dr. Mason—What makes you think it is objectionable?

Mrs. Acklin—I really don’t know. In getting new queens you change your stock, of course, and get good qualities. In getting queens from different breeders and bringing in the best drones from your best colonies, you get your best stock. Of course, if you have any bad qualities in your queens at home you can get them out to a certain extent. We watch our queens very closely.

Dr. Mason—Why not dispose of the queens that you have that have bad qualities, and keep those that have the good, and breed from those right along?

Mrs. Acklin—I don’t know as I am able to answer that.

Mr. Benton—It doesn’t seem to me that there is the least objection to continued close in-and-in breeding, of itself. That means, of itself, nothing. In other words, if you want to improve your stock by the process of inbreeding, you have to take great care to select the queens, and select the queens to breed drones with reference to the qualities which they possess and which you wish to perpetuate and fix in the progeny, and to avoid weaknesses, select such queens as mothers of the drones as will avoid weaknesses that are inherent in that strain that you are breeding from. From in-and-in breeding we can fix a type, or character, which we could not do by constantly bringing in different strains or crosses. In all our hybrid animals the types have been established. We have a beef animal; we have a milk animal; we have a sheep that gives us long wool, and fowls that produce eggs, others produce meat, and so on, and in every instance all of those particular-purpose animals have been produced by careful, intelligent in-and-in breeding. From the very earliest start, therefore, I claim that in-and-in breeding is not harmful, but it is the lack of care in operating to apply it that results badly. When we have a strain with a weakness and we do not bring in any other stock at all, we do not breed intelligently enough to fix the stronger points in the breed, and eventually that strain will run out.

Mr. West—In regard to in-and-in breeding, the question I was going to ask is, How much does that mean? Can we confine in-and-in breeding to bees with a queen of the same individual hive and let that constitute an apiary, and use the drones from that individual hive from year to year and remove all other colonies from the place? Would it be beneficial to in-and-in breed in that way?

Mr. Benton—I don’t suppose such a case occurs at all, and in actual practice there is no such constant in-and-in breeding. I really think it has been held up as a bugbear, and people that engaged in breeding in-and-in were not really doing so, because there was such constant out-crossing, and I don’t think that we would be able, with the greatest care, to confine to as close in-breeding as Mr. West refers to. When we speak of it generally, I think it refers to close breeding more than in-and-in breeding, confining drone-production and using perhaps the same queen mother constantly.

Dr. Mason—Perhaps 20 years ago I had a brother who kept bees, and I started in with fifteen colonies that he gave me. He lived fifteen miles from anybody that kept bees. He got a good queen and he never bought any more, but he was constantly breeding in-and-in, and showed poor qualities, and he had the best honey-gatherers I ever knew. He kept the bees pure. They were gentle and as nice as one wishes to see. That is what makes me believe in in-and-in breeding. They were Italian bees.

Mr. Benton—That person who obtained that trio of Buff Cochins must have gotten two of Buff Cochin stock, and then probably has selected intelligently. Now, Mr. Benton, I have never been particularly interested in the question of whether there had been some trouble with the stock, like leg weakness for instance, it is very doubtful if he could get a good breed. I think the proof of the pudding is on the other. I hope that we will get rid of this whole idea of Darwin, that cross-fertilization is necessary to perpetuate the race. There is nothing in it.

Mr. Abbott—I feel as if I wanted to vote on this. I am surprised to know that a man who has given as much attention to science as Mr. Benton has, is so in accord with the view that I have held for years. In theory it has been combated by poultry people, and by everybody, in fact, wherever I have expressed it. This idea, which origin- ated in Darwinian days, has been repeated without limit since that time, has gotten such a hold in the world that it is pretty hard to get it out of the minds of the people. In fact, some people think they ought to be against in-and-in breeding because it is forbidden in the Bible. They sometimes give that as a reason. But, so far as I have heard, the best illustrations of the result of in-and-in breeding is found in the State of New York. There is a man who originated what is known as the American Holderness cattle, and those cattle originated from a single cow that came from the Holderness cattle of England, some 40 years ago, and which is now a very fine, and all the cattle of that herd have the blood in them, said to be the finest herd of cattle on this continent. That man has used intelligent in-and-in-breeding, and he has taken the bad qualities, eliminated them as fast as he came in contact with them, and bred in the good qualities, and that is what I contend for. In the case of course, who have males to sell, would like to have you believe that it is a good thing to send across the continent and breed in-and-in order to keep your poultry healthy. I have been doing myself just what Dr. Mason says his neighbor has been doing, breeding Golden Wyandottes, and I haven’t had any new blood for years, and I am quite sure that if I live for 50 years more (and I hope I will 100), I am quite sure that there will be no new blood go into that stock, but I kill every roopy hen, I exterminate every diseased rooster, and wipe out with the hatchet all tendency to disease; I don’t tamper with what is good in the breed, and I don’t bury it beneath the ground out of sight. I believe that if bee-keepers can control bee-fertilization some time in the future, that they can get the very best results. I hope that I will get rid of this whole idea of Darwin, that cross-fertilization is necessary to perpetuate the race. There is nothing in it.
AMERICAN BEE JOURNAL

Nov. 14, 1901.

duced Rose Comb White Minorcas, so I started with that jet-black Male Minorca, and I've now found with the Minorca hens. Now, after two or three generations, I get hens that are pretty nearly white all over, by selection. I select the lightest black which I get and try to eliminate in that way. In a few generations I secured a fowl that was entirely white, and reproduced itself and had a pure rose comb, the true Minorca type, with the jet-black male or any other type at all, and produced with a male that was jet black, and whose progeny were always jet black. When I look at this, I can throw the race back, but that was only the exception, and that was done in and-in-breeding. After this first cross between the jet-black male and the white female I didn't get any other blood into them.

J. H. M. Cook, of New York—What relation is the drone, or a hive to the virgin queen produced in that hive? What true relation do they hold to each other?

Mr. Benton—You might say halfbrothers.

Dr. Miller—I do believe that there has been a great deal of misappréhension on this subject, and yet amongst insect workers I don't think that Mr. Abbott has been so much alone as perhaps he has felt. He has had good company. I believe that all intelligent breeders will tell you that if you put down the dictum that in-breeding must not be allowed, that it puts an end to nearly all improvement in breeding. It should be understood that in-breeding will perpetuate the good qualities, and it is also the thing through which you will perpetuate the bad qualities. It is a false view that old stock should and to understand that fresh blood introduced will be a good thing, and that the cross-breeding after all is for the average layman the safe thing rather than to continue to breed exactly the same stock straight along. I believe the old view, just as bad as it may be, is the safer view. There are many who head the idea that he doesn't need to pay the least attention in in-breeding, and that no harm can come from that, you are going to damage that man beyond computation.

Mrs. Ackin—We get our queens from different queen breeders occasionally to try them, and we test them two years anyway before we take them in, but we always get the same strain of bee; we don't make a cross at all, and I suppose that there always is more or less in-breeding, although we try not many times we breed from the same bees.

Mr. McEvoy—I would like to have Mr. Benton's opinion on the subject of crossing good Italians with Carniolans, are you going to damage a line by crossing?

Adjourned to 1:30 p.m.

WEDNESDAY AFTERNOON SESSION.

The convention was called to order at 1:30 o'clock by Pres. Root, but, owing to a meeting of the Board of Directors, which was held at Mr. York to the chair. The question asked by Mr. McEvoy previous to adjournment was then taken up.

Mr. Benton—I have never crossed Carniolans with Italians, so that my opinion in that matter would have to be theoretical, and from what others have told me. As I was rear- ing Carniolans, I have found that only a few of the matings and have had Italians in another, and not desiring to cross the two races, I haven't attempted any experiments in that direction. However, I have had very favorable reports of such crosses, and I see no reason why they should not be successful. The general type of the two races is alike, regards the form of the race, but in their general economy in every way. They are not so radically different as the bees of Europe and the bees of the Orient. The Carniolan is an entirely different type, and to cross an Eastern bee with the races native to Europe, would be like crossing, we will say, a race-horse and a cart-horse; some such comparison might be made, but when you come to crossing Italian and the Carniolan bees there is not that radical departure from the general type, and I see no reason why the two races would not amalgamate well, and having made the first direct cross I would then myself close to the Carniolan, and then make any other direct cross, but breed from the best constantly. I case I brought in any fresh blood after that first cross, I believe the race would be so close to the Carniolan, simply because of the qualities that they possess, but I believe that the Italian would introduce a disposition in the bees perhaps to breed a little bit less during the honey-dearth than the Carniolans, and in some localities that might be beneficial, provided, of course, you could get them to do it, and to prepare for a future harvest without having to feed them too long. The Italians, when the honey harvest lets up, are less inclined to work close to the Carniolans. The Carniolans are continually breeding during this time. That is a good quality, provided those bees that are produced then can be brought into a second harvesting. There is no succeeding harvest to put them into immediately, it would hardly pay to feed them up to the time of the next harvest, and at the same time I think such crossing would be beneficial.

Dr. Mason—I had two of Mr. Benton's queens that I crossed with Italians, and I think they made the crossest bees in the country, outside of Mr. Cogshall's apiaries.

Mr. Benton—It seems to me that would be rather an exceptional condition, and, as I suggested, by keeping close to the first cross the gentleness would preserve in the main.

HIVE-COVERS FOR SUMMER AND WINTER.

Have we a satisfactory hive-cover? Is there one made with a dead-air space so as to be warm for winter and cool for summer, and that will not warp or twist?

Mr. Heise—When that question was raised I was wondering why any one wanted a warm hive-cover in winter, all that I have found for it is to keep dry the packing that I expect to keep the bees warm with. All that I use is a half-inch board for the roof, packed with dry straw, which makes it cooler in the summer. I provide my bees with sufficient packing under the cover, and I don't care much what the cover is like so long as it keeps the packing dry.

G. F. Davidson—We use in Texas a flat cover without an air-space, but I don't think we have ever found one that would not warp. We need an air-space in the summer to keep the combs from melting down, but we never have found one that would last through the winter. We have used the flat board, and the covers that were made of three different boards, "auxiliary covers" they used to call them, in Texas. We have there about six or seven months of sunshine, without any rain on them.

Mr. Betsinger—I have a cover that doesn't warp or twist. It is a simple frame box with a tin cover telescoped on top of the hive, and it is so made that the cover doesn't come down to the board within half an inch. Now the telescope cover is half an inch larger every way than the hive. That cover, won't warp or twist I don't care where you put it. And it is cool in the summer; I never had combs melt under it. For experiment I had made another case just like the cover with the cover fitted that left a dead-air space and found that the bees would not melt. A telescope cover lets the air all around the interior of the hive, and although the sun shines directly on it, the bees are cool. The covers will cost about 50 cents apiece if you make them right. A 14x20 sheet of tin makes the cover.

As Mr. York was called out to confer with the Board of Directors at this time, Mr. Heise was requested to take the chair.

Mr. Wilcox—I have a gable-roof cover that sheds the water and is a good roof on the hive, and I made a cover as Mr. Betsinger has described, which also sheds water. Either will do well, but to guard against the melting of comb in very hot weather you need the double thickness with the air-space between, in some localities, but I would rather have a cover, if possible, that would make a hive warmer and make it cool. I think we are troubled more with cold weather than warm weather, but the difficulty has been with flat covers—either would do well. I have 300 ozee in around the hive, unless you have a gable cover, and I want something better if there is any.

Mr. Heise—I would like to have the next person who takes up the subject of hive-covers to tell us what is a dead-air space.

Mr. Wilcox—If you have a gable cover it is easy enough to lay a flat cover inside of that, and there will be a dead-air space. A dead-air space is simply the thickness between two quarts of boards where the air cannot circulate.

Mr. Betsinger—That point is very important. We don't want dead air; we want live air; we want live air, we want live summer air.

Mr. Wilcox—I want to criticise that. He says we don't want it. It depends upon what result he desires to attain. The dead-air space to keep the cold out; you have to let the cold air in, in hot weather.

Mr. Betsinger—a dead-air space is colder than no space at all. When the heat is great, it will penetrate through one wall two walls. The interior of the hive is dryer where the sun can shine on one single wall.
shine, and all the heat comes from the bees.

HAVING A SWARM WITH A NUCLEUS.

"When a swarm issues with a clipped queen, if the hive with the clipped queen be removed and replaced by a hive containing a virgin queen, you will find that returning swarm kill the queen in the nucleus?"

W. L. Coggshall—If you get foreign bees with a strange queen, they will kill it invariably.

Dr. Mason—That is, if it is a swarm that has gone out, and they come back to a nucleus that has a queen, they will kill it instead.

W. L. Coggshall—Strange bees are quite apt to kill another queen.

Mr. Betsinger—My opinion is that they wouldn't kill the queen, for the very reason that the nucleus wouldn't let them.

Mr. Wilcox—My experience is that they will not, nine times out of ten.

Mr. West—if I had swarming that way, with a nucleus, after removing the old colony, when the swarm returns I would shake the nucleus bees on to the ground, and let them return with the swarm. When the swarm is returning the old queen has been caged, and removed. Shake the nucleus bees, queen and all—and let them all run in together, and all is well.

Mr. McEvoy—I don't think you can do as well if you talk a whole afternoon to discuss the question.

Mr. Tyrrell—I would like to ask if a little smoke applied to that nucleus wouldn't produce the same effect as shaking the nucleus bees.

Mr. Wilcox—Before the others returned I have often poured them down from the hiving-box, smoked the nucleus, and united them with weak swarms.

Mr. Heise—When that swarm returns, having lost their queen, there is very little left to join them. They will accept almost anything—glad to get a home.

Mr. Mason—if Mr. Betsinger is correct that the queen, and the nucleus will protect the queen, and you spoke of a nucleus, that takes the protect out of them, doesn't it?

KNOWING WHETHER A VIRGIN QUEEN IS PRESENT.

"How can I tell whether there is a virgin queen in a hive if I cannot find her?"

F. J. Miller—There is no way that I know except to wait a few days and look for larve or eggs.

W. L. Coggshall—You will see the bottom of the cells polished out where the brood-nest is.

Mr. Coggshall—You would see a frame of brood in it and wait three days.

Mr. Davidson—They make a queenless noise.

Mr. Benton—Watch the entrance just at sundown after they have lost their virgin queen and they will be running excitedly about seeking for the queen. I want to ask Mr. Coggshall if the bees begin to polish out these worker-cells before the time approaches for the queen to begin laying eggs. They will begin to remove the honey and polish out the cells, but they will not do it until near the time she is about to lay. The point would be, I suppose, not to lose any time waiting for that time.

W. L. Coggshall—that would give you warning that she is there.

SELECTING LARVE FOR QUEEN-REARING.

"When a colony is made queenless will the bees, in their haste to rear a successor, select larve too old to secure the best results?"

Mr. Duffield—I think it is very seldom that the bees select that kind of larve. I have noticed it only a few times in my experience with bees, that they have selected the 'right old' larve. I have seen some hatched out about the ninth day and it didn't look as well as it would if reared from younger larve. I think that it is very seldom that the bees make a mistake.

Mr. Benton—I agree with Mr. Davidson. The conditions under which they do select rather too old larve seem to be when the colony is weakened by any means; for instance, it is a small colony, or what might be called only a nucleus, but a colony in good condition and gaining honey rapidly, they rarely make a mistake and get the larve too old.

Mr. West—in regard to removing a queen, if the bees, I have an apiary of about 80 colonies that about June 1 and about the time the swarm begins, I remove the queens from these colonies of bees and on about the 10th day I again rear about as many queens again as we need, and we make a selection again by using the best queens according to our judgment. I have never had better results in any apiary than I have had by getting my queens in this way.

HOW LONG TO REAR A QUEEN?

"How long from the laying of the egg to the emerging of the queen?"

Mr. West—10 days, generally.

Mr. Betsinger—It varies from 15 to 17. The largest colonies getting the most honey will produce queens that will mature quicker than smaller colonies with less honey.

Mr. West—if colonies are in a normal condition and everything favorable it will not vary from 16 days.

Mr. Benton—It is a question of continuity of heat in the hive, and I agree with Mr. McEvoy. The time the larve is there varies one way or the other for a number of hours. It may be less than 16 days or a little more than 16 days, but in some cases to lay the cells where the heat is continuous. I think the average time is about 16 days. We find the worker-bees sometimes comes out in 10 days and very commonly in continuous heat in the latitude of Washington they emerge on the 20th day from the time the egg is laid, showing it is due to steady heat which develops the larve.

YIELD OF HONEY PER COLONY.

"Which will give the greatest yield, a colony of bees that produced the same colony if it does not swarm?"

Mr. Hershiser—It depends entirely upon how early in the season you get the swarm.
Contributed Articles.

Unfinished Sections in the Fall—How to Obviate Them.

By G. M. Doolittle.

A correspondent writes thus: "Nearly every fall I have had more or less trouble from the wax- secretion. I have lost a number of colonies and especialy combs of honey, and it makes us less work in handling hives and extra fixtures, and it saves us considerable trouble.

W. L. Coggshall—From what Mr. Betsinger said about feeding, you might infer that I feed sugar to stimulate the bees and the amount of sugar in my life to stimulate.


can get more from the swarm and the two or three combs the queen have an apary of 80 to 100 colonies, and all the bees we need to gather the surplus honey of the field, I prefer not to have any increase to amount to anything, before the old colony will gather honey, and it makes us less work in handling hives and extra fixtures, and it saves us considerable trouble.

W. L. Coggsahl—From what Mr. Betsinger said about feeding, you might infer that I feed sugar to stimulate the bees and the amount of sugar in my life to stimulate.

WAX-SECRETION.

"Is wax secretion voluntary or involuntary?"

Mr. Bentsinger—Largely voluntary.

Mr. Betsinger—I'd like to know why.

Mr. Bentson—Simply this: If we give a colony its combs there is not a great secretion of wax, even though they are gathering honey rapidly. If, on the other hand we give the bees to do hive or hive it in a empty hive, it has its combs to build, and it will use quantities of honey that otherwise would be left. The secretion of wax to build those combs. Therefore, I regard it as voluntary, since in the one instance they have used no wax to amount to anything, and in the other they have used a good deal when there was the need of it.

Mr. Betsinger—You plant a little garden on the ground and it comes up and grows. Is that voluntary or involuntary? You can hold it back or you can force it. So it is with bees. They secrete wax and they cannot help it so long as they gather honey, but you can increase that by feeding. But they are compelled to secrete wax as long as they live and gather honey.

(Continued next week.)


The following are sections in the fall, while, had we left them as they were, all would have been finished, and we and the bees have been happy.

My plan of operation to secure all capped sections or as nearly so as may be, when the season closes, is as follows: When the bees show by building bits of comb here and there about the hive, and by lengthening the cells along the top bars of the frames, that they are securing honey from the fields. I put on sections to the amount of the smallest capacity of one of my surplus arrangements—or say 24 to 25 pounds—and leave them thus until the bees are fairly at work in them. When I add more room to the amount of one-half that put on at first, if possible; and, if not, the smallest possible amount consistent with the surplus arrangement I use, generally putting this last fast under the one the bees are already nicely at work in, if this room is needed during the first half of the probable surplus yield. When more room seems likely to be needed, by finding that the room now on is fully occupied, it is given by placing wide frames of sections containing full sheets of extra thin comb foundation at the sides of those sections the bees are already at work in; or, if our surplus arrangement will not admit of doing this, by placing these sections over those already occupied.

By working according to this last named plan, the bees always have plenty of room so that they are never crowded, yet it is given in such a way that they will always complete all of the sections under way or between, which were fully occupied when this latter room is given.

By the way more room is needed, the sections first given are ready to come off when, as they are taken off, more room is given at the sides or top, as the case may be, and thus the bees are kept finishing sections the nearest over the broad chamber and commencing in those further away. In this way the season will close with a minimum number of unfinished sections, instead of a maximum number, as is generally the case where the old way of tiering up is used.

I am well aware that we used to argue that by putting the empty sections between those already occupied and the broad nest, the bees were irritated by greater activity, and, as a result of this activity, a greater result in comb honey would be secured, but after trying both plans side by side for several years, I can see no difference in the yield of honey in thoroughly good years, while in fall to poor years the plan above outlined gives much the greater yield of marketable honey.

Gonnagad Co., N. Y.
No. 2.—APICULTURE AS A BUSINESS.
Some Colorado Conditions—Average Yield—Prices and Outcome.

By R. C. ATKIN.

I WANT the ear of all apiarists who are in apiculture to make it a business. Some few have been very successful, but those whose motive is for either home consumption or for market, surely should consider the cost. I shall write mainly for Western conditions, and, for several reasons, principal among which are, 1st, I am more familiar with conditions here; 2d, more people in the West are engaged in this business; 3d, the Western apiarist has more difficult problems to solve.

As indicated in No. 1, not even in Colorado, where alfalfa, sweet clover, and clover abound, do we have a sure crop. Each Eastern apiarist thinking of coming here to get the advantage of a field where he can have a honey crop every year, would better step and learn if his ideas are right. My field, and the county in general, as well as other counties and localities in the State, have both alfalfa and sweet clover in similar quantities, and I do not believe that either will give some surplus honey should it yield freely.

The trouble with alfalfa is this: Being in growth similar to sweet clover, a strong, rank plant, though not so large as to entangle honeybees, allows it to mature to the extent of getting into full bloom or any ripeness of stems, or parts of stems, before the honeybees learn how to get at affluence. If we could force the stems become hard and woody, so much that stock will not eat these coarse stems unless forced to do so by very scant feeding; hence, the rule is to cut for hay just as the bloom begins to appear. In this slow-ripening clover, spring is a little later than that for alfalfa, in Iowa, central Illinois, Ohio and Indiana, probably about two weeks. The southern parts of this State will be from 2 to 3 weeks earlier than here, and lower altitudes in the same general line.

Alfalfa delights and grows rapidly in a moist but not wet soil. A big rain or irrigation that fills the soil with moisture puts it in prime condition for rapid growth in hot, sunny days. In my location periods of 80° to 90° and nights, many nights in April coming close to frost, even in May and June quite cool. The fact is, that, as a rule, all the year through we have cool nights, and, often, some frost appears in places almost every month. However, while the nights are cool the days are warm, the rapid and extreme changes in temperature between midday and midnight being much greater than in lower altitudes. In May and June the days become quite hot, and then the alfalfa "gets a move on it" and grows rapidly. In my location one can see the honeybees gathering nectar averaging the date of June 15, ranging from the 10th to the 20th.

About the time the first blossoms begin to appear on the alfalfa the first honey flow is in. Out on the first hand the last fields are cut they have attained just about full bloom, hence we have had from one to two weeks of fair honey-flow from this source—the only bloom and source at this season. I say fair flow—alfalfa delight and grows freely, but never known it to give the rapid yields obtained from white clover and basswood, especially the latter. This slowness of the flow and the limited time of its duration, often find us with the brood-combs filled and possibly just a start in the supers, and also the swarming-fever on, when the first flow is about over. So far as the great and vast acreage of alfalfa is concerned, you see it has gone into hay, a very small percent of it over maturing to sufficient bloom to yield any nectar. As soon as the first cutting of hay has been finished, the mower begins where it started first, and in June and July the growth is so rapid with favorable seasons I have known the second cutting to be in July. It is in the first, though usually a longer time intervenes. Unless delayed, the farmer never lets his hay alfalfa bloom.

But there are the fence-rows, ditch-banks and here and there weedy places and plants that continue in bloom. Also, there are fields of a certain size that have had their hay cut and put away. The heavy, tough alfalfa roots are very hard to cut with a plow, and usually enough of the plow by slipping by it, in spite of three and four horse-power, to make quite a great deal of surface breaking. The honey is not any less, it is merely scattering a field here and there, and thin in the field, so our flow from this is seldom at all free.

The last of July and the main part of August is wheat harvest time here, more being harvested in August than in July, but, bear in mind that these dates vary with latitude and altitude, but in relation to each other and general application to apiculture, the principles and facts apply. In some localities and years the conditions may be much different. In Colorado the bloom to the maturity of seed is several weeks, ripe seed and bloom being on the plant at the same time, more so than red clover, but not so much as sweet clover.

You see, under these conditions we watch anxiously for the flowering of this clover, and realize the importance of having available a plentiful quantity of alfalfa, clover, and others for a scarcity of grappers and for favorable nectar-secretin weather, and hope the farmers will not push having too rapidly.

Right with the first alfalfa flow comes swarming. The combs that swarms during the first two weeks of the flow is almost sure to do so before the first super is full, many before it is even started. Now see the drooping hopes of the apiarist—super work only just getting started, bees swarming and, what is more, the bloom and source of nectar rapidly falling before the mowing machines.

It will be about July 15—one month from the beginning of the alfalfa bloom—before sweet clover comes on. Having failed of any paying surplus from the first flow (and this is common), we watch anxiously for a strengthening or continue of the flow from the sparse, scattering alfalfa in the corners and wheat-fields, and for the opening of sweet clover. If the swarming alfalfa has had a fair supply of nectar and pollen to give to the bees, then this is the time to watch for a super crop of alfalfa, and there is ordinarily about every two to three weeks on very strong colonies, and one in three to six weeks on the medium colonies. Contrast this, if you will, with, getting a hundred pounds surplus in a two to four days, if the flow, and any experienced apiarist knows such conditions will not give fair results, and satisfactory and profitable yields, without the best of management. For ten years I have had just such experiences almost constantly, slow and intermission of flow, a condition that does not ask for a 15- to 25-pound surplus to almost a hundred-pound yield. I recall from memory such yields as 10, 20, 25, 40, 75 and 80 pounds—an average yield for 10 years of about 40 pounds.

Here I must state that such yields have not been obtained where swarming and much increase have been allowed. My yields for my locality, as herein given, have been far in excess of the average bee-keeper in this vicinity, or even in this county and adjoining ones. I do not allow swarming, nor do I allow any increase in the colony to the amount of one section—either liquid or super. This is an average yield for the past ten years in this county, in the hands of any but those having more than average knowledge of the business and necessary facilities. I think there is not ex-
Questions and Answers

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.
(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—Editors.)

Moving Bees.

1. I wish to move several colonies a distance of 30 or 35 miles, either by rail or horses. They are packed for winter on the summer stands, are in 8-frame, staple-spaced hives, with one deep box of packing all around and chalk on top the depth of the supers. The cases are the same size as the stand. If I leave the hive-entrance open the full width, and fasten wire-screen over the case, entrance, and to hive-stand, will top ventilation be necessary if moved now or in March?

2. Would frames need fastening if moved on bob-sleighs?

3. Would they have to be moved at night during cold weather?

4. Would it be safe to move them now, or would they do better moved toward spring, say February or March?

New York.

Answers—1. Something depends on the kind of bottom-board and entrance. With a deep bottom-board and a large entrance, there would be no need of top ventilation. With an entrance box 4 inches, there is no use to the left entrance, and therefore there might be danger to a strong colony.

2. Staple-spaced frames, or any fixed-distance frames, ought to need fastening.

3. They could be moved in daylight.

4. While they might be safely moved now, there might be some advantage in moving them in early spring. The combs would be lighter then and less likely to break. There would be fewer chances of loss by thieves, and better chance for the bees to see the sunlight and move away and work back. We think it important that bees should have a chance to fly off after being moved, and they would probably be able to fly sooner in March than in December.

Queens for Breeding Purposes.

I have a lot of queens all reared from the same mother; of course, the mother's bees are nicely marked and are fine gatherers. But one of the young queen's bees show to very finely marked and are extra-fine gatherers. Now, if one of the queens had to be used as a breeder—the young queen just mentioned or the mother—which would be the better one to use?

If the young queen is used as a breeder the drones will be principally of her sisters, and if the old queen is used as a breeder the drones will be of her daughters.

Now, if you think of this, a new queen to breed from please let me know where I can get one that is second to none in every respect.

South Carolina.

Answers—1. Your question is not an easy one. The rule that has been generally given is to breed from the best. Mr. F. B. Simpson, who seems to be unusually well informed in the business of breeding, says that a queen whose workers are phenomally good, it is better to breed from one which is only a little above the average, providing the breeder is from a mother whose queen progeny are nearly uniform in character, and is generally of an average good being. In this case I think I should breed from both the old and the young queen. The drones prevailing in the apiary, as you intimate, will be the sons of the sisters of the young queen, and will be practically the same blood as the young queen. Assuming that these are the drones that will be used, if you breed from the young queen, her daughters will breed drones that will be practically the same blood as themselves. The assumption, however, that the said drones will be the ones used, is, in most cases, not very reliable. The drones from surrounding apiaries within a radius of a mile or more must be taken into account. It depends much upon the character of your present stock as to whether or not it may be a gain to get a new queen. If your stock is not good, you could improve by fresh purchase. But I could not direct you where to purchase, and for two reasons. It would have been much better for you, had you a fresh slock 10 years, so that you could have a new bee-paper to have one special breeder pointed out as the one from whom purchases should be made. In the second place, even if the publishers should allow it, I could not tell you where to get the very best for the simple reason that I do not know. There are, no doubt, many who are trying to rear good queens, and it is possible that a large portion of them may be nearly on equal footing.

Arranging the Hives in an Apiary.

I am going to move 100 colonies of bees to the country this winter. How would you arrange them? I will have plenty of shade and ground. I want to avoid the loss of virgin queens as much as possible.

Alabama.

Answer—With plenty of ground, you could place them regularly in rows a rod apart, each hive a rod from the nearest. That would make it all right for the virgin queens, but it would make it more difficult for the bee-keepers. In this case, if you get at a satisfactory answer, suppose we talk the matter over a little. It is not so much the distance between hives that allows a bee to find its own hive as it is other things. Set a hundred colonies of bees in a row, a perfectly level plain, not a tree, bush, stump or anything of the kind in sight, and if the hives are a rod apart there will probably be more danger of bees getting into the wrong hive than there would be in a dense, natural grove with the hives only a foot apart. Let two hives be placed touching each other, and if no other hives are about there will be no danger of bees getting into the wrong hive. Have two nuclei in the same hive with entrances facing the same way and only six inches apart, and there is little danger that the bees of the right side will enter the left side. I understand this we can take advantage of it in placing our hives. Where shade is plenty, as you say it is in your case, there are trees present to help mark locations, and a little danger of confusion if hives influence each other only six feet apart. Suppose we place them so. As already said, there is no danger of mistake if two hives are set close side by side, by the side of each hive already placed let us set another. Now that the bees can reach in and out, and for a distance a little farther, we think that the other group, that is, the backs of the second pair are placed against the backs of the first pair. Now we have our hives placed in groups of four, and if there is any mistake as to entering wrong hives, it will not be that are the confusion. If the bees have their own group but that it will enter the hive corresponding to its own hive in another group. This method of grouping I have used for years, and you will see that it allows you to have 100 colonies on a given piece of ground, with just as much shade as though you had only 25 placed singly on the same ground.
1. I have a few colonies of bees I bought one year ago. I robbed them the last of June and got 17 pounds of comb honey per colony; and again the last of July I got 26 pounds of comb in another colony; but the last time I robbed them they all fought and stung me awfully. Now I want to know why they all fought me so the last time I robbed when the first time I did not get stung at all? How can I manage to avoid stings in the future?  
2. When is the best time to rob the bees?  
3. Why did I have so few swarms this year?  
4. When is the time to transfer?  

**ANSWERS.—1.** The great probability is that when you took the honey from them in the first time in June, they were at that time too young to rob freely. As long as a larva is quite good-natured and liberal, caring little how much honey you take away. When you attempted to repeat the operation the last of July, it is likely they were getting little or nothing from the fields, with plenty of time and disposition to resent any parroting of their hard-earned stores. Even if they did considerable storing afterwards, there may have been a hull in the harvest the latter part of July. It is also possible that you were not quite so careful the second time about exposing honey in the hottest weather. If it is some with bees in a time of scarcity, avoid having hives open longer than is absolutely necessary, and take great pains not to have supers of honey exposed to the robbers. It may also be a little safer to rob at this coming of time, by that the efforts of any bees with ambition to obtain a reputation as highway robbers.  
2. Better take away all surplus as soon as the flow ceases, or to leave it however no more than suflfices for their daily needs. Something can be told about this when you find that the amount of honey in the supers is not on the increase, and at such times the very fact that the bees are unusually cross and inclined to rob may make you suspect that they are not gaining in stores.  
3. Very likely the character of the season had something to do with their not swarming, although other causes may have prevailed. Without knowing any more particulars, it would be incorrect to say what.  
4. You may transfer in fruit-bloom, or three weeks after the first swarm.
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dreams and their meaning to himself. But, no, he must tell.
I hear the show of boasting may have been present to
the already unholy and sensitive nature of his dream. Was it kindly, then, or mosteful, for him to tell of the
second dream? The less was this true in that it reached to
the heart of the one who was to become subject to the son
of those wicked brothers—and they were horribly wretched—were
in the way of some potent influences which must have fed and
nourished powerfully the rancor, hate and jealousy that res-
sulted from them.
Joseph's misfortunes certainly developed in him a char-
acter magnificent almost beyond compare. That the brothers
were won in part from their evil thoughts and practices is as
surely true. Maybe many of us are most fortunate in the
irritating, vexations, experiences that come to form us.

THE SUNDAY-SCHOOL.

I find a rich treat in the Sunday-school. My father al-
ways went with me to Sunday-school. He was for years
the superintendent. I early learned to love the study and dis-
sions. How different it might have been had not my father
cared for these Sunday privileges. Nothing could keep any
father away. How could I but learn to respect this service? I have
always followed in my father's steps. My children were the
companions of myself and wife as we almost invariably went
each Sunday to study that masterpiece in all literature.

Today my son teaches regularly a large class in a large
and influential Sunday-school. A little son has just come to
the front in this fairly large Sunday-school. I am in the thought that "Little
Albert" will grow up to attend and love the Sunday-school and all the blessed teachings that it hands over to its patrons.
In just such influences lies the safety of our children. Such teachings give to our nation a grand citizenship.
We stood appalled before the last act of the anarchist. Anarchy
can not even sprout in the blessed seed-bed of the Sunday-school.

I am teacher of a large Sunday-school Bible class of over 30.
There are seldom less than that number in the class.
Yesterday we had a gentleman and his wife with us who are
not wont to come. The father told me that he did not know
it was so interesting. He assured me that they would come
regularly if the subject interested them. They have three bright boys.
One, the oldest, a very promising boy in many ways, with two

other boys, ran away last year, and were gone, to the great
sorrow and agony of the parents. In my home, I thought,
I replace any wish to do so with a better ambition. But if we
wish our children to love and benefit by the school we
must love and benefit by it ourselves. We often need its beneficent
influence fully as much as our children do.

Oh, how glad I am that my father loved such things!
How richly have his tendencies and habits in all these good
ways taken hold of my own life, and, through me, they have
been passed on to bless my children and my grandchildren.
Sunday-school teaching is more to the point to give us
with our children to a good Sunday-school?

A MINING TOWN SUNDAY-SCHOOL.

As a child I was never strong. While I remember my col-
lege life as most delightful and as the best part of my whole
life, my poor health, however, was a constant menace to its
continuance. So this life was not all roses.

I stepped from college broken in health, and came to
California to mend it. I secured a school in a rough
mountain town. There was no church there, and, as I have
ever been the only professional Christian. The children, how-
ever, were just as interesting as others, and, I thought, full
of promise. Sunday-school day I was invited to the church
with our children to a good Sunday-school?

Reader, may not you be able to work in the same way?
25 cents Cash paid for Beeswax. 

This is a good time to send in your Beeswax. We are paying 25 cents a pound—Cash—for best yellow, upon its receipt, or 25 cents in trade. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

An ELASTIC Elastic is not more satisfactory than Elastic Page Fence. PAGE MOVES WIRE FENCE CO., ADRIAN, MICH.

If you want the Bee-Book
That covers the whole Agricultural Field more completely than any other published, send $1.25 to
Prof. A. J. Cook, Claremont, Cal., for his
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.

Extracted Honey For Sale
ALL IN 60-POUND TIN CANS.

Alfalfa Honey

This is the famous White Extracted Honey gathered in the great alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can get enough of the alfalfa extracted.

Basswood Honey

This is the well-known light-colored honey gathered from the rich, nectar-loaded basswood blossoms. It has a stronger flavor than alfalfa, and is preferred by those who like a distinct flavor in their honey.

Prices of Alfalfa or Basswood Honey:
A sample of either, by mail, 10 cents, to pay for package and postage. By freight—two 60-pound cans of alfalfa, 8 cents per pound; four or more cans, 7½ cents per pound. Basswood Honey, 7½ cent more per pound than alfalfa prices. Cash must accompany order. You can order half of each kind of honey, if you so desire. The cans are boxed. This is all

ABSOLUTELY PURE HONEY
The finest of their kinds produced in this country.

Read Dr. Miller's Testimony on Alfalfa Honey:
I've just sampled the honey you sent, and it's prime. Thank you, I feel that I'm something of a hearse, to sell several thousand pounds of honey of my own production and have buy honey of you for my own use. But however loyal one ought to be to the honey of his own region, there's no denying the fact that for use in any kind of hot drink, where one prefers a more wholesome honey to sugar, the very excellent quality of alfalfa honey I have received from you is better suited than the honeys of more marked flavor, according to my taste.

C. C. MILLER.
McHenry Co., Ill.

Order the Above Honey and then Sell It.
We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

nearly all the drones, and making a hole from 4 to 6 inches square in the center of the bottom-board, with wire-cloth nailed on both sides, then keep cool and travel upward into the sections. If there are many robber-bees prowling around simply make small entrances.

Novocid Co., Mich., Oct. 21, C. CRANE.

Report for the Past Season.
I have 28 colonies at present, I wintered 18. The bees did well the forepart of the season, but it got too dry in July, and has been ever since. I sell my honey for 15 cents a pound, and can sell all I have. I sell to the consumer only. I will have about 1200 pounds this season. I have used 200 pounds of sugar.

Audubon Co., Iowa, Sept. 1.
Dittmer's Foundation!  
Retail—Wholesale—Jobbing.

I use a PROCESS that produces EVERY ESSENTIAL necessary to make the BEST and MOST desirable in all respects. My PROCESS and AUTOMATIC MACHINES are my OWN inventions, which enable me to SELL, FOUNDATION and WORK WAX INTO FOUNDATION FOR CASH at prices that are the lowest. Catalog giving Full Line of Supplies, with prices and samples, free on application BEEWAX WANTED.

GUS. DITTMER, August, Wis.

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California! if you care to know of its Fruits, Flowers, Climate or Resources, send for sample copy of California’s Favorite Paper—

The Pacific Rural Press, 
The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

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Successful Incubator (The Egg) 
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Send for Free Book or Free Illustrated Handbill, N. L. Address manager.

Please mention Bee Journal when writing.

Bees on Shares.

Contrary to the advice of some of the sages of bee-culture, a great many people in Colorado are working bees on shares, and getting a start in the business without any great cost to them from their labor. And this chiefly follows from the fact that there are a number of retired apiarists in the State. Yes, these men who have made a competency from the production of honey.

Another class, owners of bees, but unskilled in the arts of rearing queens and marking the practical apiarists, and make a handsome percentage on their investment.

In Colorado at present the share bee-keeping is about as certain to prove remunerative as rain is to fall on the Mojave desert, and when the authorities say that both parties are apt to be disappointed and dissatisfied (especially the owner of the bees), say authorities are apt to be disappointed and dissatisfied. But to reverse irrigated portions of the West, where reverse conditions prevail, things generally go along smoothly, provided the parties have observed the letter and spirit of their agreement.

In taking bees on shares, the Journal, in all cases, advises its readers to have a written contract, covering every feature of the agreement and providing for every probable contingency that may arise. Such a contract should be taken, no matter how honest and good-intentioned the parties may be; the chances for error in the understanding of a frequent trouble will be reduced to a minimum; and, besides, it is business.

The shares given for the use of the bees varies according to conditions. Where a few colonies are picked up here and there and united with another colony, the bee-keeper considers each colony is a fair compensation, if the season is good, and less if it is poor. Where a large number of colonies are united including all necessary fixtures and ground furnished for apiary, the lessee performs all the labor, charges the owner with half the expenses, sections, foundation, shipping-cases and new hives, and at the end of the season the process are divided; that is, each takes share of the honey and one-half of the increase. It is usually stipulated that the share of honey belonging to the bee-keeper should be delivered to him cashed, graded and ready for market.

The Journal will sum up the matter by saying: If you cannot get a start in bees in any other way, take them on shares. But if you can acquire queens by any other means, you must have to pay 15 to 25 percent for it, better do that and buy your bees outright. You would be better off buying your bees outright, after the latter plan.—Rocky Mountain Bee Journal.

An Aid in Setting Foundation.

In placing foundation on the wires in brood or half-depth frames, I find that the imbedding of the hexagonal teeth of the half toothed wheel, used for the purpose, by doing the rolling over a block or board covered with upwards. A piece of paper or a piece of the universe side up, would answer. Is this much better than rolling on a board. I cut a board just enough to fit the inside of a piece of an empty frame, and stretch the burpaul over it, tacking around the edges with two or four ounces twines; nail this board to a piece. After the foundation is secured in the slotted top-bar of the frame, the latter is placed over the frame or block, and the rolling done as usual.—M. F. REEVES, in American Bee-Keeper.

The Colorado Convention, to be held at Denver, Nov. 18, 19 and 20, promises to be one of the very best ever held by that excellent Association. In connection with the interest- ing program, a summary of which appears on page 675, Secretary D. W. Working has since sent us the following, which must prove of special interest to our Colorado readers:

Pro. Gillette will be prepared to measure "long tongues," and show them under the microscope.

PRESSE LIST.

A. Best and most interesting general exhibit—One improved German Steam Wax-Press, large size, offered by the A. L. Root Co.

B. Best case of a hive of bees, the best beehive or hive box, the best honey-comb wheel, used for the purpose, by doing the rolling over a block or board covered with upwards by the A. L. Root Co.

C. Best case of a hive of bees, the best beehive or hive box, the best honey-comb wheel, used for the purpose, by doing the rolling over a block or board covered with upwards by the A. L. Root Co.

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E. Best case of a hive of bees, the best beehive or hive box, the best honey-comb wheel, used for the purpose, by doing the rolling over a block or board covered with upwards by the A. L. Root Co.
Great Combination Subscription Offers.

Combination and concentration in business are the magic watchwords of the age in which we live. Why should it not be applied to the matter of subscriptions to magazines and periodical literature in general? We believe it is a wise move, especially when it is in the line of economy for the reading public. Now, if we can be the means of saving our subscribers several dollars a year in their reading matter, and at the same time help them to the best literature published to-day, we shall feel that we are doing a good thing, indeed.

We have entered into an arrangement whereby we can furnish the following excellent periodicals at greatly reduced prices:

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Here is our List of Liberal Offers:

**American Bee Journal and Success**

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- Review of Reviews
- Current Literature
- New England Magazine
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Regular price: 82.50

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We shall be pleased to have our readers examine carefully the above list, and send us their subscriptions.

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**Bee-Farming by Irrigation.**

Alfalfa, as is well known, is a great honey-producer. As under irrigation it produces several crops a year, with bloom with each crop, the bee-farmer who locates his hives of bees among alfalfa fields is sure of a large honey crop.

**General Farming Under Irrigation**

is also scientific and devoid of the element of chance. Crops are sure, yields larger, quality better, and prices higher, with no risk of wet weather damage in harvest.

Wheat yields 30 bu., oats, 100 bu.; potatoes, 300 bu.; alfalfa, five tons regularly each year. Under the popular and successful

**Wilson Irrigation Settlement Plan**

it is possible to get a well-irrigated farm possessing the requisites of abundance of water, rich soil, home markets, good society, etc., for little money and on easy terms.

We share profits with those who can advance cash. Write for Bulletin giving full details. Agents wanted.

**Homestead Land and Irrigation Company,**

79 Dearborn Street, CHICAGO, ILL.

JAS. W. WILSON, Manager.

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three months ago, so that the best honey could have been saved for exhibition. Members are
urged to make the best possible use of the opportunity offered to bring the best honey and
other products typical of our industry, and to prepare their exhibits so that they will
show creditably. The place and time of the meeting will assure as a large attendance of
beekeepefis and others interested in bees and honey. The further effort is made for the
bees, and not for the exhibitors, because of their value. The honor of winning will be worth more than the
premises. It is the beehive and the bees, and the judges of the beehive will have a view with a secure absolute fairness, as
well as ability to judge justly.

D. W. WORKING, Sec.

CONVENTION NOTICES.

CHICAGO.—The executive committee of the Chicago Bee-National has arranged that the next meeting be held all day and
evening, Tuesday, Nov. 30, and Wednesday, Dec. 1. The Bee National will hold its Annual
Exposition in Chicago at that time (Nov. 30 to Dec. 1); begone one fare $2.00 for the
round trip. This notice goes by mail to all beekeepers in Illinois, and should result in the
greatest attendance ever. A special train will take nearly 300 beekeepers near Chicago, and should result in the
largest attendance ever. The writer (D. C. Miller) and Mr. C. F. Daddie have promised to be
present. Let all come.

GEORGE W. YORKE, Pres.

COLORADO.—The Colorado annual meeting promises to be a genuine success. The program
has been made out for a number of weeks, and is almost ready for publication. It has come
to be about what we expected to see at a yearly review of the state, before our Association, and so very few who
do not know of the exciting results of the first meeting. One paper is already in the hands of the
secretary. On two or three nights a big magic lantern show is given by the famous author of bees and the bee industry. And then we are
going to have an evening of the choicest—honey in the United States (made in Colorado,
you know), and wax, with bees enough to show
how the bees live in the wild.

If you want to know more, or have forgotten the
dates, Nov. 30 to Dec. 1, write to the under-
signed, 612 Denver, Colo.

D. W. WORKING, Sec.

MINNESOTA.—The Minnesota Bee Keepers’ As-
semble, under the presidency of Mr. Rev. O. W. Church, 201 14th St. and Nicollet Ave., Minneapolis, Minn.,
Wednesday and Thursday, Dec. 4 and 5, 1903, will be held at the Commercial Club, Minneapolis, Minn.
Joining the National Bees Keeper’s As-
semble, and having a meeting on Wednesday, Dec. 8, All bee keepers and those interested in bees are invited.

H. G. AKELIN,
Chairman Executive Committee.

ILLINOIS.—The Illinois Bee Keepers’ As-
semble will hold its 11th annual meeting on
Nov. 19, and 20, 1901, in room 17, at the State Il-
inois Hotel, Springfield. We have arranged that there will be a
program we expect every one to come prepared to take advantage of those asked by others. Those who attend our meeting can
arrive themselves of the Odd Fellows’ rates on the trains. The Central Passenger
Association has made an open rate of one
fare for the round trip. Other roads in the Central Passenger Association will at least
give a rate on a fare and a third for the round trip. We hope that it will be as low as this
one-fare rate. There is no better way for beekeepefis to have a place at a larger rate
than themselves of the cheap railroad rates, and terms will be given to those who ask if we
rest a discussion on some particular topic, just
write a short paper on same, and rest assured the discussion will be held.

J. A. STONE, Sec.

R. R. No. 4, Springfield, Ill.

THE MAGAZINE AGE.—Never since print-
ing began has periodical literature been so
rich, varied and attractive as at present. A
laudable effort has been made to bring the
people of our country to a pitch of excellence, while unusual activity, ingenu-
ity and enthusiasm are being utilized for circula-
tion from city to cross-land the country over.
Keen competition has also brought the price of
books and papers on a point so low as to touch the pocket lightly. All this has re-
sulted in making us a nation of magazine readers in a remarkable manner. The
former have increased in a single magazine and counted it a luxury, fifty now look upon it as a necessity.

Preuss BEE-KEEPER.
AMERICAN BEE JOURNAL

Nov. 14, 1901.

We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR
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OR ANYTHING YOU WANT IN THE BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of THE AMERICAN BEE-KEEPER free. Address:

THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N.Y.

$5 W. M. Gershish, East Nottingham, N. H., carries a full line of our goods, at catalog prices. Order of him and save freight.

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Queen-Clipping Device Free....

The MONETTA Queen-Clipping Device is a fine thing for use in catching and clipping Queens wings. We sell it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00, or for $1.00 we will mail the Bee Journal one year and the Clipping Device. Address,

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Chicago, Ill.

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ROOT'S GOODS AT ROOT'S PRICE.

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WALTER S. POUNDER

A New Bee-keeper's Song—

"Buckwheat Cakes and Honey"

Words by EUGENE SECOR.
Music by GEORGE W. YORK.

This song was written specially for the Buffalo convention, and was sung there. It is written for organ or piano, as have been all the songs written for bee-keepers. Every home should have a copy of it, as well as a copy of "THE HUM OF THE BEES in the APPLE-TREE BLOOM" written by EUGENE SECOR and Dr. C. C. MILLER.

Prices—Either song will be mailed for 10 cents (stamps or silver), or both for only 15 cents. Or, for $1.00 strictly in advance payment of a year's subscription to the American Bee Journal, we will mail both of these songs free, if asked for.

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We guarantee satisfaction. ** Why does it sell so well? **

What more can anybody do? BEAUTY, PURITY, FIRMNESS, NO SAVING, NO LOSS.

PATENT WEED-PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.25, by mail.

Beeswax wanted at all times.

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Texas Bee-Keepers.

New Branch Office. We beg to announce the opening of a branch office and warehouse at 45 W. Houston St., San Antonio, Texas. Rates of transportation from Medina in less than car-load lots are high, and it takes a long time for local shipment to reach Southern Texas points.

Low Freight and Quick Delivery.

San Antonio as a Shipping-point.

To secure these two necessary advantages—low freight and quick delivery—and to better prepared to serve the interests of our Texas friends is our reason for establishing this new branch office. No other point in Southern Texas is better adapted to serve as a distributing point than San Antonio. It has four great railroads—the Southern Pacific R. R. and West—the International and Great Northern R. R. from Laredo up through San Antonio and Central Texas; the San Antonio and Arkansas Pass R. R.; and San Antonio and Gulf R. R. It also has the American, Wellis-Fargo and Pacific Express Companies.

Our Managers.

We have secured as managers Mr. Udo Tooperwein, formerly of Leon Springs, and Mr. A. W. Walton Jr., both of whom are well known to the bee-keepers of South and Central Texas. They are also thoroughly familiar with practical bee-keeping and all matters associated with it, and any orders sent to this branch will receive prompt, careful attention.

Our Goods.

As usual our motto is to furnish the best goods of the most approved pattern. We do not undertake to compete in price with all manufacturers. Bee-keepers have learned that it does not pay to buy cheap supplies, for a saving of 10 cents on the first cost of a hive may be a loss of many times this amount by getting poorly made and ill-fitting material. Every year brings us many proofs that our policy of "the best goods" is a correct one.

Our Catalog. Very few changes in prices will be made in our new catalog, so do not delay your order, but send it at once. You will be allowed a refund if lower prices are made, and in case of higher prices ruling in the new catalog, if any, you will receive the benefit by ordering now. Catalog and estimates may be had by applying to the address given below.

Our Invitation. Whenever you visit San Antonio you are invited to call at our office and make it your headquarters. Here you will find a display of Apisarian Supplies not equalled elsewhere in Texas. You will also find on file the leading bee-journals to pass pleasantly your leisure time.

Spanish Catalog. Some of you may read Spanish, or have a bee-keeping friend who does. If so, call for our Spanish catalog. It's sent free.

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MISS EMMA WILSON—DR. MILLER'S SISTER-IN-LAW
AND CHIEF HELPER IN THE APIARY.
The "Barler Ideal" OIL-HEATER ....

Saves its Cost Every Year!
No Odor! No Smoke! No Ashes!

Costs only a cent an hour to run it.

The editor of the American Bee Journal is using the "Barler Ideal" Oil Heater, and it is all right in every way. We liked it so well that we wanted our readers to have it too, so we have recently arranged with its manufacturer to fill our orders. The picture shown herewith is the one we have. It is a perfect gem of a stove for heating dining-rooms, bed-rooms, and bath-rooms. It hinges back in a substantial way, and is thoroughly well made through. The arra removes for heating water. The brass fount, or wall, has a bail, and holds nearly one gallon of kerosene oil. It is just as safe as an ordinary lamp. You wouldn't be without it for twice its cost, after once having one of these stoves. Most oil-stoves emit an offensive odor, but this one doesn't. Its height is 8 ½ feet, and weighs 50 pounds, or 90 pounds crated ready for shipment, either by freight or express.

Price, f.o.b. Chicago, $6.00; or, combined with a year's subscription to the American Bee Journal—both for only $6.50. FULL DIRECTIONS GO WITH EACH UNIT.

If you want something that is really serviceable, reliable, and thoroughly comfortable, you should get this "Barler Ideal" Oil Stove, as it can easily be carried by any woman from one room to another, and thus have all the heat you want right where you want it.

Address: GEORGE W. YORK & CO., Chicago, Ill.

Please Mention the Bee Journal when writing Advertisers ....

The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.

H. HOWARD M. MELBEE, HONEYVILLE, O. 

(This Cut is the Full Size of the Knife.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver. The linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it, otherwise to try to destroy the name and address, would destroy the knife. It traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your Pocket-Knife will serve as an identifier; and in case of death, your relatives will at once be informed of the fact.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side? 

The accompanying cut gives a faint idea, but, cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to appreciate the name and address, and its beauty.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00). We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

GEORGE W. YORK & CO.,
St., Chicago, Ill.
A Dr. Miller Number is what might be called this week's issue of the American Bee Journal. When we visited him recently we discovered the original photographs of the pictures shown, and decided to use them in a single number, as we now have done.

As we have described quite fully each illustration, no extended write up by us will be necessary. Still, if there is anything about the pictures our readers would like to know more of, they can easily send in their proper questions to Dr. Miller, when he will reply to them in these columns.

We wanted very much to show a picture of Mrs. Miller, but she said "No" in such a kind, yet decided, way that we felt we must respect her wish. She is a most lovely woman, greatly interested in all the Doctor's work and writings. Of course, you'd expect Dr. Miller to have just such a wife.

As our readers know, Dr. Miller is past his 70th birthday, and yet no one would suspect him of being nearly that age. He retains his youth in a wonderful manner. But that comes from the spirit that dwells within, and that shines forth in his daily life. It keeps him young and happy. May it also keep him with us yet many years, to bless and to cheer all who are so fortunate as to meet him or his helpful words.

The 3rd International Congress is to be held Sept. 9, 10 and 11, 1902, at Bois-le-Duc, Holland, and the program is already published. Among other topics are: The role of bees in fertilizing grain and grape-vines; increase of bee-pasturage; causes of swarming; influence of food upon the brood; length of bees' tongues; foul brood legislation in different countries; adulteration of honey and wax; suppression of fumigation of bees sent from one country to another. The last topic is to be in the hands of our esteemed countryman, Mr. Dadant.

Sampling Honey in the best way is a matter of considerable importance. At fairs or other exhibitions it is important that nothing untidy shall be done, and it is by no means a pleasant thing to have a spoon passed from one person to another or dipped into honey after having been in the mouth. The matter is perhaps more strongly accentuated in the case of selling honey by samples, for a prospective customer, on being handed a sample of honey in a spoon, has no means of knowing who the preceding taster has been, and in some cases he will plumply say he wants no honey rather than to put in his mouth that which may previously have been in a mouth that was filthy or diseased. The best way to have no suggestion of uncleanness is to avoid the use of anything the second time—in other words, to throw away immediately whatever has been used once.

A common wooden toothpick serves a fair purpose, and for sampling comb honey there may be nothing better, for with a toothpick there is no need to break open more than one cell. For extracted honey something a little broader than a toothpick would be better. Some have spindles specially prepared, and it might be interesting to learn from those of experience what is the best and most convenient thing.

Spraying Fruit-Trees in Bloom.—An editorial in the Farmers' Review, after speaking of the harm to bees, says:

It has also been discovered that the poison is equally destructive to the life of the pollen, even when the amount of poison is only 0.5 or 10 parts in 10,000. Even two parts in 10,000 has been frequently found fatal to the pollen. The danger to the pollen is, however, greatly lessened by the fact that the blossoms do not all open at once, but the process extends over several days. In a clump of five blossoms the central one opens first, and spraying at that time kills the pollen in only these open blossoms.

Crate, Rack, or Super.—Something of a controversy is now on in the British Bee Journal as to the proper term to use for the receptacles on the hives that hold sections. The supply catalogues and some of the correspondents have it "crate," while the journal insists it should be "rack." They might do worse than to compromise by using the word in almost universal use in this country—"super." Unfortunately, while there is unanimity in this country as to the written word, the spoken word is by no means always the same. It is just as much out of the way to say "super" in place of "super" as it would be to say "eœur" in place of "eœur."

Moving Bees.—The distance bees can safely be moved—that is, without danger of their returning to the old location unless special precautions are taken—is a matter that depends upon circumstances. It may be two feet, or it may be two miles, much depending upon the time of year. After bees stop flying in the fall, and up to the time when they begin to gather in the spring, they may be moved any number of inches or feet, and there will be little danger of any return-
placed for the bees Sept. 25, but were left untouched the entire day. Next day the clusters of grapes were sprinkled with honey-water. They were vigorously attacked by the bees, the sweetened water licked up clean, yet not a berry injured. September 29 the clusters were changed, sprinkled with honey-water, and five berries in each cluster pierced with a needle. They were promptly licked off, the punctured berries emptied, and the rest left whole. The beemasters did not question being punc-
tured in each cluster, and these alone cleaned out, except two or three berries that had probably been accidentally injured. Black Portuguese grapes were an exception; ripen-
ing early they burst open, especially in wet weather, and, of course, were then cleaned out by the bees.

A Good Word for the Blacks is spoken in the Rocky Mountain Bee Journal, A. E. Willett has blacks with a tongue-reach of 16-100 inch which gather more than his Italians with 10-100, and he thinks if blacks had had as fair a chance as Italians the blacks would be ahead.

Weekly Budget.

That Texas Horsemint paragraph, on page 706, was written by Mr. Louis Scholl, instead of Editor Root. The wrong credit is clearly an error on our part, as we have since noticed that it is plainly stated in the original article from which the paragraph was taken, that Mr. Scholl was requested to write about the horsemint, after Mr. Root had departed from Texas. We are glad to make this correction.

Mr. W. Z. Hutchinson, writing us Nov. 10, said:

FRIEND YORK,—When at Buffalo I prom-
ised Mr. W. G. Aclln that I would come up to their December convention at Minneapolis, Minn. I have just received notice that it will be held December 14th and 15th. This throws me out of attending the Chicago convention. I am sorry, as I had anticipated having an enjoyable time.

Yours truly,

W. Z. Hutchinson.

Well, that is too bad. But the meeting will be a good one, anyway. Of course, all would like to have Mr. Hutchinson present, but what will be our loss will be Minnesota's gain.

Mr. W. J. Chalf, the editor of the Cana-
dian Bee Journal, and with a very pleasant gentleman, was present at the Buffalo con-
vention, and has this to say editorially:

As was previously announced, the exercises consisted principally of questions and an-
swers. We were afraid at first that this kind of manner would become monotonous and tiresome, but the interest continued right through, and very much valuable information was imparted. Mr. E. R. Root, proved him-
self an ideal chairman, and perfect order and good humor prevailed during the sessions.

Dr. A. B. Mason, the genial secretary, has a happy faculty of making people feel at home. We Canadians were treated with the greatest possible courtesy and consideration; pleased to say we had a good representation.

The Buffalo Convention.

The Report of the Proceedings of the Thirty-Second Annual Convention of the National Bee-keepers' Asso-
ciation, held at Buffalo, New York, Sept. 10, 11 and 12, 1901.

(Continued from page 727.)

USING FOUNDATION FOR COMB HONEY.

"Is it desirable to use drawn foundation in securing comb honey?"

Mr. Wilcox—Some years ago I was called upon to conduct some experiments on the subject of the use of full sheets of foundation and small starters, and, from those experiments, I might say that the result showed that the most expedient way, when they were filled and finished, hence the drawn comb was the first filled and finished, the full sheets of foundation next, and the small starters last. This suggests probably relates to the prac-
tice of putting in a sheet of foundation to be drawn out half length or more, to be cut up and used in sections as starters for the bees. I am satisfied with that experiment and subsequent experience, that the bees produced more honey if supplied with combs fully drawn out. At the same time, I do not think it practicable for the majority of bee-keepers to do it. The difficulty or trouble of getting them drawn out balances the gain, I believe, in the use of the small.

Mr. Heise—I think probably Mr. Wilcox has the key to the question. I thought probably this referred to the artificially drawn combs. Probably it does not.

Mr. Betsinger—I hate awfully to let it stand in that form. My experience is that they will use foundation, do better work and fill the section quicker than they will with the foundation that has been drawn out previously, especially if it has been carried over one season.

FLAVOR OF RED CLOVER HONEY.

"Can any one tell me the flavor of red clover honey?"

J. J. Moore, of Ohio—We have had a good deal of red clover, which is of course the thing we have never experienced before, and generally after the middle of July the bees seemed to settle back and think they have done all that is neces-
sary, but this summer they have gath-
ered considerable honey from red clover. It is very much like white clover. When you open a hive in which it has been gathered freshly it reminds you of white clover. It seemed to be very white and nice. The bees were at work on red clover and there wasn't anything else to gather. It is in Seneca County, Ohio. Some of the bees were pure Italian; most of them were hybrids. Hybrids are kept more easily than Italians in our section. There was white clover early in the season, but later there was very little of it. Mr. McEvoy—Every kind of bee has gathered honey this year from red clover.

Dr. Mason—I suppose there are a lot of many of those present who have robbed humble-bees' nests, and if you have, and tasted the honey, you know just how red clover honey tastes. It has a real, nice flavor.

Mr. Hershiser—Referring to the secret-
ary's remark about humble-bee gathering red clover honey, I would like to know if humble-bees do not take other honey than red clover honey.

Dr. Mason—I think the flavor of red clover predominates. I have tasted of it quite a good many times in different apiaries, and the parties have called my attention to it as having been gathered from red clover.

HONEY FERMENTING IN THE COMB.

"Will honey ferment in the comb?"

Mr. Wilcox—I know it will.

Mr. McEvoy—Yes.

Mr. Mason—That depends on where it is kept. I believe.

Mr. Wilcox—Whenever it is kept warm enough to absorb moisture, and once the moisture clings to the honey, and if it is continued warm and moist, it will ferment. If it is kept warm and dry it is all right. It must absorb the moisture first to ferment.

COMBS OF CANDIED HONEY.

"What is the best method of handling combs that contain candied honey, in the spring?"

Dr. Mason—Uncap it and give it to strong colonies.

Mr. Moore—I would advise uncapping it and pouring water on the comb where it is candied. Bees will use it up.

Dr. Mason—if the honey is kept you need not pour any water on it. If it is dry, pour on some water.

W. L. Coggsall—I would just pile the combs up with the candied combs outdoors where the bees could have access to them, and that honey you can take and put in a wax-extractor and liquefy it.

Dr. Mason—if it is moist, you would not need to do that way.

W. L. Coggsall—I wouldn't pour any water on the combs.

"WHAT IS A TESTED QUEEN?"

Mr. Wilcox—One you have tried and found to be good for nothing.

Mr. Heise—is that the only way we can tell tested queens?

Dr. Mason—The other is when it has been tried and found to be good.

Mr. Beaton—I think some one who has asked that question would like to know what a tested queen is. In pop-
ular parlance a tested queen is one that has been kept until we have seen
her worker-bees and know from their markigns that they belong to the race then it is proper for them to belong to. A queen is partially tested as soon as you have seen her deposition of eggs, when you have observed that she has deposited eggs and laid them regularly; but in Mr. Benton's case, it is a queen whose workers you have seen and which come up to the standard of the race she is supposed to belong to. You can possibly get somewhat farther and test her for her queen progeny, test her for their gathering qualities; but I think everybody understands the popular method.

Mr. McEvoy—I like a queen to lay her eggs so that when they come to cap the cells they will all be capped in one day. I do not like an irregular layer.

Mr. Benton—I want the brood to be in solid. It develops better because of its mutual heat. The developing insect develops a great deal of heat, and we can test a queen from the appearance of her eggs.

Mr. Moore—I have an idea that the man who would dream a bee's last motion would like to know if he has an Italian queen. How would you know the progeny? What is the marking of an Italian queen?

Mr. Benton—The first and prime point is three yellow bands on the anterior part of the abdomen, that is, directly under the wings or near the throat of the bee. In the light, because there are dark and light Italians, and I should say that the queen that gave workers showing those things is nearer the general large form of the Italian. Whatever brownish tint over the body that is due to the fuzz on the body, would come up to the standard of an Italian queen, and as near as I know that marking is the better it would be in that particular respect. An evenness in the points, every worker like every other.

A Member—I would like to ask Mr. Benton if he could dream a bee an Italian that showed four bands?

Mr. Benton—I would say that was a queen that had been produced by selection, but I would not require that the worker had four bands in order to come up to the Italian standard.

A Member—Suppose most of the bees had four bands, but once in a while you saw one with only three, would that be against her?

Mr. Benton—Decidedly. I would not call that a pure Italian bee.

Mr. Wilcox—I agree with Mr. Benton, that uniformity of markings is the most important point.

MISCELLANEOUS MATTERS.

The secretary then read a letter inviting the members of the National Bee-Keepers' Association to attend to the annual meeting of the Ontario Bee-Keepers' Association, to be held at Woodstock, Ont., in December.

Mr. Heise warmly seconded the invitation.

Mr. York—I would move that we as an association accept the invitation so courteously tendered by our friends from across the border, and as many as wish be bound for that meeting.

The motion was seconded by Dr. Mason and carried.

Mr. York—It seems to me it would be well to have a committee on resolutions to report at the close of the session.

The motion, Messrs. Abbott, C. C. Miller and N. D. West were appointed.

Mr. Benton—I move that the convention adjourn tomorrow at 1 o'clock and meet at the Epworth Hotel in the evening.

The motion was seconded.

Dr. Mason—I move as a substitute that those who wish to go to the Pan-American can do so, and the others retain here.

After a brief discussion the substitute was carried.

Mr. Young—I move that the matter of selecting a badge be referred to the Board of Directors.

The motion was seconded by Dr. Mason and carried.

Mr. Young—On the matter of score card, I would move that the same committee that acted last year be re-appointed to act this year. I think Mr. N. E. France, of Wisconsin, was chairman of that committee. Mr. Hutchinson was also a member, and Mr. Hershiser.

The motion was seconded.

Dr. Mason—if I remember correctly, the score card committee last year made a recommendation and it was adopted by the Association.

Mr. York—I move that the convention select a committee of five to report on the score card before we adjourn, as recommended last year.

The motion was seconded by Dr. Mason and carried.

Mr. York—I nominate Mr. Benton.

Mr. Wilcox—I nominate F. Greiner.

A Member—I nominate Mr. Miller, of Canada.

The score card is a card recommended to be used by judges at honey exhibits.

Mr. Hershiser—I nominate Mr. Hutchinson.

Mr. Heim—I nominate Mr. Hershiser.

Mr. Benton—I would prefer to withdraw in favor of somebody else.

A Member—Then I would nominate W. F. Marks, of New York.

The motion was put and carried.

It was moved, seconded and carried that the roll of those present be called by States. The result was as follows: Massachusetts 2; New York 42; Pennsylvania 8; Maine 7; Vermont 1; Virginia 2; Cuba 1; Texas 2; Missouri 2; Iowa 1; Minnesota 3; Wisconsin 1; Illinois 4; Indiana 1; Michigan 4; Ohio 8; Canada 18; Maryland 1; Connecticut 1; New Hampshire 1; Jamaica 1.

QUESTION ON QUEEN-REARING.

"How many days after the egg hatches will the queen cease to live on the royal jelly, and what does she then live on?"

Mr. Benton—It varies from 5½ to 6 days; in other words, she lives on this royal jelly from her first larval period to the end of her whole larval period; the cell is then sealed over, and she then lives on the fatty tissues derived from the food she ate in the larval condition. The tip of the abdomen, or nymph, is inserted in the food which remains there. I express the opinion that by absorption she does not take from this food anything in addition, but for the greater part I should suppose that she lives from the food deposits or tissue derived from that food. At the end of the larval period the pupa of many insects remain over winter—large numbers—and some insects remain two or three years in this condition before they come out. We have the 17-year locust that remains 17 years in this condition, living on the absorbed tissue.

Mr. Bettsinger—A similar question was discussed within the last two years, and I asked the question how the queen took this food, and of course I renew that membership by the time Dr. Mason gave: but I see he has added that she takes the balance of the food through the abdomen.

Mr. Sleeper—I think I have seen indications that this substance called royal jelly is largely absorbed by the posterior portion of the abdomen during this time after the larva is sealed.

Mr. Benton—I am not in a position to say that I expressed an opinion merely; I have a little basis for that opinion. I have noticed that if cells have been taken at a very early period, this juncture of the pupa in the queen-cell is broken, and she drops to the bottom; of the cell and may never emerge after that—it depends upon the state of development if she emerges; and if she emerges, she may be somewhat inferior through having dropped down. My inference was that she was deprived of the initial part of her development.

Dr. Mason—I think I have seen cases of that kind where the queen was detached in that way in an early period of the development. It injured the queen very materially.

Mr. Benton—The idea would then be not to handle queens roughly, or to move them as little as possible until the perfect queen has emerged.

MEMBERSHIP QUERY.

"If I fail to renew my membership and renew it after, when does the renewal date from?"

Dr. Mason—The renewal dates from the time you renew. If you are a member of the Association and you fail to renew it before the time the year expires, you cease to be a member; so, those of you who are members, don't entertain the idea that you can have the protection of the Association and pay at the end of the calendar year.

DOES COMB COLOR AFFECT COLOR OF EXTRACTED HONEY?

"Does the color of comb make any difference in the color of extracted honey?"

Mr. McEvoy—Take old combs and sprinkle them well with water, shake them, and see if you don't get something a little the color of tea. Take a very young comb, and see what you get from that. Now, after a comb has been used several times and extracted, the bees have cleaned it out so much that you cannot get anything from it.

Mr. Bettsinger—I made it a business to attend a good many fairs and I have seen some pretty fine honey; I have made a great point to find out where it came from, and I believe there is an exhibition today in our State, and the
extracted honey was taken from old combs. There was also honey there taken from new combs. It has not taken the first premium because of its lack of color. Now, I will admit that you must have brownish or yellowish combs and get color from them, but it is not honey. Honey doesn’t take on color. You can lay it down in the dirt and it will still be white.

Mr. Wilcox—I would like to ask you if your first extracting is not a little darker in color than the next honey-

Mr. Betsinger—I would say, no, sir. The honey taken the second time is no whiter than the first, but the season in this State is not long enough to get honey. The honey has been on the combs so long that I would have to extract every day to get the same quality; our flowers vary from day to day.

Mr. McEvoy—I have been 18 years an inspector in the Province of Ontario, and I think very few men have more thoroughly tested the quality of old and new combs, and my experience has been that old combs do not have a shade of color. You will get, perhaps, a little better color of honey from one colony than another.

Mr. Betsinger—I don’t mean to say that one colony gets whiter honey than the other from the same field?

Mr. McEvoy—I would not say the same.

Mr. Davidson—I would like to add my experience to that of Mr. McEvoy. I have been in the extracted-honey business a good deal, and while I have not always taken color, I do know that honey taken at the same time stored in light and dark combs will have different colors. I have tested it in our extracting in Texas. The bees store the honey in the brood-combs sometimes, and I have to separate those combs and keep them separate from my regular extracting-combs in order to keep from coloring the whole lot of honey. I know it is gathered at the same time and by the same colony.

“Journal”—My opinion is that the comb has a lot to do with the color of the honey, because down our way all our honey is pure white. I have known the bees to extract honey in dark or old combs and it brings out a dark honey with a very inferior flavor.

A Member—It occurs to me that perhaps there may be a double meaning. Mr. Betsinger may refer to old combs that have been used a number of years for extracting, and some one else may refer to combs that have been used in the honey business, and put into the hive and honey extracted from them. In that case my experience would be that the honey is somewhat colored.

W. L. Coggshall—Mr. Davidson, in talking of that matter, said he got more or less bee-bread in the honey, which made it a little bit colored. Mine is almost colorless, but honey, and, of course, you couldn’t see much difference there. I think there is hardly enough difference to make it worth while to take care of.

Dr. Mason—This is an important matter. Some of you produce dark honey only, and that is all, and your opinion isn’t worth much. It is only a few years since, that I advocated this matter that it did color, and I was laughed at; and no longer ago than two years, in the Philadelphia convention, when I spoke of this, President Whitcomb said, “Do you believe that honey dissolves the wax?” Mrs. Harrison recently said something on this subject. Mr. Betsinger has a lot of bees—“when you want nice, light honey get nice, new combs.” Now, I have had a good deal of experience in this line, and this year I have been fully convinced of it than ever. I have combs that had been used as brood-combs for years, and that had not been used as such for the last two years. I am just about to put them in supers with combs that were never used for brood-rearing; I uncapped the old and the new and extracted, the old combs in one extractor and the new combs in another. I put them in supers with combs that were never used for brood-rearing; I uncapped the old and the new and extracted, the old combs in one extractor — and the co or was so different that you wouldn’t believe it was the same honey. Now, I am so thoroughly convinced of this that, although I have about six full extracting combs to the colony, I am going to destroy every one of them and put new ones in place of them, and I shall have honey not colored by old combs.

Mr. Betsinger—I may be behind the times, but I am not behind in long years of experience. I have extracted, and I am convinced of course, that old and new combs, and I would not give a snap of my finger for the difference between old and new combs.

Mr. McEvoy—I couldn’t be under- stood as saying that using old combs is going to give you a dark-colored honey. I would use it several times before I would think it sufficiently washed out.

Mr. Terrell—I wish to endorse what Mr. McEvoy has said. The question is whether it refers to old combs that have been used for years for extracted honey. This season I have taken combs from old colonies, placed them on top for extracting purposes, and the first honey extracted was decidedly colored, but as I kept on taking off the honey, the last extracting there was not very much difference between the honey from the old combs and the new ones.

Mr. Benton—When the honey is first gathered it is about three-quarters water. Now, if pure water would take away all the color in the honey, I have said, Mr. Mason—I have used a lot of dark quarters water and one-quarter sugar!

W. L. Coggshall—In sending some bees down to Cuba I sent along some combs, and I left from 10 to 12 pounds of honey in each colony, and it took them that whole season down to get that dark honey out of the colonies. The bees kept carrying it up, and it took longer to get the dark honey out of the hives.

F. J. Miller—If there is any person who is doubtful about this, if he will just send me a sample of honey to show how it will stand half an hour and then pour it out, he will see a decided black color; and if he refills that comb the color will gradually grow lighter. Dr. Mason is right in saying that I could not make an exhibition article of honey from those brood-combs. Commercially speaking, it would not matter, but it is probably the right thing if you were doing it for exhibition purposes it would make a decided score against you.

Mr. Wilcox—All the arguments go to show that the first extracting is darker colored than the second, but they don’t show why, because that color comes from the comb itself, or the accumula-
tion of dust and dirt that may be in that comb during the winter season. I have supposed that it was an accumulation of smoke or dirt which might have gotten into the combs during the winter. I don’t know whether that coloring is in the comb itself. I shall be slow to destroy my old black combs. I shall keep them and extract from them.

Mr. Betsinger—The gentlemen mention their first extracting as being a little colored. Honey isn’t water; it is an extract. You cannot make a wash with honey.

Mr. McEvoy—Allow me to explain a little. A member speaks about the first extracting of honey. Now, honey no honey excepted clover, and the clover from the white combs is a shade whiter on the start than it is from the old combs.

Mr. Betsinger—if you were in a locality where you didn’t have one drop of honey in the brood-chamber—none at all—no colony coming to maturity—then I must say you are a happy man to extract honey.

Mr. McEvoy—I uncrap between fruit, plum and clover, and I convert the honey. I see it differently. I think of course, that the honey is as the system I follow, and Mr. Miller knows it. I think that I can prove my case.

Mr. Betsinger—Does any mustard grow in that locality?

Mr. McEvoy—I dare say you could find some, but I myself don’t know where it is.

Mr. Stevens, of New York—Is the honey stored in those dark combs affected any in flavor by storing in them?

Dr. Mason—No, sir; it takes a fine taste to tell it. No man who chews tobacco can tell the difference.

SMOKING BEES WITH TOBACCO.

“Is it detrimental to the bees to use tobacco-smoke whenever necessary to open their eyes?”

Mr. McEvoy—I don’t think it is necessary ever to use tobacco-smoke.

Mr. Benton—I would say, decidedly, never use tobacco-smoke on the bees. I have had a lot of bees with which I don’t think of using smoke or veil. I take out the combs and shake the bees off without ever getting a sting.

Mr. Benton—I think there are times when some have claimed that tobacco-smoke was useful in introducing queens, but I should think that being strong-scented and producing a strong odor in the hive would probably convey to the receiving of a queen, and I do not think it is properly introduced, not to use tobacco-smoke on queens.

Mr. Moore—Does tobacco-smoke have a more detrimental effect in conquering very cross bees than just ordinary smoke?

Mr. Benton—I think if used on the ordinary cross Italian bee it is a good thing, but not on Cyprians.

Dr. Mason—I have sometimes tried it in introducing queens, and it has seemed to be a help.

Mr. Hershiser—I tried uniting colonies of bees, or nuclei, to make the colonies strong enough to winter, some years ago, and gave them so much that it made them sick, so that they dropped down to the bottom of the hive, but after they “came to,” again they
Queen-Breeding and Improvement in Bees.

BY A. NORTON.

There is no matter for rejoicing that so much attention is now being given to the improvement of stock in the apiary. In one sense the movement is not new. For years individuals have worked along this line and have done what they could independently, some in one direction and some in another. But the movement has not become systematic; it has grown so much in magnitude and is attaining so many of our most systematic apiarists and queen-breeders that we may expect to see it assume more and more systematic shape each season. The results do not prove too temporary to warrant its continuance. At least the united efforts of breeders will demonstrate how much dependence may be placed upon this hope of improving our races of bees, so that more intelligent estimates may be formed in the near future than at present. Even yet there is room for betterment in the aims of our improvers, some of whom decry what others are bringing about, and narrow their desires down to certain points, to the exclusion of other desirable ones. But we may hope that broader and so more uniform aims may be realized and that all breeders will be pursuing the same parallel paths.

Through but few pages of earth's record can we trace back bees and breeding. Geologically we know bees of sundry species as early as the Eocene epoch (or Mammalian time). The oldest known specimens are found preserved in the Eocene amber, or fossilized wax, on the shores of the Baltic Sea. That was about the time of the first appearance of flowering plants and trees, and before there was any one to domesticate and breed them. There were none even to love the sweetness of their garnerings till the cave bear came, unless animals of some other then existing orders were fond of honey.

How long honey-bees have been the associates of man as domesticated insects can not be ever conjectured. Historically, the searches into this question that we have seen from time to time in the American Bee Journal have carried as well into antiquity, but have not brought us to any answer. They have shown, however, that anything like intelligent handling and careful breeding is by no means ancient, and that our present improvements have been accomplished within a short period. While we should avoid over-conservativeness, or "old fashionedness," in regard to progress, we may, on the other hand, get into over-enthusiasm in our visionary hopes.

In considering the subject of breeding bees, and the possibilities that lie therein, men are liable to let preconceived ideas carry their hopes, if not beyond the possible, at least beyond the probable. Yet the experiments and expectations of what breeding may bring forth, are likely more wrong in their premises than in their conclusions. If the theories we are just now told we must believe or be behind the times, are true, the tide evolved from dead matter and man originated in some monkey, and so on back in formless protoplasm, why need we limit our ambition in the line of breeding? Let us produce Apis dorsata, or something just as good, from the bees we already have, instead of searching Asiatic jungles for them. Let us breed bees from wasps, or perhaps develop mosquitoes into storers of nectar instead of probers for blood.

Domestication hastens variation and increases it; but the balance of variation and heredity will always continue stable. Natural selection, therefore, may be considered as God's preventive of degeneracy, and not a substitute for creation; and, as surely as God circumseribed the ocean, He has also set the bounds of propagating organisms—"So far shalt thou change, and no further." Logic may lead us astray in these matters. If we reach the North Pole and keep on traveling, we will be getting away from it. So it is with truth, which is the only science: for logic, assumption, and speculation are not science.

"Take, for instance, the familiar illustration of the deer and the wolves. The fastest deer can save their lives and breed faster offspring; and thus their speed has been attained, say logic, assumption and speculation. This necessitates the assumption that they once were slow. Do we know this to be a fact? How did they become slow if not by a process of evolu-
course this was all since the time when flowers had no nectar at all, and bees had no use for honey, but made their living in some entirely different way. However, we must sadly admit that no assumption and logic based on natural selection can satisfactorily explain the uniformity of color in worker-bees, especially when we consider how variable in this respect are both queens and drones—the progenitors—and how shockingly they disregard all color-lines in mating; also, how little they could tell (if they wanted to know) what complexities their children would have, from the looks of each other.

But coming more directly to the subject of breeding bees, we really face the fact—which in proportion as it is known constitutes so much true science—that by careful selection we may induce changes in our bees in various directions until we reach the limit which the Creator has established: but beyond that we can go no further. The evolution of the yachting has shown continual increase of speed for many years. But the fact that this year’s "Constitution" couldn’t outsail last year’s "Columbia" awakens us to the realization of what we should have already known, that the speed of sailing-vessels can not increase forever. A swifter yacht than "Columbia" might yet be built; but some vessel must some time be built than which none can be made any swifter. And so with bees, or poultry, or anything else domesticated. But we should strive to improve as far as improvement can be made. If we take care of the improvements, the limits will take care of themselves.

The writer does not assume to tell eminent and successful queen-specialists what they should do to better their strains; he will be content if he brings out any established truth that they may have overlooked, or the "laity" have forgotten, is a mistake to assume that development can be carried on in only one direction at a time. Our Italian bees may be made (and they have been made) better in more respects than one. To take any one example among domestic animals: the Hou- dan fowl was in some period bred into one having a large, shapely crest and muff, a peculiar comb, regular characteristics of color, good size, great prolificness in egg-laying, and small amount of offal, and with the sitting instinct about entirely bred out. And with all this the fowl is hardy and strong. Now all these make a great many features to work for in the same breed, and the result was surely achieved. And we can find the same to be true of too many varieties of fowls, cattle, etc., to be mentioned. Hence we may conclude that we need not look to long tongues alone in breeding bees. We can carry on simultaneous improvements in hardiness, length of life, length of tongue, gentleness, beauty, and other points, until we reach the bounds of each. Do not, therefore, decry any one of these because it is not what you have been developing heretofore; and do not be in such great haste to develop one that you forget to keep up the others. It is true that inability to control queen-mating is a great handicap, but enough has already been done to show that progress can be made despite this obstacle; and, besides, those who make so much of natural selection must admit that it has less control of mating of queens and drones than man can exercise.

The idea is often advanced that crossing would be a means of improving varieties. This does not seem in keeping with all the facts. If crossing carries the better points of parents into the offspring, it carries the poorer ones as well. In crossing you cannot say what shall or shall not be perpetuated. From its very nature crossing does not carry characteristics bodily from either parent so much as it divides or averages those of both. If each had one good point carried to excess, the cross might make a better average; but its greater variability, resulting in more types to select from, would be offset by the greater difficulty of making the mongrels uniform and stable. Hence, there is more hope in selecting from the best among established varieties, because each step is more easily kept.

And, finally, it should be urged upon the masses of apialists to patronize the regular queen-breeders. Especially does this apply to those who live in districts rich in honey and filled with bee-keepers. You are far more at your neighbor’s mercy and under the power of wild bees than is the case in any other kind of stock-raising. The majority of your neighbors will not try to improve. No matter what you may try to do in the way of bettering your stock, you must lose it on honey. The swarms of drones from inferior stock produced around you. You must, more or less often, have recourse to the permanent improvements made by beekeepers who have succeeded in getting places where their own drones mate with their queens. You thus help yourselves, and at the same time help the beekeepers to maintain the business which you would be sure to miss should it fail through lack of patronage.

Monterey Co., Calif.

Quoting the Honey Market—Other Matters.

By Francisco Brown.

I wish to add my approval to that portion of Mr. Cooley’s criticism, on page 365, in reference to the commission-houses quoting fully up-to-date. I am particularly interested in the market quotations, but I wish them up-to-date. There is a feature in one of the bee-papers, if no more, of which I distinctly disapprove, in reference to said quotations, and that is, a house, quoting regularly, deprecating the beekeepers’ interests by cry of “overstock,” or words to that effect, and creating the impression that the price is going down, and then saying, “We are not a commission firm.” This kind of quotation is simply advertising their own honey. I wonder if the publishers of that paper would give all the rest of us a standing “ad” by telling them honey was worth so and so. I warrant the honey-dealer referred to does not tell his customers that honey is “down,” “big crop,” etc. I have dealt with commission-houses in honey for 15 years. Some, like the Horrie-Wheadan concerns, have treated me scandalously, and others have treated me remarkably fair. Under the present conditions of business we cannot well get along without the honest commission men. In some instances the producers are the gainers by consigning their product—not selling outright. How? Why, if we have a fancy, gilt-edged article, it brings the top price when buyers bid against each other. When we wish to sell outright, maybe only one or two buyers come along. For my part, I want the commission man, and I want him to know that I am alive—to my business; that the house that gets me the best price is the one that handles my honey. I have been converted to this decision more than once. To illustrate: I once had a crop of extracted honey that I wanted to sell outright. I offered it at 5 cents, and would have taken 7. After sending him a sample, a commission man wrote me your honey—I will sell to best advantage, and you will be the gainer.” I sent it. He put it into small glasses, and sold it at 16 cents, netting me 12 cents a pound. In the course of time this man sold nearly 50,000 pounds for me, selling my two combs in Dr. Miller frames.

One frame dripping with bees, and both so filled with sealed-brood there is no room in them for honey.

Dr. Miller’s Farm-Wagon Loaded with Bees from the Ouch-Apiany.
SAMPLE OF DR. MILLER'S "PAT MURPHYS."

Half-bushel (to Carmen No. 3, weigh 26 lbs.; 3 largest weighed 6 lbs. and 34 oz. The stick lying on them is a foot rule. Photographed Oct. 11, 1900.

comb honey for 16, 17 and 18 cents, when the best cash offer I received was 11 and 12 cents. 

THOSE "HINTS ON HIRED HELP."

Tell Mr. Hyde (page 564, "Hints on Hired Help in the Apiary") to be thankful indeed that his ideal helper is not to be found. If conditions would regulate hired help to do all we want to exact of them, Mr. Hyde and a lot of the rest of us would be hired help. It proves me as much as anyone to see hired help do things awkwardly, carelessly, or without thought or judgment, that a little reasoning would obviate. And yet these very things are necessary, or there would be no hired help—all would be owners—for it doesn’t cost much to start with bees. Its details, especially, are our capital. So do not expect hired help to furnish the capital, and give you the lion’s share of the earnings. A banker once asked for a cashier. Said his friend: "I can send you an honest young man, who knows nothing of banking..." "That is the man I want," explained the banker, "for I can teach him my methods and systems, and he will not have to learn knowledge that I do not want in my business." Much so with hired help, especially in the apiary. Either make a partner of the man at once, or hold yourself in reserve, and let him realize he is only a part of the machine.

LOSS OF BEES BY COMBS MELTING DOWN.

In regard to Mr. Gerelid’s loss of bees by melting down (page 560), the lack of water I do not believe had anything to do with the bees. All the colonies probably melted down within the space of an hour; when the breeze hilled they been out in a 10-acre field the loss would not have been 10 percent, I feel. We have long, hot summers in Florida, often getting up to 95 and 100 degrees, and last year, in August, it was 105 and 106 degrees on two different days, still I did not lose a single colony from melting down, and in several apiaries that I am acquainted with there was not a loss. In this line, if Mr. Gerelid will raise his colonies on benches and will put the two rows of hives about eight feet apart, then put a roof over them, extending it well over the sides, he will have a comfortable place for his bees, and also a comfortable one to work in. 

In Florida a large ant is very troublesome to bees, often destroying a good colony in a single night. If there are any to contend with, hang the benches with wire from above, instead of having legs, or attach to the posts of the shed; then dab coal-tar on the wires, and the ants will be rid of.

The most serious charge against shed-aplaries—and I have four in use, some of them several years—is the failure to get queens mated in colonies so kept. But to offset this, there is the satisfaction of having everything under cover, out of the rain, and the case of manipulation when all colonies are close together. You can have all under lock and key by using 6-inch fence-boards on the sides, leaving a space of eight inches or a foot opposite the hive-entrances, and then stretch a strand or two of barbed wire along this. For 10-frame hives allow 20 inches space each in length of building. At one end have your work-room, made bee-tight by use of burrap or mosquito netting—I use old corn and oats sacks rapped up—in which have a table and your extracting outfit. I mention the use of burrap instead of wire-cloth on account of the latter rusting out quickly in our moist climate.

Florida, Sept. 7.

SPECIAL FACILITIES FOR MOVING BEES.

It seems that the Atchleys are so inclined to the perambulator, pick-up-and-start kind of bee-keeping that they have 200 special hive-shells or cases into which bees and combs are put for moving, and taken out on arrival. As special wagons also are provided I infer that the cases are made of light materials—so light, and so much wire screen that they might crush on the road if the wagon body did not embrace each one and furnish the strength. How about this? Is it a winning idea; or is it too much expense? It stops, once for all, the smothering of bees—also the crushing of bees, so far as that comes from combs getting loose and thrashing around; but it can hardly stop new, weak combs from breaking out of the frames. Wonder if the imprisonment of each colony is supplemented by an outside screen over the whole concern. That would reduce to a very decided minimum the stinging of horses. I suppose one idea is that bees which do not get killed enroute, many of them have their lives shortened by what they suffer. If that’s the case it may pay to spend some time and money to have the honey-gatherers arrive at home Canaan in perfect order. Still my fancy hears some brother saying. "Too many traps and calamities!" and. "If I had such an outfit I shouldn’t actually get to use it, on account of the time and fuss it calls for." Page 659.

STACHELAUSAN AND LARGE BEE-CHAIRMEN.

Stachelausen seems to favor decidedly the large broad-chamber. He strikes an idea pertaining to the matter which is not familiar to all of us. Let the queen lay all she can for a spell early in the season and she wants a partial rest when the main harvest is on. On the other hand, let the queen be obliged to restrict her laying to a mere fraction of what she is capable of, and her time to avenge herself will probably come eventually; and very likely it will come just when moderate laying should mean more surplus honey. It occurs to me that the very worst cases of this could happen in a very big hive with large frames, if the colony itself came through very weak in the spring. Page 659.

LEGISLATION FAVORING FRAME HIVES.

Aha! Ye legally appointed inspector, inspect he never so wisely, cannot inspect to any purpose the apiary where all the combs are built cross-cross. That is, he can’t when foul brood is nicely beginning in 20 colonies, and none have yet got putrid or weak. To meet this case, our legislative man, Hambagh, wants everybody compelled by law to have bees on actually movable frames. Sounds seductive. But if we begin with that kind of legislation where will the end be? Where, indeed, till every dog is law-bidden to wag tail. Down, left, right, up," as the singing-master would have him? And what shall we answer if some one at the state-

HOME FROM THE OUT-APIARY.

Dr. Miller and Miss Wilson in bee-wagon used for going to and from out-APIARIES, hauling home honey, etc., drawn by "Beauty" and "Grandy."
house inquires, "Is it advisable to pass eleven laws for ten men?" Page 631.

PACKAGES FOR RETAILING EXTRACTED HONEY.

It is not so much by showing our conclusions at one another that we shall conjure up the ultimate truth from the bottom of the well, as it is by candidly laying our real experiences side by side. Mr. Davenport finds his customers don't return packages worth a cent. I find mine, pretty much all of them, so carefully conscientious in the matter that keeping a memorandum book, to show where the out pails are, seems rather a waste of time. Are my customers so much higher in their moral level than his? Impossible. What then? The full answer to that question is not likely to be reached except by a good deal of grubbing—perchance by a good many grubbers. I'll only just begin a little at one corner of the subject. Folks of low-average honesty, if they think (rightly or wrongly) that they have paid too much for the contents of a package, will gobble the package itself—as reprobial in part. I have several times tried to sell in the city by means of an intermediary, he to fix his own prices, and the result is a heavy loss of pails. Page 631.

THE LEAKY HONEY-BARREL.

Davenport's experience with barrels should be noted. All leaked; both soft wood and hard wood, although dried for two years. Wax and warrant both failed. The wax cracked; and as for the warrant, honey doesn't seem to understand the meaning of a warrant at all. Page 631.

Questions and Answers.

CONDUCTED BY

DR. C. O. MILLER, Marengo, 111.
[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail—Editors.]

Packing Bees for Winter—Other Questions.

1. 81 purchased 40 colonies of black bees, 20 in Falcon chalk hives and the rest in box-hives. The entrances of the chalk hives are only ¾ by 12 inches. Do you think that large enough for winter and summer?

2. Would you advise me to take the inner cover off of the brood-chamber and put burlap over the frames, and pack with forest leaves?

3. Would it be all right to raise the brood-chamber say ¾ inch in the summer, or would it cause the bees to loaf between the bottom-board and brood-chamber?

4. The frames have never been manipulated in these hives, and are badly braced and burr-combed. Would you advise transferring the bees and using full sheets of foundation?

5. The hives are painted red. Do you think it advisable to paint them white?

6. Would it be well to leave the packing around the brood-chamber all summer?

7. Is there any danger of using too much bi-sulphite of carbon in fumigating the honey? Does it taint the honey? About how much should one use to fumigate 100 pounds? Does it matter in regard to quality?


Answers—1. For outdoor wintering such an entrance is large enough. For hot weather, and for wintering in the cellar, I should prefer it much larger.

2. That's a good plan.

3. It would be all right.

4. If combs are straight and there is no trouble except the brace and burr combs, it would be a waste to transfer. Just cut away all the superfluous bars and braces.

5. White is generally preferred, but if hives are in the shade it makes little difference.

6. Most bee-keepers prefer to remove the packing for summer.

7. An excess is not likely to do any harm, as it evaporates rapidly. Two table-spoonfuls would be enough, or more than enough, for 100 lb. of honey if placed over the honey and closed up tight. I think you need pay little attention to quality. See interesting discussion in the report of the Buffalo convention, page 502.

8. If you are in a hurry to get the bees started, almost any honey is safe. If you trust to the bees to get them started, you may use a little brood (and you will need two or more honey super:s). There are so many ways. One way is to double up in the fall to nearly the number you want, and, if none of them die in winter, to do some more doubling-up in spring. Another way is to remove the old queen when a prime swarm issues (if your queens are clipped they will be destroyed if you let them entirely alone), and then as soon as the first of the young queens issues—which you may know by hearing the young queen pipe in the evening—destroy all remaining cells; or, return the swarm as often as it issues with the young queen.

The Home Circle.

Conducted by Prof. A. J. Cook, Claremont, Calif.

OUR COUNTRY.

If there is any one thing that should make our hearts well up in gratitude more than any other thing, it is the thought of our incomparable land. True, the home comes nearest to us, and touches our hearts and lives with the best gifts. But our American homes could not exist outside of America. Britain is the only other country that comes within telephoning reach of America. And Britain as a whole, as a land of comfortable home, hardly deserves either.

I believe the best gift or possession that any boy or girl may fall heir to, is a good education. It can be too broad or liberal. Even the day-laborer would be vastly better off with a good education. Were I to train a boy for the farm, I would have him pursue a course as thorough as that coveted by the would-be lawyer or physician. I would urge that he get all he could in the college; that he go then to the university for graduate work; and then it would do him no harm should he study abroad for a year or two. Do you say that this would likely fit him for agriculture? I know it need not, for I have the proof. Isn't it the glory of our magnificent country that any boy of will, energy and determination can, all unaided, secure all of this, if he is only so fortunate as to be an American? I know he can, for here again I have the proofs.

I have just been rejoicing in some statistics that fill my heart with gratitude as an American citizen. Our total debt now is $1,000,000,000. It was three times that at the close of the war. Yet this in the face of the fact that the war cost our Government more than $6,000,000,000, if we take direct and indirect expenses, such as pensions, etc., into account. In 1860, when our credit was at the worst, we could not borrow more for less than 12 percent. Now our 2 percent bonds are at 8 percent premium. Our present debt is $84 per capita, Russia's is $24, with a great army of people who are wholly impecunious. Even England's debt is $75 per capita; and that of France reaches the alarming
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A Good Year for Bees.
This has been a good year for bees, with the exception of a drought we had in the middle of the season. I commenced with four colonies, which I increased to 11, and got about 450 pounds of honey. The colonies are all strong, with stores of stores to take them through the winter. I wintered them in a shed built for that purpose, packed in straw, and they seem to do well.

The American Bee Journal comes promptly every Thursday, and I always watch for it with pleasure. I could not get along without it.

FRED R. HAWKINS.
Edgar Co., Ill., Nov. 7.

Selling and Shipping Honey.
My attention has been called to a letter on page 60, from H. D. Dennis, of Dr. Miller's, who speaks of his treatment by R. Presley & Co. of St. Paul. In justice to a firm which, I believe, holds the highest reputation in the Northwest, I must say that I have shipped honey and apply to them for the past three years, and not only have they always gotten me the highest market price for my shipments, and that without any unreasonable delay, but I have never had to ask twice for a check on my account.

I am aware that there are quite as many black sheep among commission men as there are inexperienced shipper, and honey, and shippers there are not unfitted. To the former I will give no quarter if I ever come across them; to the latter I will.

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The finest of their kinds produced in this country.

Read Dr. Miller's Testimony on Alfalfa Honey:
I've just sampled the honey you sent, and it's prime. Thank you. I feel that I'm sending a testimonial to sell several thousand pounds of honey of my own production and then buy honey of you for my own use. But however loyal I ought to be to the honey of his own region, there's no denying the fact that for use in any kind of hot drinks, where one prefers the more wholesome honey to sugar, the very excellent quality of alfalfa honey I have received from you is better suited than the honeys of more marked flavor, according to my taste.
C. C. MELLER.
Mclnery Co., Ill.

Order the Above Honey and then Sell It.
We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

say, consult your "A B C of Bee-Culture" as to the safe methods of shipping comb honey, and don't be surprised if you get low prices for honey which arrives at its destination in a leaky condition.

Notwithstanding our efforts to introduce honey as a staple article of diet, it yet remains more or less a luxury for those who can afford luxuries can afford to insist on their grocers supplying them with clean and appetizing ones. Who can then blame the grocers for preferring a case of honey which looks clean and fresh, to one that is sticky, and consequently dirty?—WALTER R. ANSELL.

Ramsay Co., Minn., Nov. 8.

Report from Alabama—Bitter Bees.
I have had fair success this year for this locality, considering the very limited time I can give to the bees, working as I do in railroad shops, and having only evenings. For the first time since I have been keeping bees they stored a surplus from white clover. I got about one pound of honey this fall, and not one bit more, probably caused by drought, which was followed by excessive rains; then again a very dry spell, so I got no more honey till this fall, when quite late there came a good flow, which proved to be the best fall honey I ever got here, except 2 colonies out of 28 that had better honey (from yellow clover). I do not know the source of the rest, but from the time the flow commenced I noticed a peculiar flavor, and sour odor from the hives, stronger in the night: this odor is slightly noticeable in the honey, which was so very dry I had to extract, and candied solid in a week or 10 days, exactly the color of butter. I got about 20 gallons. Have you any idea what plant these bees got it from?—ALBERT E. PALAC.

Morgan Co., Ala., Nov. 5.

[We can not even guess as to the source. Perhaps some of our Southern readers can tell.—EDITOR.]

Introduction of Queens.
Mr. Editor:—I am not greatly interested in the philosophical discussion between Messrs. W. and Whitney, but I am interested in the matter of introducing queens; and if there is some way easier than the usual one I want to know about it. My most recent plan of introduction may be relied on as safe, there will be advantage in using it, but sometimes a little deviation will result in failure. In one respect his instructions seem hardly explicit enough. He says: "Do not smoke the bees constantly, but smoke and pound alternately, for two or three minutes only." That may mean to smoke two or three minutes, then pound two or three minutes and then smoke two or three minutes, and so on. If that is the meaning, will he please tell us how long, in all, the pounding and smoking is to be continued? It may, however, mean that the whole time of pounding and smoking is to be only two or three minutes. If that is the meaning, will he please tell us how long to smoke each time, and how long to pound? For it might make some difference whether

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Please mention Bee Journal when writing Advertisers.
Use of Bisulphide of Carbon.

In the convention proceedings, pages 602 and 603, Mr. Burton, in speaking of the use of bisulphide of carbon as a destroyer of the bee-moth, raises the question whether any one has advocated or used it in this way for five or six years ago. I wish to state that in the files of the American Bee Journal of 12th June, 1897, there is a short statement as to its use for that purpose by G. R. Pierce of this State. Mr. Pierce not only advocates the use of it, but his present residence is unknown to me, but I thought it no more than fair to make this statement. - N. P. NELSON.

Benton Co., Iowa, Oct. 31.

Selling Honey and Other Things.

"Good evening, Mr. Hustler, I am glad you came, for if I don't talk about bees once a while I get homesick."

Now, Mr. H. lives some 30 or 12 miles from my place, but he comes this way once in a while and visits me. It is there I live in the woods near as, and he picks what trees he wants to fill his orders with; so he stays there until he has picked as many as he wants them at once, and then he has a little time to talk bees.

"At any rate," he says, "I have been stirred up lately over some articles of Doolittle's in Gleanings in Bee-Culture and the American Bee Journal. They are all on the subject of selling honey, which coincides with my idea of the way honey or anything else should be pushed out of your hands, and the 'tin' got into your pocket.

"That is all right," says I, "but a good salesman does not do business in order to sell. He has an article on selling honey, which coincides with my idea of the way honey or anything else should be pushed out of your hands, and the 'tin' got into your pocket."

Mr. Hustler replies: "That is all right," says I, "but a good salesman does not do business in order to sell, but rather in order to sell, as he advises. There are always two or three small questions, and both should be answered once for all. I think that he who might work well in one locality and not in another. For instance, suppose I sold my honey for one dollar per pound less than it would be sold in one of the wholesale in the city markets, as I understand by his advice, that is, to sell at 12 cents per pound, you quote 15 cents in the bee-paper. It costs the fancy just to market it. Now, I have 1000 pounds of honey to dispose of, and can manage, by a little push, to make it sell for 14 cents, and I could make my fortune, and my sizes, and my bee-keepers, and they would be getting rid of 12 cents per pound, and they would sell it short of 12 cents per pound, and I dispose of the balance at that price. Now, don't you see I am not trying to sell your bee-paper on the same two cents retail and 10 cents wholesale, which would be the price everywhere, should bee-keepers follow your advice? I think it would be well enough in certain localities, where every-thing else is cheap, but in my section of the country, where all sorts of goods ranging from 20 cents per pound retail, and $1.00 for 12 pounds at the stores, it would not work at all.

Add a little to that, Doolittle's
Queens for Breeders.

"Breed from the best" has been the watchword with myself as well as others. F. B. Simpson in Bee-Keepers' Review, says we're off. Given five queens from the same mother, which five queens uniformly yield about 40 pounds more than the average, and another five from another mother, which five zigzag all around from 35 below to 90 above the average, and he will breed from the first five rather than from the one that runs 90 above the average. Now, if F. B. will tell us, as I am afraid he will, that all intelligent breeders of note will agree with him, I will promptly 'bent face and stand in line with him; but if he's only giving us a chance of abusive epithets laid up for him, and a lot of brickbats to fling at his battlements. I ought to explain that he reasons that the one that runs 90 above the average is a freak that will not give uniform results, while the five of the other mother, being uniform, may be relied upon for future results.—The recommendation of F. B. Simpson is one that we have been carrying out in practice for several years. A breeder whose queens are irregular, zigzagging from one extreme to another, is one that will cause complaints from customers; but one that will give uniform results in markings.

SWEET CLOVER
And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express at the following prices, cash with the order:

<table>
<thead>
<tr>
<th>Name</th>
<th>Price</th>
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<tbody>
<tr>
<td>Sweet Clover (white)</td>
<td>50c</td>
</tr>
<tr>
<td>Sweet Clover (yellow)</td>
<td>1.00</td>
</tr>
<tr>
<td>White Clover</td>
<td>1.70</td>
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<tr>
<td>Alfalfa Clover</td>
<td>2.50</td>
</tr>
<tr>
<td>Prices subject to market changes.</td>
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</tbody>
</table>

Single pound 5 cents more than the pound rate, and 10 cents extra for postage and sack. Add 25 cents to your order, for carriage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street.
CHICAGO, ILL.

FOR GETTING NEW SUBSCRIBERS.

Red Clover Queens FOR 1902 Free
Long-Tongue Variety—Warranted Purely Mated.

We have already arranged with the queen-breeder who furnished Long-Tongue Red Clover Queens for us during the past season, to fill our orders next season. Although fully 95 percent of the untested queens he sent out were purely mated, next season all that mails for us will be warranted purely mated.

We want every one of our present subscribers to have one or more of these money-maker Queens. We have received most excellent reports from the queens we supplied during the past year. And next year our queen-breeder says he expects to be able to send out even better Queens, if that is possible. He is one of the very oldest and best queen-breeders. His bees average quite a good deal the longest tongues of any yet measured. The Breeder he will use is direct from Italy, having imported her himself. Her worker-bees are large, of beautiful color, very gentle, scarcely requiring veil or smoke.

Orders for these fine, "long reach" Warranted Queens will be filled in rotation—first come, first served—only granting as early in June as possible. It is expected that orders can be filled quite promptly (even better than the past season), as a much larger number of queen-rearing nuclei will be run. (But never remove the old queen from the colony until you have received the new one, no matter from whom you order a queen).

A Warranted Queen for sending us Only 2 New Yearly Subscribers

In order that every one of our subscribers who wants one of these Warranted Queens next season can easily earn it, we will book your order for one queen for sending us the names and addresses of two new subscribers to the American Bee Journal and $2.00. FURTHERMORE, we will begin to send the Bee Journal to the new subscribers just as soon as they are received here (with the $2.00), and continue to send it until the end of next year, 1902. So, forward the new subscriptions soon—the sooner sent in the more weekly copies they will receive. This is indeed an opportunity to get a superior Queen, and, at the same time, help swell the list of readers of the old American Bee Journal.

We are now ready to book the Queen orders, and also to enroll the new subscriptions. Remember, the sooner you get in your order the earlier you will get your Queen next season, and the more copies of the Bee the new subscribers receive that you can send in. We hope that every one of our present readers will decide to have at least one of these Queens.

Address,

GEORGE W. YORK & CO., 144 & 146 ERIE STREET, CHICAGO, ILL.
How frequently we see the remark: "When I get home, I shall strip everything in my yard, I select her to breed from." As an example, suppose 10 colonies to produce 200 pounds of honey; 25, 20, 150, 45, 60, 75, 45, 70, 50, 60. Suppose all are equally well bred; the queen question is not asked. In our experience, we find that the first five queens were from one mother, and the last five from another, both of which breeders had given a five-year average of 60 pounds each. It is evident that the selected queen is the least uniform, individually, and also one whose blood, the greatest variation and the greatest number between the average (it will be noted that the numbers are given, and therefore, all is 60 pounds). We know that 60 percent of her sisters gave yields below that of their mother, and we also know that the average we can expect from her must be far below her own record, and as she is the most variable (from her mother as well as from the average), we can naturally look for even a greater percent of her offspring to go below the average—in short, we are practically certain to get regression and degeneration instead of progress; simply because we are breeding from an average, not from the most consistent representative of the best blood. On the other hand, the second breeding-queen shows but two or 40 percent below the average, and therefore, we expect the average, and, therefore, their mother's yield. Therefore, I would breed from the 75-pound, the 45-pound, the 20-pound queen, and the 60-pound queen, from the second mother.

Light Laying for Feeding Queens.

"Ridiculous!" is the label that F. B. Simp- ton, Seattle, Washington, puts on the notion that keeping a queen in a nucleus will beget longevity in her offspring. Sure. But it is doing his breeders no good. It may be up to a point in a nucleus to give such a notion. He says his breeders must do their duty in a full-size hive, so he can compare right F. P. queen with the same full-size after a queen has fully established her reputation I like to give her a light job so as to keep her in a good state of health. A queen now trying to winter was born in 1897. After doing extra work during four years I felt she was too loaded to be reliable. I quit trying to save what little stuff in you. I gave her a soft job for 1901. [You are doing with your breeding just as I am, instead of doing with our best queen. —Epheus.]—Stray Straw in Gleanings in Bee-Culture.

Beeswax from Different Countries.

This will by no means always be the same. An interesting summing up of the different kinds is given in Gravenhorst's Bien- nual, which was translated in the American Bee Journal by H. G. Acklin.

In Austria the wax is found or produced in the southern portion, equaling the wax produced in buckwheat localities. The provinces of Bohemia, Moravia, and Galicia produce a soft wax, although a distinction has to be made between the wax from the western part and the eastern part of Galicia. That from the first-named locality has a pitchy odor, while the other possesses the combined odor of the other two, and is of higher quality. The best of all known waxes is that from Turkey; it is red in color, and India in price, compared with wax from Greece and its islands is nearly equal to it in quality. The southern part of France produces the best wax; the north, the best. The wax from Spain is about as good as the best produced in France. Italy produces the best wax.

The wax of India is a grayish-brown, and has almost no odor. The wax produced upon the Islands, as Timor and Flores, etc., is of importance, but the trade has not generally been exported to China, where a great deal is consumed and also produced.

Egypt. Morocco. Barbary States furnish a considerable quantity of very impure wax. Beeswax from the Senegal is rather dark in color, accompanied by an unpleasant odor. Very good wax is produced in Guinea; it is hard and very difficult to obtain. The best American wax is usually dark and difficult to bleach. From Guadeloupe black wax from wild bees has been marketed. It can not be bleached out.

CONVENTION NOTICES.

Chicago — The executive committee of the Chicago Bee-keepers' Association has ordered that the next meeting be held all day and evening, Dec. 5, 1901, at the Grotto Club-room. This is arranged on account of the low rates to be for force them for the International Live-Stock Exposition in Chicago at that time (Nov. 30 to Dec. 7), being one fare plus $2.00 for the round-trip fare to send 100 to 300 bee-keepers near Chicago, and should result in the largest attendance ever had. C. C. Miller and Mr. C. P. Dadday have promised to be present. Let all come.

HERMAN F. MOORE, Sec.

George  W. Young, Pres.

MINNESOTA — The Minnesota Bee-keepers' Association will meet in Plymouth Church, Cor- sth St. and Nicollet Ave., Minneapolis, Minn., Wednesday and Thursday, Dec. 1 and 2, 1901. Mr. W. Z. Hutchinson will give a stereopticon lecture, and an exhibition of good preparations and wasps. A program is prepared and now in the hands of the printer. Joining the National Bee-keepers' As- sociation every bee-keeper in the state is invited. Chairman Executive Committee.

Naples, N. Y., Frederick Grimm Finer.

New York — There will be a bee-keepers' con- vention (annual) held in Canandaigua, N. Y., by the Ontario Co., N. Y., by Bee-keepers' Associa- tion of Ontario, N. Y., Dec. 1 and 2, 1901. R. A. Burne, and Muth, Canandaigua, Ohio.

Honey and Beeswax

MARKET QUOTATIONS.

Honey

CHICAGO, Nov. 1.—The market is easier in tone, while prices are nominally the same, but strong is shated to effect sales. Some caros of honey come to the Eastern market, and are diverted to this and surrounding points, which is heavy a depressing influence to the market in 141c for best grades of white; light amber, 125c; dark amber, 50c; white, 45c; buckwheat, 30c, according to quality, flavor and pack- age; light amber, 45c; amber and dark, 50c. Beeswax.

CINCINNATI, Oct. 25.—The honey market is rather dull on account of the warm weather. Export sales continue to be the only source of revenue from 50c; better grades alalfa waxes from 50c; white clover from 80c. Fancy white comb honey sells from 135c.

C. H. W. WHREE.

ALBANY, N. Y., Oct. 25.—Honey in good de- mand, and the market is on an even keel for some time to sell. Grocersmen are stock- ing up and will buy lines, when rates allow buyer enough to piece out. Fancy white comb honey sells at 145c; buckwheat, 135c. Exported, white, 80c; mixed, 75c; buckwheat, 60c; white, 50c. Kansas City, Oct. 25.—Near comb honey is arriving by express in small quantities from Iowa and Colorado, and selling at $3.50 per case in a re- tail trade. A call is made for fancy white comb offered caros at 85c; per pound, f.o.b. Cal- ifornia, 60c to 50c, depending on the grade and quality of any sales having been made thus far. The production of extracted honey seems to be quite large this year in Colorado, Utah and California. PEYBROE BUCKS.

NEW YORK, Nov. 4.—Comb honey is in good demand, and the market is on an even keel for some time to sell. Grocersmen are stock- ing up and will buy lines, when rates allow buyer enough to piece out. Fancy white comb honey sells at 145c; buckwheat, 135c. Exported, white, 80c; mixed, 75c; buckwheat, 60c; white, 50c. Blaire, Scott & Lee.

SAN FRANCISCO, Oct. 25.—There is very little demand for stocks with ample supplies at the present writing. Fancy No. 1, in cartons, 150c; No. 2, in cartons, 125c, No. 1, 25c; very little No. 1, no longer received; glass-from stock, 125c to 75c; fancy white comb honey, 95c to 75c. PEYBROE BUCKS & CHANEY.

DREXEL, Oct. 25.—There is very little demand for stocks with ample supplies at the present writing. Fancy No. 1, in cartons, 150c; No. 2, in cartons, 125c, No. 1, 25c; very little No. 1, no longer received; glass-from stock, 125c to 75c; fancy white comb honey, 95c to 75c. PEYBROE BUCKS & CHANEY.

DETOUR, Oct. 25.—Fancy white comb honey, 145c; No. 1, 135c; No. 2, 115c to 10c; No. 3, 25c; No. 4, 15c; exported, white, 60c. PEYBROE BUCKS & CHANEY.

SUNNYVALE, Oct. 25.—Fancy white comb honey, 145c; No. 1, 135c; No. 2, 115c to 10c; No. 3, 25c; No. 4, 15c; exported, white, 60c. PEYBROE BUCKS & CHANEY.

SUNNYVALE, Oct. 25.—Fancy white comb honey, 145c; No. 1, 135c; No. 2, 115c to 10c; No. 3, 25c; No. 4, 15c; exported, white, 60c. PEYBROE BUCKS & CHANEY.

BARGAIN

APRIL OF 50 CO. CASES $5.00; LAME, FOR EX- PERIMENTAL USE ONLY; GOOD QUALITY, ALL WAX FROM SAN FRAN- CI'S CO. DR. G. W. BIDLMEYER.

BEESWAX FROM SAN FRANCISCO, CAL.

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We have a Large Stock on hand and can ship promptly.

SEND US YOUR ORDERS FOR Hives, Extractors OR ANYTHING YOU WANT IN THE BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of The American Bee-keeper free. Address, THE W. W. FALGONER MFG. CO., JAMESTOWN, N. Y.

M. W. GERMISH, East Nottingham, N. H., carries a full line of our goods at catalog prices. Order of him and save freight.

Queen-Clipping Device Free....

The MONETTE Queen-Clipping Device is a thing for use in catching and clipping Queen's wings. We mail it for 25 cents; or will send it FREE, as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.25 we will mail the Bee Journal one year and the Clipping Device. Address, GEORGE W. YORK & COMPANY, Chicago, IlI.

BEE-SUPPLIES!

ROB'S GOODSThanks AT ROB'S PRICES

Everything used by bee-keepers. Pouder's HONEY JARS. Prompt service. Low Freight Rates. NEW CATALOG FREE.

WALTER S. POUDER,
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A New Bee-keeper's Song—

"Buckwheat Cakes and Honey"

Words by EUGENE SECOR.
Mus. by GEORGE W. YORK.

This song was written specially for the Buffalo convention, and was sung there. It is written for organ or piano, as have been all the songs written for bee-keepers. Every home should have a copy of it, as well as a copy of "THE HUM OF THE BEES in the APPLE-TREE BLOOM"

Written by EUGENE SECOR and Dr. C. G. MILLER.

Prices—Either song will be mailed for 10 cents (stamps or silver), or both for only 15 cents. Or, for $1.00 strictly in advance payment of a year's subscription to the American Bee Journal, we will mail both of these songs free, if asked for.

GEORGE W. YORK & CO.
144 & 146 Erie St., CHICAGO, ILL.

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24th Year Dadant's Foundation. 24th Year

We guarantee satisfaction. Why does it sell so well?

What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WOOD-PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk. BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised, The classic in Bee-Culture—Price, $1.25, by mail.

Bee-wax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

Please mention Bee Journal when writing.

Texas Bee-Keepers.

We beg to announce the opening of a branch office and warehouse at 438 W. Houston St., San Antonio, Texas. Rates of transportation from Medina in less than car-load lots are high, and it takes a long time for a local shipment to reach Southern Texas points.

Low Freight and Quick Delivery.

To secure these two necessary advantages—low freight and quick delivery—and to be better prepared to serve the interests of our Texas friends, is our reason for establishing this new branch office. No other point in southern Texas is better adapted to serve as a distributing point. It has four great railroads—the Southern Pacific R. R. west and West—the International and Great Northern R. R. from Laredo up through San Antonio and Central Texas, the San Antonio and Arkansas Pass R. R., and San Antonio and Gulf R. R. It also has the American, Wells-Fargo and Pacific Express Companies.

Our Managers.

We have secured as managers Mr. Udo Toepperwein, formerly of Leon Springs, and Mr. A. Y. Walton, Jr., both of whom are well known to the bee-keepers of South and Central Texas. They are also thoroughly familiar with practical bee-keeping and all matters associated with it, and any orders sent to this branch will receive prompt, careful attention.

Our Goods.

As usual our motto is to furnish the best goods of the most approved pattern. We do not undertake to compete in price with all manufacturers. Bee-keepers have learned that it does not pay to buy cheap supplies, for a saving of 10 cents on the first cost of a hive may be a loss of many times this amount by getting poorly made and ill-fitting material. Every year brings us many proofs that our policy of "the best goods" is a correct one.

Our Catalog.

Very few changes in prices will be made in our new catalog, so do not delay your order, but send it at once. You will be allowed a refund if lower prices are made, and in case of higher prices ruling in the new catalog, if any, you will secure the benefit by ordering now. Catalog and estimates may be had by applying to the address given below.

Our Invitation.

Whenever you visit San Antonio you are invited to call at our office and make it your headquarters. Here you will find a display of Apisarian Supplies not equaled elsewhere in Texas. You will also find on file the leading bee-journals to pass pleasantly your leisure time.

Spanish Catalog.

Some of you may read Spanish, or have a bee-keeping friend who does. If so, call for our Spanish catalog. It's sent free.

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THE A. I. ROOT CO., Medina, Ohio.

Branch Office:

THE A. I. ROOT CO., San Antonio, Texas, 438 West Houston Street, TOEPPEPERWEIN & WALTON, Managers.

GEORGE W. YORK & CO., 144 & 146 Erie Street, CHICAGO, ILL. are headquarters for ROOT'S BEE-KEEPER'S SUPPLIES IN CHICAGO. Send to them for their free Catalog.
MR. J. T. ELLIOTT AND APIARY, OF BROOKE CO., W. VA.—(See page 754.)
American Bee Journal

Weekly Budget

Editor W. Z. Hutchinson gave us a short call on Saturday, Nov. 16, when on his way to attend the meeting of the Colorado Bee-Keepers Association at Denver, held last week.

Eugene Secor, the general manager of the National Bee-Keepers Association, was recently elected to the Iowa Legislature by a handsome majority. He expects to spend the winter in Des Moines, the State capital.

Mr. C. M. Scott, for some years the manager of the G. B. Lewis Co.'s bee-supply branch at Indianapolis, Ind., has bought the business at that place, and will continue it under the name of C. M. Scott & Co. Mr. Scott is very highly commended by the Lewis Company, and we trust he may continue to do a successful business.

Mr. W. L. Coggshall, one of New York State's most extensive bee-keepers, has been in very poor health for some time. Late he went to a sanitarium about 40 miles west of Chicago, where he is receiving treatment. On Nov. 15 he wrote us that in two or three weeks his physician expected to send him home well. Mr. Coggshall's many friends will be delighted to hear this. If well enough he may attend the Chicago convention at the Briggs's House, Dec. 5.

Mrs. N. Neilson, of Sac Co., Iowa, died of cancer Nov. 11, after months of suffering. In 1882 she married Mr. N. Neilson, who, with five children, are left to mourn her departure. She was a member of the Congregational church from her young girlhood. A local newspaper says Mrs. Neilson was an amiable, thoughtful, patient, loving wife and mother, showing in her life the noble qualities of a high Christian character, and winning unto herself a host of warm friends who deeply feel their loss. Our sincerest sympathy goes out to the stricken husband and children, who, it is a satisfaction to note, "mourn not as those who have no hope."

Dr. C. C. Miller has this to say regarding the meetings of the Board of Directors of the National Association at Buffalo, and also something about certain discussions in open convention:

Mr. Editor—These unfortunate Directors' meetings held while the convention was in session at Buffalo, deprived me of the privilege of hearing a considerable part of the discussions, which probably makes me appreciate all the more the excellent and full report you are now giving in the columns of your journal.

Referring to a discussion on page 726, I may say that I have many a time seen a hive containing a nucleus in place of a swarming colony, &c., and not long ago I entered the nucleus, and in no case have I ever known the queen of the nucleus to be molested in any way. The old colony was removed, and the queen that hatched with the swarm was also disposed of. If it is not often that as much real information is given in so short a space as in the discussion of the succeeding topic. All of the items mentioned are useful in trying to determine the presence of a virgin queen when she can not be found. Perhaps none of them may be pleased upon reading the report, but they will help. The one that I have depended upon as much as any other for years, is the one mentioned by W. L. Coggshall—cells polished out in the central part of the brood nest ready for the queen to lay in; and this may be several days before the queen is seen. I have often times when she is hardly a day old. Some-what strangely, I do not remember to have seen this mentioned in print, and this shows one good thing in conventions, bringing out from such men as W. L. Coggshall things that they would never take the trouble to write.

C. C. Miller.

Mr. J. M. Hooker, as may be seen in a late number of the British Bee Journal, has sailed from England for his new home in America. His loss will be keenly felt by the British Bee-Keepers Association. Mr. Hooker having been one of the seven who originally met to organize the Association, and one who was always foremost in the movement to establish modern bee-keeping. Mr. Garrett probably spoke the general feeling when he said that to hold a conversation without the presence of Mr. Hooker was a mere invention, and that everybody who had been accustomed to see that gentleman there would feel that the cause had suffered a severe loss by his absence. Mr. Hooker is cordially welcomed to these shores.

Mr. J. T. Elliott and Apialy are shown on the first page this week. When sending the photograph, Mr. Elliott wrote as follows:

Editor York.—I send you a picture of my apiary, but it does not show up very well, as it was impossible to get a good view showing all the hives, etc., on account of the trees and shrubbery. I keep my bees on a city lot, so I have not much extra room for hives, but I have them under young apple and peach trees, just over the bank at the edge of the garden. The hives being down just over the edge of the bank is why they do not show up better.

We have 24 colonies, all in one row, and work them for both comb and extracted honey. As I am employed as clerk in a railroad office, I do not have much time to develop my apiary. My bees are on the lot only a very few minutes at the noon hour, and a little while mornings and evenings, when the weather is favorable. My greatest pleasure in working with the bees, and find them very profitable, also in supplying my table three times every day with honey, which is more healthful than jellies, jams, etc. Then I can dispose of all my surplus honey to my British Bee-Keepers Association. My bees did fairly well the past season, the surplus all being from basswood and sweet clover.

J. T. Elliott.

The Delineator.—The Christmas number of the Delineator is about the first of the special Christmas issues. It is a beauty. The cover is a most artistic production, showing a beautifully gowned woman, standing gracefully in a brilliantly lighted salon. Two charming love letters, followed by a great deal of advice regarding Christmas Gifts; timely pointers on Cookery; Winter-time Care of Plants; all the fashions of the day, interpreted into simple language, can be found in the Christmas number of the Delineator. It is a splendid magazine, satisfactory inside and out. There is no magazine for women at present that can stand up against it as a page. As a Xmas gift itself, it bears its own recommendation. $1.00 a year, or 15 cents a copy. Butterick Publishing Co., Ltd., 7 to 17 W. 13th St., New York, N. Y.

National Bee-Keepers' Association:

OBJECTS:
To protect and promote the interests of its members.
To prevent the adulteration of honey.
To prosecute dishonest honey-dealers.

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E. K. Root.

EXECUTIVE COMMITTEE.
Ernest R. Root, President.
R. M. Stockey, Vice-President.
Dr. A. B. Mason, Secretary, Toledo, Ohio.

Eugene Secor, General Manager and Treasurer, Forest City, Iowa.

Membership dues, $1.00 a year.

If more convenient, dues may be sent to the office of the American Bee Journal, when they will be forwarded to Mr. Secor, who will mail individual receipts.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

NOTE.—One reader writes: I have every reason to believe that it would be a very good idea for every bee-keeper to wear one of these buttons, as it will cause people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of some of your products. I wish you could give the bee-keeper a superior opportunity to enable many a person is regard to honey and bees.

The picture shown herewith is a reproduction of a most interesting conversation that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10 cents; or 8 for 25 cents. Send all orders to the office of the American Bee Journal.
The Chicago Convention is to be held next week, and the papers will be presented on Monday at 10 a.m., at the Briggs House, northeast corner of Randolph St. and Fifth Ave. There will also be an evening session.

We are expecting a large attendance, as there are many bee-keepers in Chicago and vicinity, and we have received notice from a number of distances who expect to be present.

Come, and bring with you as many questions as you would like to have answered. Dr. Miller has promised to come, and bring with him a good supply of answers, which, with the other able experts that are expected to be present, ought to be of no difficulty about taking care of several boxes of questions. These will also be a few papers on practical topics, that will help start interesting discussions.

Come along, and help make this meeting of the Chicago Bee-keepers’ Association equal to the best “Northwestern” ever held.

Combing Honey by Weight or Case.—On another page Messrs. A. A. Burnett & Co. write on the subject of selling comb honey by the case or by weight. We agree entirely with them. In our opinion there can hardly be any valid reason advanced in favor of selling comb honey by the case to wholesale dealers, or to retailers. We have handled quite a good deal of comb honey, but have never bought any by the case, except in one instance where we had it sold before getting it ourselves, and our buyer being willing to take it by the case, we have not been able to say if it would be of any advantage to the producer to sell by the case. Our own grocery trade we do not think that we could be induced to purchase honey by the case. We would have to sell it out by weight to the retail grocers.

Sometimes selling by the case proves a great loss to the producer. We remember once hearing of a carload of comb honey that was sold to a certain firm by the case, on which they cleared beyond a fair profit the sum of $400; and just because they sold it out by the pound, the ear of honey avenging enough more pounds per case to equal that amount, or more, to pay the freight. Had that ear of honey been sold by weight in the first place, as it should have been, the producers would have been about $400 better off. So much for the producers standing in their own light.

We hope that bee-keepers will see that it is to their best interest to deal squarely, and not encourage a kind of buying and selling that can not well be defended as honorable and upright. Gains gotten by any other than straight dealing can be only of temporary benefit. The firm or individual whose policy is ever tainted with deception, or by what is known as “smart dealing,” has its days already numbered. “What shall it profit a man if he gain the whole world and lose his own soul?” There are some things of more value than dollars—their worth can not be estimated in money. A man is really worth what he is, not what he has. True character and a good reputation are everything in this life, and a blessed assurance of the higher and better life that is to come.

A Good Hive-Cover is a thing that is not in universal use, and the interesting discussion reported upon page 725 of this journal shows that the demand for a satisfactory cover is becoming so insistent that manufacturers can hardly afford to ignore it. The trouble has been that the matter of cost has cut too large a figure. A plain board with cleats on each end can be had for a small sum, and in some respects it makes an excellent cover; but no matter how many good qualities it may have, a single bad quality, if bad enough, is sufficient to condemn it. The plain board cover has more than one bad quality, but one that is sufficient alone to condemn it is that it will twist. Cleats, if strong enough, may prevent warping, but cleats of cast iron can not prevent twisting, if a board is inclined to twist. Unfortunately too many of them have that inclination, and when a cover twists so that one corner lies a fourth inch or more above the hive, the day of satisfactory service for that cover is over.

Perhaps the easiest way to secure a non-twisting cover is to have it consist of two layers of wood, the grain of the two layers running in opposite directions. A dead-air space between these two layers will make the cover cooler in the hottest weather, and warmer when the outside temperature is lower than that in the hive. Such a cover covered with tin and painted might be furnished at a cost not beyond reach, and it is possible that some kind of painted paper might be nearly or quite as well as tin. Now that attention is so strongly turned in that direction, the right thing will probably be in sight before long.

The Minnesota Convention is to be held Wednesday and Thursday, Dec. 4 and 5, 1901, in Plymouth Church, corner 5th St. and Nicollet Ave., Minneapolis. The first session is at 9:30 a.m. on Wednesday. A really good program has been published in connection with that of the State Horticultural Society. This is a good arrangement, both organizations meeting on the same dates.

Besides the question-box and usual business of the sessions, we find the following special features on the bee-keepers’ program:

-Song,—“The Honey-queen and the Bee”—Miss Edith Dexter.
-Should We, or Should We Not, Join the National Bee-keepers’ Association?”—C. Thielleman.
-Song.—Wm. Reuter and Miss Mary Reuter.—Some Facts in Favor of Joining the National Bee-keepers’ Association.—J. T. West and Mrs. H. G. Acklin.
-President’s Address.—Wm. Russell.
-Song.—“Buckwheat Cakes and Honey”—Master Eddie Holmes.
-Some Problems and Queries in Practical Bee keepmg.”—J. W. Murray.
-Song.—Miss Julia Moonen.
-Bagpipe Selections.—Wm. Russell.
-Song.—“Hymn of the Bees in the Apple-Tree Bloom”—Little Miss Ethel Acklin.
-Distributing of the Honey Crop to the Best Advantage.”—A. D. Shepard.
-“Shade and Ventilation”—Walter R. Nelson.
-Wintering Bees.”—J. B. Dexter.
-Bucking Against Nature with Bees.”—John Collins.

Nominations for the National.—Editor Root, in commenting on our suggestion about having the national convention make nominations for the election of general manager and three directors each December, suggests that it might be wise to change the general manager very often. All right; then re-nominate him among the three candidates; and also re-nominate among the nine the three directors whose terms expire, if thought best.

See page 69 for our former editorial on this subject. It is a matter worthy of earnest consideration.
The Buffalo Convention.


Sept. 10, 11 and 12, 1901.

(Continued from page 743.)

The Wednesday evening session was treated to an exhibition of stercoriposition views by Pres. Root and W. Z. Hutchinson.

THIRD DAY—MORNING SESSION.

The convention was called to order by Mr. Root, who called upon Dr. Miller to offer prayer.

The Canadian members present were asked to rise to their feet, and, on being counted, there were found to be 12.

F. A. Gennill, of Ontario, Canada, then spoke as follows on the subject of Wax-Presses and Their Use.

In regard to the matter of wax presses, I might say that some years ago my bees had foul brood. Of course, that is a bad disease, but it is no disgrace for a man to let it have it, if it is a disease to keep it; and I tried up many of the old combs I found that I could not get all the wax out—that is, those containing many cocoons and pollen—without using pressure in some form. I looked over the bee papers and bee-books, and among others, the 'A B C of Bee-Culture,' and I saw some illustrations of old presses, the Hatch press, and I combined the two and made a press, the Hatch-Gennill press, which I think it would pay any one to use. I wouldn't say that press alone, but I believe in some kind where strong pressure is used.

I might say that I tried the Doolittle plan of melting the old combs in a gunny-sack, using a large press, and as the wax being boiled the lever was brought to bear on the wax and the wax squeezed out. I tried the plan of putting them in gunny-sacks and sinking them in water. It was very good; of course, it requires a little boiling in order to get all the wax out. It is a better plan, maybe, than using the steam wax press where the refuse is allowed to remain on the bottom, for this reason, that if the gunny-sack is sunk in the water, but not too deep, the wax will rise to the top; in the other case, if you use the steam, the refuse will go to the bottom and remain in the cocoons, and stay there unless pressed out.

Then I tried other machines, the Ferris and one or two others, and I have nothing to say against any machine, only that my experience proved that where I used either boiling water or steam I had to use the pressure in order to get all the wax out. I also melted combs in the Board man, still I found that with old combs with cocoons and a large pollen-mass it was impossible to get all the wax out. If left in the extractor for a week there would still be some there; the cocoons acted as a sponge and retained it, so that I think those that have been using the solar wax-extractor for old combs and the honey-extractor We have lost quite a little bit of wax. I was quite amused at Mr. Root's reference to Mr. Mendelson buying up the slum gum in California and using a press that paid him to get the wax out of it.

I don't know that there is much that I can say. If there are any questions that you wish to ask I would be happy to answer them. I might say that my first article in regard to this matter appeared in the Review, and since that time Mr. Root has been in California and he has fallen in line with the same ideas that I had in regard to the press. We had some correspondence in regard to it, and I believe he is now manufacturing one that I believe is a good thing. I hope to have the pleasure of trying it shortly.

F. A. Gennill.

Pres. Root—This question about being able to get all the wax out of slum gum is a very important matter, because bees are throwing away dollars, and now they have come to know there is wax in that slum gum.

A Member—How do you avoid getting propolis in the wax?

Mr. Gennill—The propolis will come out with the old combs, to a certain extent. In our country [Canada], however, we don't have a great quantity of it.

Mr. Betsinger—How long do you think it will take to pay for such a machine? How much does this machine cost?

Mr. Gennill—About $3.50 to $4. But Mr. Root's machine is an improvement, in some ways. Of course, it will cost more.

Dr. Miller—Suppose that you have combs enough from which you get about 100 pounds of wax in the ordinary way. Now the slum gum from that contains yet how much wax?

Mr. Gennill—That depends upon the method you employ. If you use the plan for waxing it, the wax in the bottom of the boiling water you will get more if you boil long enough, than you will get out of a steam or solar extractor, where you allow the refuse to remain in the bottom of the steamer, for the simple reason that it is retained there the same as a sponge retains water. I found that I could get more wax out by boiling according to the Doolant plan. I would get about 3/4. I can get a third more, easily, than with the steam process, and a third more by using the press.

Dr. Miller—That is, a third of the wax is still left in the slum gum?

Mr. Gennill—that is, it would be left in Mr. Root's steamer he did not use the pressure.

Mr. McEvey—Are wax presses the bee-keeper, in your experience, able to afford to do without a press?

Mr. Gennill—I say any man that has any colonies at all, and has any old combs to melt up. Where one has any old combs that have been used for some years, and that contain pollen and cocoons, I think that man should use a press.

Dr. Miller—How many colonies?

Mr. Gennill—25 colonies, anyway.

Dr. Miller—How long should the wax be boiled when the pressure is used on it?

Mr. Gennill—I allow it to come just to a boil, and boil smartly for a short time, and then get it to flow freely. After you apply the pressure it doesn't require boiling very long.

Mr. Betsinger—Five minutes, probably.

Mr. Gennill—About that.

Dr. Miller—I see the instructions are, in making the pressure, to turn down a certain amount, then wait awhile and then apply it. Is any harm come from pressing too rapidly?

Mr. Gennill—I find that you have got to give the wax a little time to come down from the combs. Now, there is just one point there. After you have pressed all you think you can out of it, if you use the steam, you can boil it after it settles down. Any more wax that will settle down, and that will help to free any wax that it may still contain. Then you can apply pressure again, or you can turn over the refuse two or three times and then apply it, but it will do no harm to try the hot water.

Mr. Betsinger—By using old combs and putting it through this pressure would there be any color in the wax?

Mr. Gennill—Oh, no, it would be perfectly yellow. It is squeezed right through the combs. It is forced right through and it is purest wax, course, you will understand, in the press it is confined in a small sack that acts as a filter or strainer.

Mr. Betsinger—Can all the propolis go through that, too?

Mr. Gennill—O yes, it will go through.

Mr. Davidson—Do you think such wax is just as good for making foundation as other wax?

Mr. Gennill—I couldn't see any difference. I don't see why it should not be. There is nothing in it but pure wax.

Mr. Davidson—I find that with several grades of wax used in sections, it does not receive as acceptance readily as others, and I had the idea that section foundation made with old wax, that is, wax from old combs, would not be accepted as readily as foundation made from newer wax, that is, from newer combs.

Mr. Gennill—I must confess that I haven't had any experience in that line. Dr. Miller—in our old combs, we are directed, or have been in the past, to break them up carefully, and to soak them beforehand. Now, the melting of the desirable or advisable in this method?

Mr. Gennill—It is not required where you use pressure.
the wax from the press the softer the wax. The wax from cappings should always be used in foundation for sections. It is nicer.

Mr.; Gemmili—The cappings from combs made with this press and wax extractor are a great deal harder. There are other things in the cappings besides wax.

Mr. Shwader—I was speaking of old wax that is gotten out by any process. Doesn't wax by age lose something that it requires?

Mr. Gemmili—I couldn't say in that respect.

Dr. Miller—Now, I think you are all such careful bee-keepers that you never have combs melt in the sun. A certain bee-keeper who lives where I do, sometimes has that happen, and the thing that surprises me is the amount of yellow wax that the sun-wax-extractor will get; and another thing that surprises me is the softness of that wax, and I very much doubt if there is any hardness increased in that wax.

Mr. Gemmili—I think that is correct.

Mr. Callbrene—Should the combs be soaked beforehand, or doesn't that make any difference?

Mr. Gemmili—It doesn't make any difference, as far as I know; you may use boiling water and pressure, provided you use pressure afterwards. Of course, according to the Dadant plan, you soaked the combs in vegetable oil before drenching them in boiling water, and then immersing them in the boiling water. But the point is this, that if you use pressure you don't require the amount of heat that you would if you didn't.

Mr. Villa—I was going to say, I think the foundation that was set in sections and was not accept was a soft grade of foundation, and my idea was that the wax by age loses something that the bees require in order to mould their foundation over; and a foundation not having that, the bees will not work it as rapidly as they will foundation made from new wax. This is my idea, because I do not think you would work certain foundation.

Mr. Gemmili—I would like to say that since using the press, I have noticed a large number of bee-keepers who were retaining old combs that were defective in some way, and I might mention Mr. Hall, of Ontario, for one; who was going to make foundation one day, and I got my son to go down to assist him. My son took the press down with him, and all the time he was making foundation in the forenoon he was talking press; and at the noon-hour my boy went out and got the press a-going, and got a lot of the slumgum that Mr. Hall had been throwing out of the press during the time of getting it out of it. Mr. Hall looked at it a moment, and said he would get a press. He got a press and has melted up several times since then, and he says, as far as I know, he doesn't want any old combs, and I think your boy is very right.

Dr. Miller—This gentleman asked about foundation being acceptable to the bees after getting old. I had some foundation that was put in sections four years ago, and I kept it where it was dark, and I couldn't see but what the bees accepted this foundation as readily as they did new foundation put in this year.

Mr. Benton—I want to ask Mr. Gemmili if it wouldn't answer, in applying the new press, to put the wax extractor instead of being obliged to watch it and screw it down, so that it would act automatically?

Mr. Gemmili—You would have to use great pressure, and it would have to be coming down constantly.

Mr. Benton—It would be coming down, or would it?

Mr. Gemmili—You would require a great weight. People have no conception of what a screw will do in regard to the amount of pounds that it will pull up, and you want to be sure, in getting the press, to get a machine that will have a strong screw. You will be astonished at the amount of pressure you can use. I wouldn't recommend a weight at all; you would want to have hydraulic pressure, or something of that kind, if you were going to use a weight instead of a screw.

Mr. West—I endorse the pressure of getting out wax. I have used the pressure, as has been mentioned, of pressing foundation for the wax to rise to the top, and in every case I find it is necessary now and then to raise the screw to let the water in. But since I have been using the pressure system, I have had the habit of using a radically different way of melting our wax. We use the same tank, put our hot water and combs in, and let them melt, and then when the pressure is high enough, we take the cheese-cloth, on one side, and we use a large dipper—a 3 or 4 quart dipper to dip it—and get that cheese-cloth and put the pressure up there, and draw the wax out in another place. We get the wax, we think, pretty nearly clear in that way.

Mr. Gemmili—Of course, I am not informed as to the best methods of applying the screw, but I say apply the pressure in some form.

Mr. Benton—The reason why I asked the question, again, was weight. We were asked to give our German friends some credit. We are apt to poke fun at them and call them slow, but they have been using the wax-press all the time.

Mr. Gemmili—I am not a German, and have not come in contact with any German bee-papers, but I understand that Mr. Holtermann, formerly of the Canadian Bee Journal, had made some copy of the old German press, and, of course, they were using the screw there long before I knew anything about it in that form.

A. I. Root—The Germans were original in the use of this press in connection with steam and hot water, and because of the different terminologies and names we have the machine "German," because we thought the credit ought to go where it belongs. I found they had used it in 1847.

Dr. Miller—If you are going to quote the Germans, I think you ought to go a little further and say that many of them are being sold, and the abandonment of steam presses for hot water and they are now saying that hot water is better than the steam—under pressure, you understand.

Mr. Gemmili—By putting the combs into the gummy-sacks and sinking them under water more wax will be secured than in the steamer; the wax will rise to the top, and if you do the pressing in the hot water the water will carry the wax to the surface.

W. L. Coggshall—Hot water is the thing to do with, that I think. It will do it much better than steam, with me. I use an ordinary kettle for a boiler, and can make 100 pounds of wax in half a day without any trouble.

Dr. Miller—Does Mr. Coggshall use pressure?

W. L. Coggshall—No, I haven't used pressure, but I think it is the proper thing to do. I usually put the pressure on by fastening a stick across the top of the kettle, and I put a kettle over the top and take the wax off the top. It is the proper coper. I just put an ordinary strainer over the top and move it around and take the wax off.

Mr. Lam—What kind of a kettle do you use?

Mr. Coggshall—A four-barrel kettle.

Dr. Miller—Was that called the old Jones extracting kettle? Was there pressure used?

Mr. Lam—There was pressure used. I have nothing against the pressure, but the press I had was too small for the purpose, and it melted the wax too fast. I've been letting the steam melted it more slowly, and for that reason I melted the wax first, then poured it into the kettle and put on the pressure.

Mr. Craig—The first set of wax-presses that were sent out, that is with the pressure, was an attachment to what is known as the old Jones press, and we found that it required too much heat to generate the steam and so we discouraged that, making a machine with a copper bottom that sets down in a kettle of water; and this, we find, works very much better, and requires very much less heat.

Mr. Alpaugh—Mr. Gemmili has told me more than I could tell you, about five times over. I melted only a few old combs, and I did it with hot water and pressure, on Mr. Gemmili's principle.

Mr. Gemmili—Mr. Alpaugh has an idea in regard to this matter that I should like to hear.

Mr. Alpaugh—My idea would be to have a large melting tank, something you could get lots of stuff in, anyway, and have a division in this, and in the division a pair of rollers set perfectly tight, so that they would work on the principle of a wringer, so that you could wring the stuff through from one side to the other and keep the wax bath hot, which is the only way to melt quantities and not to have too slow a job. My idea was to feed it through rollers in a thin layer and grind it through under low pressure, the same as wringing out clothes.

Mr. McEvoy—How would it to do to put the combs through a cutting-box first?
Pres. Root—I believe Mr. Alpaugh is on the right track. In order to put pressure on the combs you have to get them close enough together so that the wax melted from one panel would cover the other. I don't think it perhaps would be the depth of a basket, and when squeezed down should not be more than an inch thick. Mr. Alpaugh has the right idea of having a waxed paper or their fellow that would yield enough so that this slumgum could go through in thin layers.

D. H. Miller—I believe that Mr. Alpaugh has a good thing and a bad thing together. I believe he has the right idea in the one respect, that you want to put the combs close enough together to get pressure on the slumgum. That's the trouble with the wringer business. You attempt to put a towel through a clothes wringer and you get the least start the towel will go through; but suppose you take two towels on the half of it will go through, and there is nothing to catch the next particle, and it will simply squeeze and pack, in order to get through the towel. I don't believe you could get the thing to go through, but I believe Mr. Alpaugh has the right idea, that there should be some kind of arrangement that will get the wax out in thin layers.

D. H. Coggshall—I take a bran-sack or a gunny-sack and re-sew them so that they won't rip at the edges, and put the wax or combs into that; then I make a large particle of wax in the slumgum, use a large caldron kettle and put the sack of wax in, and keep the upper one going, working back and forth, through the squeezing and keep working it back and forth. Of course, if I have black combs there is not so much wax in them. I have tried every way, boiling it under water. There are lots of articles particles of wax in the slumgum. You have to work it under water while you are pressing it. I keep two sacks, one heating while I am squeezing the other. I get lots of water in the can I am cooling it in. Then draw the water off at the bottom and take the wax out. I made a division line in the wax; made a trench 3 feet long, use a large caldron kettle and put the sack of wax in, and keep the upper one going, working back and forth, through this squeezing and keep working it back and forth. To make the squeezers I take a board a foot wide for the bottom one, and the upper one not quite as thick. I put them on the ground and pound them all up; put them under hot water, and squeeze them in these squeezers. I can get it that way. I think that is the only correct way to get it.

Mr. Alpaugh—I understand you to say there wasn't so much wax in black combs.

D. H. Coggshall.—Of course; there isn't much refuse in cappings; there would be a little.

Mr. Alpaugh—You mean to say a comb of wax, if you put it in after the nights got so cold, the bees wouldn't go up in the feeder, but by placing the feeder underneath so as to bring the food within an inch of the frames, a night in October when the ground was covered with white frost, they would go down into this and take up perhaps seven or eight pounds of wax in some nights. Whereas, if I put it above they would withdraw, and I would lose the colony by not feeding early. I like the combs all sealed. It is work, but it pays.

Mr. Gemmill—The only way is to keep pressing until you can't get any more out of it. I don't care how much you can get. If you put your finger into the fire you will see there is a little left in it.

The chairman was called from the room, when Mr. Gemmill presided.

Mr. Gemmill—The wax has been brought in to this room. The winterer had all the wax gathered together and wished to remodel it. I generally used the steam extractor without the pressure. I made a few schedulers. In making hot jelly in my lines of top of that I put a wire-clothes basket sunk down, and inside of that I laid a very fine piece of old cheese-cloth; then I put this into the steamer, and in the lower portion I put on the lid of an old pot so as to keep the wax from running down into water, and I retained all the refuse, and a lot of the propolis, too. The problem of it, there would be very little pollen. The wax is forced out of the pollen and the coconuts. There will be a little propolis and some mechanics of dust.

W. L. Coggshall—To clarify wax, a teaspoonful of sulphuric acid will do for 100 pounds. Be careful not to put in too much.

Mr. Calbreath—What kind of a vessel do you use?

W. L. Coggshall—Pour it into a tin vessel.

Mr. Calbreath—Won't the sulphuric acid eat the tin off?

W. L. Coggshall—It eats the dirt, not the tin. That is what cleanses it.

Preparing Bees for Winter.

"What is the best method of preparing the brood-nest for wintering?"

Mr. McEvoy—About October 1, I like to bring the bees successfully through the winter with the least consumption of stores, and that is a thing that I worked on for quite a while in my early days of bee-keeping. To do this I surround the queen with five or six combs, one on each side, and put them in a warm spell in January. There isn't the chance for them to commence much brood-rearing, but when I wintered them on a full set of combs and left an open center, and a warm spell came in January, young queens would start laying, the cluster would become broken, and spring wandering rearing-resulting in the colony into winter with sealed stores, crowded on the least number of combs, and when I haven't sealed stores to do it feed upon those are killed.

Mr. Calbreath—Beginning before October 1 to feed?

Mr. McEvoy—Sometimes before and sometimes after, and where I didn't keep them up after the nights got so cold, the bees wouldn't go up in the feeder, but by placing the feeder underneath so as to bring the food within an inch of the frames, a night in October when the ground was covered with white frost, they would go down into this and take up perhaps seven or eight pounds of wax in some nights. Whereas, if I put it above they would withdraw, and I would lose the colony by not feeding early. I like the combs all sealed. It is work, but it pays.

Mr. McEvoy—Do you begin feeding after brood-rearing has ceased?

Mr. McEvoy—Yes; and if I find that brood-rearing continues, I shut up, I give them sealed stores and shut it off in that way.

Mr. Calbreath—Won't the feeding start brood-rearing?

Mr. McEvoy—Do it so suddenly that it won't. If I do it slowly it will waste the stores, and start brood-rearing. If I can feed them up in one or two nights, I do it. The sooner you do it the better.

Mr. West—Is that for wintering outside or indoors?

Mr. McEvoy—If I have them out and in, both. Of course, in the latitude [Ontario] I am in I like outdoor wintering: but for indoors it will do equally as well.

Mr. Barb—Doesn't it make it too cold in the hive to have the bees on so few combs?

Mr. McEvoy—No, the bees are crowded on these, and when they get any honey, instead of hunting all through the hive, all they have to do is simply to lean forward.

Mr. Barb—If much far apart do you have the combs?

Mr. McEvoy—The regular distance, about 1 1/2 inches from center to center. As soon as the honey is out of them in the spring I want them ready for breeding.

E. R. Longnecker—Suppose there are combs containing brood when you begin to feed, what would you do with them?

Mr. McEvoy—At that season of the year there is very little brood; but if there be, I take the next weakest colony and put it in that.

Mr. Calbreath—I would like to ask Mr. McEvoy if doubling up two colonies, one very strong, the bees could not be left on the full set of combs with plenty of honey. Will they commence brood-rearing early in the spring without any bad results?

Mr. McEvoy—Some years I have been brought without weighing, a hundred of them would be upon the full set. I would find that I had several that was nearly solid with honey. I could not let them be weak last; but taking all in all, from year to year, I found that ten of them would not average up with ten of those that I prepared. Some of them would be just as good, but there wouldn't be an average in ten that would equal ten that I had prepared, so much so that I do not want one colony in 100 on full stores, I prefer them to be just the same.

Mr. Calbreath—I am not quite satisfied. My experience is that the colonies that are heavy with honey in the fall, without any feeding, without any attention on the part of the bee-keeper, are the colonies that have poor queens, and not a very great many young bees; and such of course would be likely to develop in the winter or the spring.

Mr. McEvoy—Sometimes I find it so, too.

Mr. Calbreath—Such colonies would be likely to make a poor showing the next year.

Mr. McEvoy—Do you winter bees outside?

Mr. Calbreath—Yes, sir.

Dr. Mason—How many frames do you put a good, fair colony on?

Mr. McEvoy—Five or six, according to the strength.
Selling Comb Honey by Case vs. Weight.

BY R. A. BURNETT & CO.

For some little time there has been an effort made to sell comb honey by the case and count of sections instead of by the pound. This method is more adapted to the requirements of our localities than the old method of selling by the pound. There is before me as I write two letters from parties desiring to sell their honey in this way; namely, so much per case of 24 sections, without reference to the actual weight of honey. This method is especially adapted to the case of the car-load shippers who are requested to name their price per pound. In reply to that letter, one of them writes:

"In reply, I will state that it is not possible to quote any honey by the pound, for the reason that the different honey-producers use different-weight cases, and it would be an endless task to arrive at the net weight of all the honey cases." The other one writes:

"In reply to your favor of the 20th inst., I beg to say that we make it a rule to sell by the case only, as selling by the pound would put a premium on the separate honey, which is not satisfactory to the dealers as the nice separated article, which is much more even in weight and less liable to injury by careless handling. We hope that selling by the case will soon come into more general use.

We hardly care to make any comment on the foregoing quotations, but merely introduce them so that the reader may know that there is more or less honey in the comb being offered for sale in this way. To say that by selling by count is more satisfactory than buying by the pound brings to our memory the old adage so often repeated, that, "It is never wise to buy a pig in the bag," for, in all probability, it is a pig, yet when the bag is removed it may not at all meet the expectations of the buyer.

It may be conceded that some, if not many, of our expert bee-manipulators get the bees to store in each section a given quantity, filling each cell with honey to the same capacity, and there is no less, than is contained in all the neighboring ones; now if this were the case generally, the use of scales might well be abandoned, but if it is with the bees longer to put 16 ounces of honey into a section than it does 12, and a correspondingly longer time to put in 12 than it would, is it not reasonable to infer that some man less scrupulous than his neighbor would manage it so that he could get a little less honey in the section, and thus a greater lot of sections filled in a given time by the bee-manipulator than by his neighbor? And as much money for the number of sections as his neighbor produced, and, having produced a fourth or a third more filled sections, he would be that much better off financially than his neighbor; and the purchaser would have that much less honey for his full money: therefore, it would be but a little time before a case of 24 so-called one-pound sections, instead of weighing from 22 to 24 pounds, as was supposed to be the case at the beginning of this method, we soon find that the case of the comb contained about 24 sections, in many instances weigh from 17 to 19 pounds.

Although this method of selling honey in any quantity has not been in vogue more than three or four years, already we find a 24-section case to weigh nearer 19 to 20 pounds than 23 to 24; yet there are some producers in a collection of a thousand cases of comb honey, whose cases weigh from 23 to 24 pounds, while others run from 17 to 19 pounds, there being no apparent difference in the grade of honey when viewed through the glass exposure, but there is, when sections are compared with one another, a noticeable difference in the thickness of the comb.

If all men were evolved up to one standard, there would be little need of checking one's accounts against another, but as many as we are, it is at this time, at the stage where we all practice deception for the sake of personal gain—a false gain to be sure, but, nevertheless, one that is daily practiced by a very great number of us—and the desire that is so prevalent to exceed our neighbor in getting the best of a bargain, constantly in mind that this method of selling honey by the case without reference to the net weight of the contents is a great temptation to a moral nature not overly strong. It would be as fair to buy our sugar and tea by the bag of 100 pounds weight as it is to sell comb honey by the case. Nut bags hold just so much in weight and it is unnecessary to weigh the goods I serve you for so much;" while it is true that since paper bags are made by machinery they vary but little in weight, yet a machine, after it has been adjusted, does the work with such accuracy, that the bag when completed, fills it with corresponding accuracy; thus the bag when complete, if properly filled, will contain almost exactly the same amount of sugar, tea or coffee. But there are some merchants who want to sell a bag of tea, coffee, or sugar for a little less than their competitors, and to enable them to do, and yet make a profit, they arrange for a bag that will hold a little less than the so-called five or ten pound bag they have previously been using, and their neighbor is using, and by this means they are able to draw those who formerly bought of their neighbor to buy their goods, for the most of us consider it necessary to buy where we can buy the cheapest.

If the price is to be the same as reasonable to abandon weighing one of the commodities we have mentioned as it would the other, for, in either case, we would be putting a temptation in the way of a weaker brother by giving him an opportunity to cheat without fear of detection. It has been said in support of buying honey by the case, that nearly all the retailers sell it by the section and not by the weight. Let us grant this to be the fact. The sections are taken out of the cases, or they are arranged in such a way that the buyer can see what he is getting; if it is sold to him as weighing a pound, and, if he doubts, he can ask to have it weighed; if the merchant refuses to do so it would be a tacit admission on his part that he was deceiving his customer.

Now, there are very few purchasers who will take that risk in order to prove the patronage of the customer would be worth much more to him than the little he could make on a section of honey; for how many of us would continue to trade with any one whom we found deliberately trying to cheat us.

We yield to the temptation to the degree of specialization against buying or selling honey in what seems to us a very primitive way, namely, of guessing at what the weights might be. When nowadays scales are cheap, and business is so closely that the guess is no longer admissible, if for no other reason than that the ill-feeling is liable to arise between the parties buying and selling, it should be dispensed with.

Our purpose in the foregoing is to call the attention of beekeepers to this subject, especially when we find that organizations of beekeepers in some instances are advocating the abandoning of weighing their honey and selling it by the case.

Cook Co. Ill.
times we must specialize. By this I mean that we must select one line of business and push that one thing. Even what a few years ago would be counted as one line of business, we find now divided into several different and special branches. One man's specialty is extracted honey, another comb, a third queen-rearing, and such division and subdivision. It is possible for one man or firm to handle successfully several lines, but to do so requires a much larger outlay of capital. The thought is, the specialist, giving his time and energy to the one thing—mastering all the details and facilitating his production or conduct of the business—is able to discount all competitors who are less well prepared. The specialist having acquired the knowledge and facilities for handling the business, adds to its volume at a very nominal additional outlay, and it is this increased volume of business handled from approximately the same basis of equipment used in the smaller business, that enables the special and extensive operators to discount the less.

It is the argument in favor of great combinations, that the multitude of small factories or businesses, when combined under one general head and management, can be run much more cheaply than when all run separately and independently. Combination gives power, and an unjust use of this power becomes oppression and extortion. The fact that combination gives a power that often is used for extortion, does not invalidate my argument, but strengthens it—there is no disputing the fact that in union there is strength. The general benefits of co-operation or combination I will not now discuss, nor the wrong use of power, which comes of combination; I have introduced the thought here because specialization and combination are things that must be considered in our business calculations. My aim in this series of articles on " Apiculture as a Business" is to get our ideas down to a business basis. The thing most of all that has prompted this discussion, is the fact that there is an epidemic bee-fever in Colorado, and very many are rushing into the business, apparently only to make financial failures.

I am going to take the proposition of one going into apiculture as a money-making procedure, calculating cost of equipment and all necessary expenditures, and analyzing the business in its details to the final outcome. This will include a consideration of locality, market conditions, ability of apiculturist, and methods to obtain results.

One of the very first and most common mistakes made by all classes, is a failure to consider the cost, final chances of success, and whether there is room and opportunity for their proposed venture. Suppose some one has a longing to embark in the business in my territory here. He thinks I am making money, and surely he is as smart as I am—if Ailkin can succeed so can he. He does not stop to think that I am already established in the business, that I have spent years of study and hundreds and hundreds of dollars in investigations, experimenting, and advertising, have built up a trade—in short, have spent years laying the foundation for a business. Few stop to consider that it is not a question simply of mere personal fitness, but of preparation and becoming fitted by practice and familiarity with the thing we are to deal with.

I note that many of these investors are paying $3 a colony for their stock to start with. They, being no judges of the condition of the stock, get good, bad and indifferent, various sized hives, ill-fitting supers, queenless colonies, foul stock—many undesirable things. In order to have a basis I shall take the $3 a-colony price, considering that this price gets regular lives and two supers to the hive. I shall also consider that 200 colonies will be all the prospective owner can handle, and that some experience has been had to enable the owner to begin with a fair foundation knowledge of the management of bees.

A 100 colonies at $3 is $1000; honey and storageroom (small) $100; smokers, knives, veils, cart or barrow, solar or other wax-extractor, saws, hammers and tools to make or repair hives, etc. $20; total investment, $1120.

A 25-pound yield from the 200 hives would give 500 pounds, but suppose a 25-pound colony, and $10,000 pounds costs in foundation, sections, and cases, $200. The bees assessed at $1 a colony and a general total tax of 25 percent is $5—a total outlay of extra for the 10,000 pounds of honey, $205. At the average price noted in article No. 2, this crop of honey being 116 cases and a fraction (we will drop the fraction) brings $15.20. Take from this the $205, 18.20 is left, and $71.80 of interest on the investment and for the apiculturist's labor and living.

Now let us run the calculations through from this same yield of half the foregoing. We have 208 cases at $2.25, or $578.80; taking this from $105 for sections, foundation cases and taxes, leaves for the labor and interest $332.60. A glance at these figures shows at once that if the owner can not handle the stock himself and alone, if for any reason he has to hire help, very little will be left of the income.

"I know many who are being called on to invest large sums of money, and what is it worth?" Let us see what it is worth. A fair increase for 200 colonies would be 100, when handled at all with a view to getting the surplus yields. I have allowed in the above estimates, a surplus of half colonies. The first cost in the flat about $1.50 each; nailed and painted, with starters in the brood-frames, the apiculturist doing the labor, the hives cost about $2.00 each. I allowed at the start $5 a colony stock purchased to begin with, but would not cost a safe price on the increase. There is a limit to all things. You do not expect to go on increasing and selling your increase to your neighbors to go into business and be your competitors; and not only competitors, but to overstock your pastures and cut out directly your yields. Even if you did sell off the increase there would soon be no market for it—you could not continue that line of policy very long. I should say that $5 a colony would be a good, big allowance for the increase.

So far, we have gone on the assumption that the original stock remains intact, no losses in winter from queenlessness or any other cause. A small annual increase is necessary to keep up the unavoidable losses it is a rare thing that will get through the winter without a few losses from queenless colonies at least. This necessitates, then, some additional capital invested in hives. If we must, in order to keep up the stock, have some extra hives for increase, our capital put into the stock was greater than any percentage of the money. We must have a really safe basis to keep up the original stock, one should have about 25 extra hives, making so much increase in them to be doubled back or substituted for the unavoidable losses.

There is still another item not yet considered. No matter whether the yield be 5,000 or 10,000 pounds, there will be of necessity a surplus of sections and foundation, for one can not turn to an exact count. The unfinished sections left over when you have cleaned up 5,000 pounds of marketable honey or any other amount, will be from 10 to 20 percent, sometimes reaching 40 or 50 percent. This represents only the section and foundation purchased or paid for. To this we must add the cost of the additional stock carried in order to cover them. If we anticipate a 10,000-pound yield, we can scarcely do less than buy and put up at least 10,000 sections, even though we do not get half of them filled. And, if one considers the work and care for the stock, investments left over becomes a necessity that all prospectively needed hives, sections, and all supplies except cases, be purchased ahead and prepared, enough to hold the biggest crop expected, for 200 colonies, keeping the rest for future use.

These extra supplies needed and carried in stock, must be added to the investment of bees, honey-house and tools. Two hundred colonies in one apiary are too many—they should be in two places. If in two yards, a horse and wagon will be needed. Without an additional stock of honey, there is no necessary money capital to be invested in a 200-colony business where $5 a colony has to be paid for the bees, at $1500. Ordinarily it is not done for less.

In the foregoing calculations we have put the figure much higher than any green hand could accomplish. I have taken it for granted that all the product was No. 1 honey, whereas...
the inexperienced would have from ½ to 1½ No. 2 and 2½
pounds. For the past ten years I put my own bees to 2½
pounds. My general average price has been, for all grades,
about $3.50 a case—8½ cents a pound. Sections, foundation
and cases cost 2 cents, or 80 cents a colony. Investment for
700 colonies and equipment being, as per previous tables,
$1,800, I allow on this 15 percent for interest, and 10 per-
cent more for wear and tear—20 percent of $1,800 is $360,
or $1.50 a colony. A 40-pound yield at $1.50 cents makes the
gross income per colony $3.50. Deduct from this the cost of
sections, foundation and cases, interest and wear and tear—
the 20 percent on capital invested—$2.30 a colony, leaves me
$1.00 a colony, 20 colonies giving me the sum of $200
for my labor and caring for them.

If this is the way it turns out with one of so large an ex-
perience, what must be the result when an inexperienced per-
son is doing the managing? There is no money in the busi-
ness here except in the hands of practical apiarists.

Larimer Co., Colo.

HONEY-RIES AND TEXAS CATTLE.

Adrian Geltz says an important but rather discouraging
thing on page 647. Can we by skilled breeding make Texas
cattle—more tough and hardy? After a long study of this
matter Nature has already done the job and finished it. Well, then,
how about bees? Has not nature for thousands of years been
developing hardiness and honey-gathering, the very qualities
we propose to breed for?

A WOODPECKER’S “BEE.”

Thanks to Prof. Cook for his verification among woodpeckers—being a muscular, biological, our judg-
ment. It’s pleasant to see how many human things we can
find duplicated among our lower down (in this case higher up)
relations. So the woodpecker does sometimes actually “make
a bee,” and invite his fellows to help him—and they go
naturally to respond, and then go back to their own work. Page 649.

EVENING PRIMROSES AS NECTAR YIELDERS.

How mysterious are the kinds of honey-flow and seasons!
Why did the evening primroses this year abound with nectar
—both in Missouri (page 652) and here in Ohio—notwith-
standing the fact that they usually do not attract bees very
much. Prize of five cents for the boy that can tell.

The Afterthought.

The “Old Reliable” seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, O.

SELLING EXTRACTED HONEY IN PAPER SACKS.

So she thought a gallon crock went with three pounds of
honey, and inconveniently packed it full of batter! All right
to deliver her honey in a paper sack, if you tell her to put it
out into something different. And the actual storage in
forestsacks of 1,000 pounds of honey, taken from badly leak-
ing (and badly warranted) barrels is certainly worth putting
in the papers. They were second-hand flour-sacks at that;
remember. Page 639.

MIXING OF SWARMS.

Boomer’s experience, on page 633, touches one of the
standing bee-puzzles. When two swarms mix, some think it
well and some think it ill, but whatever happens, they seldom
separate. Yet when a swarm forces itself into another hive
they usually separate. Why is this thus? I rather think that
in the latter case they don’t really mix, but stand with their
toes on a line making faces at each other. The case
Boomer gives is a little unusual as to the short time No. 1
had been in possession.

FLORAL DISPLAYS ON HIVE-TOPS.

Looking at the very beautiful apiary of J. W. Tucker &
Son, on page 634, I see pots of flowers on some of the hive-
roofs. That’s not it, but the contemplation of Ananias drops
a new thought into my mind. Could we put a “wandering
dew,” or some equally rampant vine, into a big pot and make
it weigh down the cover and shade the whole establishment
at the same time? I see some objections, but maybe they
could all be surmounted. They wouldn’t blow away as easily
till plants do.

GROWING MULBERRIES FROM THE SEED.

Considering how shy of germination many similar seeds
are, it is quite a success to have mulberry seeds sown August
15, not only up but an inch high September 20. Little ex-
ence left now for not having all the young plants we think we
need. Page 647.

BUOFFT CROP REPORTS HELP SALES.

Quite interesting to see so competent authority as R. A.
Burnett & Co. adopt the opinion that the cry of “Honey
scare and high this year” scares off customers; and that the
publication of news that there has been a bountiful crop pro-
 motes sales. This is not a popular view with our brethren;
but it’s well for the Alex. Burnett & Son to let us know this
is a view that I share. Of course, yarns about an enormous overplus would not come
under the same head. I fear there are usually quite as many
trying to lie the crop down as try to lie it up. What does a liar estimate himself to be? A crook
Bull is more than a match for a dozen of Ananias Bear. Esq.
The latter can not possibly see any less than none in any given
locality. If there are five car-loads somewhere, then five car-
loads is the limit of his mendacity; while the former chap has
no limit, and can see five car-loads as a thousand. Better we
make it hot for the whole Ananias tribe. Page 643.

INDULGENCE.

The greatest lesson Christ taught the world was the bless-
edness of sacrifice. “He came not to be ministered unto,
but to minister.” “My Father worketh hitherto, and I work.”
“He that saveth his life shall lose it, but he that loseth his
life for my sake and the gospel’s shall surely find it.” He
was simply willing, but rejoiced to give himself for men.
No wonder his most devoted, and so, of course, his most effi-
cient disciple—the great Paul—could say, “I count not my
self dear unto myself.” No wonder he could rejoice in beat-
ings, shipwrecks, standing the hardest trials and most tord
soules sacrifices. He had right in sight the greater sacri-
ances of the Master, “who spake as never man spake,” who
went about doing good,” and in whose life was no guile.”
The dear Christ life and nature knew no such word as selfishness, but were guided and guided by sacrifice. No won-
der He lifted the world. No wonder He shines in lives and
hearts today. No wonder that He is to work as most blessed
leaven until the world is redeemed unto himself.

I believe that this greatest lesson is one that we keep too
little in mind in our home circles. We as parents love our
children. We love to gratify them. To minister unto them is
easiest, for our greatest pleasure comes when they are hap-
piest. Our love, unless we are wary, will trample our o
ment under foot, and will hide the teachings, the life, the
in-
comparable example of the Christ standing as a wall between
them and their application to our children. To be served,
petted, indulged, often clothes a child with the murky gar-
ment of selfishness, riches and prosperity to be, with faults,”
to work out one’s own salvation with fear and trembling,”
all these go to make character, and develop within the boy or
girl a moral and intellectual physique and stamina that will
stand him if he brace himself to the props which kindly hands so fondly place and hold in position.

I have seen many a boy, and many girls, made pulpy, in-
efficient, and, worst of all, irresponsibly selfish, by such indulgence. The finest characters I have ever known have been those who have learned independence and self-support in all their college life. Such persons can appreciate Christ’s rugged life, and, if occasion requires, can rival Paul in battling against hardships and exaltation.

My mother was very indulgent. I think she enjoyed that
I lay hat, coat or books on chair or sofa that she might have the
joy of putting them in place—of waiting on me. My first
room-mate in college had not been so treated. He was older
than I, and I justly looked up to him with great admiration
and respect. He could not have done a kinder thing to me
than he did do. He taught me right at the threshold of our
most happy, blessed and helpful association that I was to put up my things insufferable and every time. Coat on a chair; not much. Hat or books on his table; certainly not the second time, and this is saying little or nothing beside by sitting in touch with bed-leg just under the bed, as I retired; well, if so not repeated. What if it did seem a little tough then? What if it did make me dream of home and mother? It was a most valuable and much-needed assistance.

Mother marveled when I came home on vacations, at the valuable influence of college to make students more orderly and thoughtful. She did not know until I told her years after that it was my room-mate. Prof. Prentiss—long the honored Professor of Botany in Cornell University—that wrought the reform. To-day he is with God, beyond the river, but the salutary influence is still on earth, and it did much for me.

I know a mother who was left a widow with four children and a large debt. She had been a teacher: indeed, it was she that first said "college" to me, and with a look and emphasis that made me resolve that it and its invaluable gifts should be mine. She was determined that all those children should have a college education. Through indomitable energy and courage, in dint of long, hard hours of severest labor, she lifted the debts, gained a competency, and sent all her children to college. She felt that they must not have the hard life that she had suffered. She sent money to them in handfuls. One of her boys was dubbed "Vanderbilt." This was before her debt burdens were lifted, and in spite of the fact that she tried to know of his mother's trials and hardships. I begged her to withhold the money, but she was deaf to my suggestions. The older boys were almost ruined. They are now pretty successful and valuable men, but 10 years, and much more of the mother's money, to undo the mischief.

My father gave me to know that possibly he could not afford means to send me through college. "It would depend upon the expense," he said. He added something about my record. He need not have done this, as I was just asathirst for what the college could give me. As a result, I earned enough while in college more than to pay half my way, though I was far from strong. Whatever I may have thought then, I now am sure that my father was very wise. This is the first wise thing than to inculcate in his child a love for work, passion for industry, and habit of economy of both time and money. Indulgence will never grow the kind of fiber that gives us our grandest men and women. A wise requirement of work habits regularly, faithfully and promptly done, will secure noble men, and such requirement is the best heritage that any son gets from wise and loving parents.

THRIFT.

Can a father give a son wiser advice than that he save each year a part of his income? I know far more than one who spends each year the entire income of the home, for the very reason that I know of more than one whose expenses exceed the income. This course, if a man is rightly endowed with proper sensibilities, will handicap his daily efforts, as with such loss of independence comes unrest, and discontent weighs down efficiency. He that can do a wiser thing than to furnish a son or daughter with opportunity to earn money, and then watch for every opportunity to hoget a love and habit of wise saving.

LOVE OF PARENTS.

The fifth, or pivotal, commandment of all the ten, is "Honor thy father and thy mother." If Joseph, after his great honors and opportunities came to him, could have gone back to his father to buy that old, loving father; or, if there, do not seem insuperable objections to his going, then he was a bad, multitude son. If, on the other hand, his heart yearned to go, and he denied himself the great pleasure, feeling that possibly family discord and greater ill-will and discord would follow such visit, made before due preparation prepared father, and especially brothers, for it, then he was truly a grand boy. In industry, purity, kindness, and generous magnificence, he was certainly a model for all the ages.

A War Veteran's Report.

I am an old veteran soldier of the Civil War of 1861-1865, serving three years and eight months in Company H, First Michigan Light Infantry. I was injured in the service, having taken part in 15 battles, and now draw a pension; I have kept bees and farmed ever since then. I have small farms and grow fruit, wheat, corn, potatoes, and general produce. I have four colonies of Italian and hybrid bees, spring count, which have increased to 11 and yielded 50 quarts of extracted and 60 pounds of comb honey. I have had a Novice extractor for 10 years, but have not used it much, as I reduce the number of my colonies to about 10, and 12, as I have no time to attend to more. I generally sulphur that number every fall, and use castor oil obtained thus to extract from the following season.

This has been the best honey season in years in this vicinity. I have been sowing sweet clover in waste, out-of-the-way places of late years. Last year we gathered a lot of this fall, and also castor seed, to sow early in the spring of 1902. It yields lots of honey. A short 6-er bee box is very good. It has double-wall and 10-frame single-wall Simplicity hives.

Wm. Martin,

Safe Introduction of Queens.

So much has been written on introducing queens, and so much dissatisfaction and so many failures that I am hereby induced to give my plan, which, up to the present, has not failed in a single instance, and it would be of much value if some one would fall who adopts my method and strictly carries it out. If it is a queen received through the mails, I take care to examine on the quarter- cage, and I have never lost a queen by that plan, unless there happened to be two queens in the hive—not thinking that the old mother
and her daughter were together. In that
case I lose the imported queen. Now for my
never-failing plan:
First, I have a wire-cloth tent that sets over
the hive, with room for me to work under. I
place the smoker, and take the bees till them-

sections with honey by rapping on the hive,
etc., and in five to ten minutes I open the
hives and take the frame under the tent and
kill the old queen; and as I take out the
frames I set each one outside of the hive in a
box with a frame for the queen, and the
frames attached. I then shake all the bees
from each frame to the ground directly in
front of the hive, with alighting-board re-
moved, and then replace each frame in the
hive.
Understand, the old queen is now dead, the
bees are all on the ground, and the frames
back in the hive.
I now replace the alighting-board, and they
immediately start to crawl in; after about
1-4 or 1-5 of them have crawled in, I take the
queen I wish to introduce and drop her in a
cup of extracted honey, take her out and
drop her on the alighting-board near the
entrance. I then close the hive (if I failed to
do so sooner), raise a side or two of the
frames up, leaving the tent over them until they
are quiet.
I have introduced in this way at all seasons of
the year, from April to October, and have
yet to lose the first queen, and I have intro-
duced hundreds in this manner. I guar-
tantee safe introduction in every case where
the instructions are strictly carried out. If
bees are thoroughly filled with warm and
good enough smoke used to keep away prow-
ers, you can introduce a laying queen at any
time, and yet prevent any fried in introducing
virgin queens in this manner.
T. J. BAXTER.
Craven Co., N. C.

Poorest Honey Season in 15.
I have kept bees for about 15 years, and
that is the poorest season for honey in
this locality I have ever experienced. People
out West seem to think honey-dew is no
good, but we think it strictly first class,
and are always glad to see it come. Three
cheers for Prof. Cook's article on patent
medicines, on page 60, and again, Prof.
Cook.
HARRY P. GROGAN.
Scott Co., Va., Nov. 2.

Spring Dwindling and Its Cause.
I have not been in the bee business long,
and do not compare with those veteran bee-

fellows at the Buffalo convention. It seems
that the keepers all feel a spring dwindling,
and it has been the subject of much dis-

cussion by that worthy body. My experience
has been, that with proper food and all
numbers of bees flying, yet one thing
lacketh in the north, and that is a warm
summer. It seems as if winter and spring have
this section for their little ground—first one
victorious and then the other.
Bees have generally come out and
bloom by March 20, about which time a few
warm days swell the maple-buds, when the
bees rush forth, and, of course, commence
brood-rearing. This condition lasts long
enough for spring brood-rearing, when,
unfortunately, Old Winter makes a charge from
the northwest, and drives the mercury down to
10 degrees below the freezing point, holding
this position for from six to eight weeks; the
bees remain quiet for a day or two, or until
the supply of water in the hive is exhausted,
and the brood is ready to die for want of it;
then the little martyrs go forth, rain or
snow, and never return, and there you have a
genu-

ine spring failure. The same thing holds true
of the cold north and plains. The best
thing is to use packed honey. Good
combinations.

American Bee Journal and Success, $1.75.
with any one of the above dollar magazines (3 periodicals)........ $2.50
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with any five of the above dollar magazines........... 3.50
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<th>Clover</th>
<th>Price per pound</th>
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<tr>
<td>Sweet Clover (white)</td>
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<tr>
<td>Sweet Clover (yellow)</td>
<td>$0.70</td>
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<td>Atlee Clover</td>
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<tr>
<td>White Clover</td>
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Prices subject to market changes.
Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.
Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if
wanted by mail.

GEORGE W. YORK & CO.
144 & 146 Erie Street, CHICAGO, ILL.

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26 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying 26 cents a pound—CASH—for best yelllow wax, upon its receipt, or 25 cents in trade. Impure wax not taken at any price.

Address as follows, very plainly,

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Excellent shipping facilities and very low freight rates for Southern and Eastern territories.

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**Extracted Honey For Sale**

ALL IN 60-POUND TIN CANS.

Alfalfa Honey

This is the famous W. J. Adolm's Extracted Honey gathered in the great Alfalfa regions of Central West. It is a splendid honey, and nearly everybody who has tried it at all can't get enough of the Alfalfa extracted.

Basswood Honey

This is the well-known light-colored honey gathered from the rich, sylvan Basswood blossom. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

Prices of Alfalfa or Basswood Honey:

A sample of either, by mail, 10 cents, to pay for package and postage. By freight—two 60-pound cans of Alfalfa, 8 cents per pound; or four or more cans, 7½ cents per pound. Basswood Honey, 50 cents per pound. Alfalfa prices. Cash must accompany each order. You can order half of each kind of honey, if you so desire. The cans are boxed.

**Absolutely Pure Honey**

The finest of their kinds produced in this country.

Read Dr. Miller's Testimony on Alfalfa Honey:

I've just sampled the honey you sent, and it's prime. Thank you. I feel that I'm something of a heretic, to sell several thousand pounds of honey of my own production and then buy honey of you for my own use. But however low one ought to be to the honey of his own region, there's no denying the fact that for use in any kind of hot drink, where one prefers the more wholesome honey to sugar, the very excellent quality of alfalfa honey I have received from you is better suited than the honeyes of more marbled flavor, according to many tests.

C. C. MILLER

McHenry Co., Ill.

Order the Above Honey and Then Sell It.

We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

[GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.]

---

**Hand-Picking Drones.**

On page 651, Mr. Doolittle tells about having drones for bees to use by selling them on the comb. It is a very easy thing for Mr. Doolittle to decide just what are the best drones. It is a very hard thing for a novice. Please have Mr. Doolittle inform us how we are to decide which drones to sell, as well. ---LEARNER.

In hand-picking drones I look first for perfect development, and those under size and imperfect in any way are killed. Next I look to activity on the comb, believing those sluggish in action and motion while on the combs will be the same while on the drone. Next I look at their markings, and any varying to an unusual degree to either side of an average are disposed of. It would seem hardly necessary for me to say in conclusion, though some beginners may not know it, that drones have what are known as "buds," which means that any colony which will keep their own drones will allow the drones from other hives in the apiary to enter and be welcomed. And thus it often happens that when drones from other colonies are being driven out, you will enter the hive and pick the drones from our select, drone-reared queen, and, in hand-picking, these should be selected out and killed. This can generally be done from their color or markings. ---M. DOOLITTLE.

A Successful Wintering of Bees. This has been a very poor season for bees in my locality. We had so much rain and cold winds in the spring that the bees could work but little on apple blossoms, and when that was over it kept right on raining, so that farmers could not get many spring crops, and the farmer has been forced to get honey from the farmer as well as the bee-keeper. I sold all but about 100 colonies last spring. I increased them to 150 during the season, but got very little honey—perhaps 450 or 500 pounds—nearly all from apple clover. It rained so much that buckwheat did not yield any honey to speak of, and it has been the poorest season of the 12 that I have kept bees.

I was looking over an old diary today, where I had kept a record of my bees, of which the following is that of the past four years: Dec. 7, 1897, I had 340 colonies; Dec. 7, 1898, just as they were, with no feeding or uniting, and April 7, 1899, took out 209, losing one by smothering. Dec. 1, 1899, I put 304 colonies into winter quarters, and on March 23, 1899, took out 1898, losing one by smothering. Dec. 2, 1900, I put 130 colonies into winter quarters, and on April 7, 1900, the same number, with no loss. Nov. 17, 1900, I prepared 160 colonies for winter, and on April 12, 1901, I took out 150 colonies, one having played out through loss of the queen, I was again, and doubled up to about 100 colonies.

Now, if one who winters his bees above the ground, can show a better record than mine, I would like to hear from him. I have read the American Bee Journal for several years, and have not recognized the mention of our best beekeepers making a success.
It Brings More Eggs
Get a Dandy Green Book Cutter and double your egg-yolk. Our new canes
line cuts all about feeding green
honey, and the best technique
for cutting it.

Sold Direct
PRICE, $5
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If you want the Bee-Book
That covers the whole Apicultural Field more
completely than any other published,
send $1.25 to
Prof. A. J. Cook, Claremont, Cal.,
"Bee-Keeper's Guide."
Liberal Discounts to the Trade.
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The Emerson Binder
This Emerson stiff-bound Binder with cloth
back for the American Bee Journal we mail for
but 60 cents; or we will send it with the Bee
Journal for one year—both for only $1.40. Is

flying time to preserve the copies of the Jour-
nal as fast as they are received. If you have
this "Emerson" no further binding is neces-
sary.

GEORGE W. YORK & CO.,
144 & 146 Erie Street, CHICAGO, ILL.

Workers Decide as to Brood-Rearing.
A good deal of previous observation, and
close observation this fall, lead me to believe
that the ref is that queens continue laying
for a time after workers cease rearing brood
in the fall. It is a very common
thing to find eggs and sealed brood present,
but no unsealed brood.—A Straw in
Gleanings in Bee Culture.

Deep vs. Shallow Brood-Frames.
For a long time I have been on the fence—
undecided which to choose. Each kind
seemed to possess some advantages. I did
not want to give up, so I kept using half-
stories and full stories, shallow and deep (11
inches) frames in equal numbers. I can get
along very well in my home yard with the
shallow hives; but when it comes to outyards,
give me deep-frame hives, every time. In
stocking up an outfit, I am obliged to make
out the desired number partly with half-story
hives. I anticipated difficulties at the time,
and I found them when it came to managing
the hives. When two or more sectional hives
are used as one, the combs or frames of the
super section will be more or less
fastened to the lower one by bits of comb or
otherwise, making it unpleasant to separate
them; this is not the case with half-story
frames of to get through a hive just when
time is most valuable that it almost seems like
wasting it. When an empty brood chamber as a hive, the bees have a way
of boiling over as soon as opened up, which
is very annoying.
I used to think that the shallow frame
would be very nice for nuclei; but after try-
ing it for years by the side of deep frames, it
does not suit me nearly as well as the latter.
I find queens much quicker on a deep

wintering their bees above ground. My bees
were not prepared as Mr. McEver explained
to us at the Buffalo convention—they were
simply put in the bee-yard along with a full hive
of frames and honey, and tiers four high.

ANDREW M. THOMPSON.
Allegany Co., N. Y., Nov. 3.

Bee "Away Up North."
Last fall we had three fine colonies of bees,
filling two stories each, but the winter proved
too much for them. We had 4½ months
of continued cold weather there being scarcely
a day when they could leave their hives for
a flight, so when we opened them it was to find
them dead in a banana cage on the top
of hive No. 2, which we put into a new one and
made them cozy. We did not think of it
any more to give them a queen until July 6—they
looked as if they meant to stay, not losing
a single bee. I was sorry we lost so much time,
but not a great deal later I put a hole through the candy in the cage
with an awl, and waited three weeks, when I
found the queen still a prisoner. I opened the cage
and let her down with her attendants, and to
all appearances all were thankfully received.
It was interesting to see those old bees renewing
their youth and guarding their hive with
such an air of importance when the few vel-
ventures came out for a play—those bees must have been about 10 months
old. I wonder where they have gone. I think
we have given them a new funeral bed they
take themselves away; but I think
they died happy, and I am not at all sorry
that this year has been a failure, as I have
had some needed lessons and much enjoy-
ment.

I am as much interested in the bees as ever,
although I am not beyond finding one precious
colony. I am as fond of the American Bee
Journal as I am of the bees, and I do not wish
to do without either.

Tom Huxley,
Muskoa, Ont., Canada, Nov. 5.

200-Egg Incubator
for $12.00
Perfect in construction and
action. Hatches every fertile
egg. Write for catalogue.

GEORGE H. STAHL, Quincy, Ill.

Please mention Bee Journal when writing.

A NIGHT EXPRESS TRAIN ON THE
NICKEL PLATE ROAD.
A change of schedule for departure
of train No. 6 from Chicago on the Nickel Plate Road, provides a con-
venient express train. For P. Wayne,
Findlay, Fortoria, Cleveland, and
Dunkirk, Buffalo, New York City,
and all points East, leaving Chi-
cago daily at 11:20 p.m., reaching New
York City 6:50 next morning, Boston 10:07 second morning, and all other
points east of Buffalo on same time as heretofore. Sleeping-car open
for reception of passengers.

GEO. W. YORK & CO.,
144 & 146 Erie St., Chicago, III.

A Foster Stylographic PEN....
This pen consists of a hard rubber holder, tapering to a round point, and
writes as smoothly as a lead-pencil. The point and needle of the pen are
made of platinum, alloyed with iridium. The pen is made for
very great durability which are not
affected by the action of any kind of ink.

As only one line of uniform
width at all times, this pen is
effectual for ruling purposes.

Pens are furnished in neat
paper boxes. Each pen is
accompanied with full directions, filler
and cleaner.

FREE M. A. FOSTER PEN ON
THE MAIL RATES.
19,000 Postmasters use this kind of a pen.
The Editor of the American Bee Journal uses
the "Foster." You should have one also.

How to Get a "Foster" FREE.
Send two new subscribers to the American Bee Journal for
one year, with $2.00; or send $1.00 for the Pen and your
own subscription to the American Bee Journal for one year; or,
for $1.00 we will mail the pen alone.

GEO. W. YORK & CO.
144 & 146 Erie St., Chicago, III.

Standard Bred Queens.
Acme of Perfection.
Not a Hybrid Among Them.
IMPROVED STRAIN GOLDEN ITALIANS.
World-wide reputation. 25 st. each; $4.00.
Long-Tongued 3-Banded Italians
bred from stock whose tongues measured 26
inch. These are the red clover hatters of
America. 25 st. each, or $4.00. Safe arrival guaran-
teed.

FRED W. MUTH & CO.
Headquarters for Bee-Keeper's Supplies,
S. W. Cor. Front and Walnut Sts.
Catalog on application.
CINCINNATI, O.
frame, because they are not so apt to hide in the space between the lower edge of the brood-comb and the bottom of the frame. Particularly is this so with black bees, as they are inclined to run off the comb and take the queen with them. When taking a deep frame out of the hive the bee-keeper will find it enough to run off, while with a shallow one they would. I have decided to decrease my shallow-frame colonies gradually, and change back to the deep frame.—F. GREINER, in Gleannings in Bee Culture.

Raising Hives from the Ground.

Placing hives on high stands is in most places a thing of the past, and it is probable that most bee-keepers would say that there is no sufficient reason for the practice in any case. Arthur C. Miller, however, in the American Bee-keeper, seems to think there are many places where it is not advisable to set hives near the ground, and he gives a reason for his view. He says:

In my home apiary all hives are placed close to the ground; but in a small one, half a mile away, they are all on a bench some two feet above the ground. Both apiaries are covered with the same strains of bees and part of the home apiary is worked on the same system as the outyard. In the latter I have been getting comb honey, but in the home yard it is difficult and almost impossible. The production of extracted honey is also affected, but not so markedly. So far as I have been able to determine, the difference is due entirely to the elevation of the hives.

In another small apiary (six colonies) the owner has two hives about 18 inches above ground, the rest on it. The two have done finely, the others poorly. In my recently arranged with its manufactures to fill our orders. The picture shows herewith is the one we recommend for general use. It is a perfect gem of a stove for heating dining rooms, bed-rooms, and bath-rooms. It hinges back in a substantial way, and is thoroughly well made throughout. The urn removes for heating water. The brass hood, or well, has a bell, and holds nearly one gallon of kerosene oil. It is just as safe as an ordinary lamp. You wouldn't be without it for twice its cost, after once having one of these stoves. Most oil-stoves emit an offensive odor, but this one doesn't. Its height is 2½ feet, and weighs 20 pounds, or 30 pounds cradled ready for shipment, either by freight or express.

Price, f.o.b. Chicago, $6.00; or, combined with a year's subscription to the American Bee Journal—both for only $6.50. Full Directions so write for your copy.

If you want something that is really serviceable, reliable, and thoroughly comfortable, you should get this "Barler Ideal" Oil Stove, as it can easily be carried by any woman from one room to another, and thus have all the heat you want right where you want it.

Address,

GEORGE W. YORK & CO.,
Chicago, Ill.

The "Barler Ideal" Oil-Heater.

No. 4 "Barler Ideal" Oil-Heater.

Please Mention the Bee Journal when writing to Advertisers.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolster are made of German silver, and will never rust or corrode. The rivets are harden German silver wire; the linings are quite hard, the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise, a message name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET KNIFE will serve as an identifying; and in case of death, your relatives will be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us three New Subscribers to the Bee Journal (with $3.00). We will club the Novelty Knife and the Bee Journal for one year, both for $7.00.

GEORGE W. YORK & CO.
St. Chicago, Ill.

#2 Please allow about two weeks for your knife order to be filled.

HONEYVILLE, O.

[This Cut is the Full Size of the Knife.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is made of celluloid, and its general shape is that of a beautiful gem. The blade is of fine steel, and the handle is composed of celluloid, which is transparent and durable. It is a perfect knife for any purpose.

H. M. MELBEE,
Drones of a Drone-Layer All Right.

"Are the drones from a queen who has never met a drone virilis?" is a question suggested by the editor, p. 778. Dzierzon holds that the drones of the pharaoth and the American Bee Journal, Vol. 1, the barons of Berlepsch gives a posteriori proof that is almost conclusive. On p. 778 of the same volume is given the testimony of no less an authority than Prof. Leuckart, which I think, settles the question. He says: "The origin of the drones from the eggs of uneculated or drone-producing queens are, as I have ascertained, as perfectly developed and as active as in the European species; whereas, in some cases, those are drone queens which do not actually produce them."

Dr. George W. Park, of San Francisco, Calif., has been suggested by the inquiry, and at the same time do the work more efficiently.

Wanted—Honey.

Car Lots or otherwise, will pay highest market price, spot cash. Address, Stating quantity, quality, and location of product. We are anxious to send the mail to where it is highest to receive. THOS. C. STANLEY & SON, 314 East 26th, Illa. Please mention Bee Journal when writing.

Wanted—Honey.

Comb Honey and Bees-wax. State price desired. Address, G. H. W. WEBER, 3141-24th Central Ave., Cincinnati, O.

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Is the incubator for the poultry raiser, whether farmer or fancier. Hundreds of successful users, because their eggs, when hatched, became the price right. Many who have tried other makes of incubators, have failed to get a good hatching. Our Canna-Senorina is the incubaor that will give you satisfaction. It is built and constructed to hatch all kinds of eggs. A hand-made catalogue containing hundreds of views illustrated with full descriptions of all kinds of incubators, mailed free. When writing address nearest office. Sure Hatch Incubator Co. Clay Centre, Neb. or Columbus, Ohio.

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Or, Manual of the Apiary,

BY PROF. A. C. JOOK.

460 Pages—16th (1899) Edition—18th Thousand—$1.25 postpaid.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without THE BEE-KEEPER'S GUIDE.

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For 20 NEW Subscribers.

The following offer is made to twenty subscribers only, and no premium is also given to the twenty new subscribers simply the Bee Journal for one year.

Send us TWO NEW subscribers to the Bee Journal (with $2.00, and we will mail you a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both for only $1.75, but we will give only TWO NEW subscribers to the Bee Journal for a year, and thus get the book as a premium. Let everybody try for it. WILL YOU have one?

GEORGE W. YORK & CO.,

144 & 146 Erie Street,

CHICAGO, ILL.

THE HONEY AND BEESWAX

MARKET QUOTATIONS.

Chicago, Nov. 19.—Honey is selling fairly well, and the price for the past two months, viz: choice grades of white comb honey, 14c. per pound and light (aka, amar), 13c. with darker grades, 106½c., white (aka, amar, 5½ c.), according to quality, flavor and season. Bees-wax good demand at 2½c.

R. A. BURNETT & Co.

CINCINNATI, O.

CINCINNATI, Oct. 25.—The honey market is rather dull on account of the warm weather. Extracted sells only to manufacturers from choice grades and white, for 80c. to 86c.; white clover from 80c. to 85c. Fancy white comb honey sells from 13½c. to 14c. C. H. W. WEBER.

ALBANY, N. Y., Oct. 25.—Honey in good demand and market at this is the most satisfactory time to sell. Grocers are stocking up, and will buy lines, when late they only buy enough to piece out. Fancy white comb, 15c.; mixed, 14½c.; buckwheat, 12½c. Extracted, white, 4½c.; red, 2½c.; black, 3½c. Ed. W. R. Wright.

OMAHA, Oct. 25.—New comb honey is arriving by express in small quantities from Nevada, Colorado, and selling at $3.50 per case in a retail trade in Omaha, and prices are on the verge of $3.50 to $4.00. H. R. Wright.

EVELYN BROS.

NEW YORK, Nov. 8.—Comb honey is in good demand, and there being a scarcity of stock, is becoming very dear, and has risen to six cents per pound over the usual price. Tobacco firms are in great demand, and the best in this line before Sept. 1. Our market is not consuming a great deal of extracted honey.

DETAILED TRADE REPORTS.

DETROIT, Oct. 25.—Fancy white comb honey, 16½c.; No. 1, 15½c.; No. 2, 13½c. mixed, light amber, 7c. EXTRACTED, white, 6½c.; light amber, 3½c. EXTRACTED.

M. H. HUNT & SON.

SAN FRANCISCO, Nov. 13.—White comb, 10½ cents; amber, 78½c.; dark, 60½c. Extracted, white, 5½c.; light amber, 4½c. MARKET is moderately firm at prevailing values, which remain quiet about the same as a week ago. There is considerable demand for strictly fancy in cartons; No. 1, 14½c.; No. 2, 12½c. Mixed, light amber, 7½c. EXTRACTED. BLAKE, SCOTT & LEE.

DE SUEZ, Oct. 25.—There is very little done here in new crop of honey. Some small lots of crude honey were offered on the market and selling in a retail way at $3.50 to $3.75 per case. There is very little trade at this time, the season being very dull, and the demand for dark at 5½c. Beeswax quiet at 27c. HILDEBRETH & SHEIKEN.

BOSTON, Nov. 20.—The market for honey is easing up, somewhat due in part to the busy season at which time it is much neglected. The market at this time is not so active as it was last year, due to the fact that the price was much lower and much trade in this line before Sept. 1. Our market is not consuming a great deal of extracted honey.

M. H. HUNT & SON.

DETROIT, Oct. 25.—Fancy white comb honey, 16½c.; No. 1, 15½c.; No. 2, 13½c. mixed, light amber, 7c. EXTRACTED, white, 6½c.; light amber, 3½c. EXTRACTED. MARKET is moderately firm at prevailing values, which remain quiet about the same as a week ago. There is considerable demand for strictly fancy in cartons; No. 1, 14½c.; No. 2, 12½c. Mixed, light amber, 7½c. EXTRACTED. BLAKE, SCOTT & LEE.

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AMERICAN BEE JOURNAL
Nov. 23, 1901.

We have a Large Stock on hand and can ship promptly.

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Hives, Extractors
OR ANYTHING YOU WANT IN THE BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundations are ahead of everybody, and cost so much less than other makes. New Catalog and copy of The American Bee-keeper free. Address, THE W. T. FALCONER MFG. CO., JAMESTOWN, N. Y.

**W. M. MERRILL, East Nottingham, N. H., carries a full line of our goods at catalog prices. Order of him and save freight.**

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Queen-Clipping Device Free...
The Monette Queen-Clipping Device is a fine thing for use in catching, and clipping, Queen wings. We mail it free for 25 cents; or will send it FREE as a premium for sending as ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.00 we will mail the Bee Journal one year and the Clipping Device. Address, GEORGE W. YORK & COMPANY, Chicago, Ill.

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**WALTER S. POUDER,**

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A New Bee-keeper’s Song—

“Buckwheat Cakes and Honey”

Words by EUGENE SECOR.
Music by GEORGE W. YORK.

This song was written specially for the Buffalo convention, and was sung there. It is written for organ or piano, as have been all the songs written for bee keepers. Every home should have a copy of it, as well as a copy of

“THE HUM OF THE BEES in the APPLE-TREE BLOOM”

Written by EUGENE SECOR and DR. C. C. MILLER.

Prices—Either song will be mailed for 10 cents (stamps or silver), or both for only 15 cents. Or, for 50c strictly in advance payment of a year’s subscription to the American Bee Journal, we will mail both of these songs free, if asked for.

GEORGE W. YORK & CO. 144 & 146 Erie St., CHICAGO, ILL.

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Why does it sell so well? **

Because it has always given better satisfaction than any other.

Because in 23 years it has not been any complaints, but thousands of compliments.

Send name for our Catalog, Samples of Foundation and Vell Material. We sell the best Veils, cotton or silk.

**BEE-KEEPERS’ SUPPLIES OF ALL KINDS.**

Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, $1.25, by mail.

Bee’s waxed at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

Please mention Bee Journal when writing.

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Texas Bee-Keepers.

New Branch Office. 438 West Houston St., San Antonio, Texas. Rates of transportation from Medina in less than car-load lots are high, and it takes a long time for a local shipment to reach Southern Texas points.

Low Freight and Quick Delivery. San Antonio as a Shipping-point.

Our Managers. We have secured as managers Mr. Udo Toepperwein, formerly of Leon Springs, and Mr. A. Y. Walton, Jr., both of whom are well known to the bee-keepers of South and Central Texas. They are also thoroughly familiar with practical bee-keeping and all matters associated with it, and any orders sent to this branch will receive prompt, careful attention.

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The Fence or the Ambulance—Which?

BY JOSEPH MALINS.

"Twas a dangerous cliff, as they freely confessed,
Though to walk near its crest was so pleasant;
But over its terrible edge there had slipped
A duke, and full many a peasant;
So the people said something would have to be done;
But their projects did not at all tally,
Some said, "Put a fence round the edge of the cliff;"
Some, "An ambulance down in the valley."

But the cry for the ambulance carried the day,
For it spread through the neighboring city;
A fence may be useful or not, it is true,
But each heart became brimful of pity
For those who slipped over that dangerous cliff;
And the dwellers in highway and alley
Gave pounds or gave pence—not to put up a fence,
But an ambulance down in the valley.

"For the cliff's all right, If you're careful," they said;
"And if folks even slip and are dropping,
It isn't the slipping that hurts them so much
As the shock down below—when they're stopping;"
So day after day, as these mishaps occurred,
Quick forth would these rescuers sally,
To pick up the victims who fell off the cliff,
With their ambulance down in the valley.

Then an old sage remarked, "It's a marvel to me
That people give far more attention
To repairing results than to stopping the cause.
When they'd much better aim at prevention,
Let us stop at its source all this mischief,"
cried he.

"Come, neighbors and friends, let us rally—
If the cliff we will fence we might almost dispense
With the ambulance down in the valley."

"Oh, he's a fanatic," the others rejoined;
"Dispense with the ambulance! Never!
He'd dispense with all charities, too, if he could:
No, no! We'll support them forever;
Aren't we picking folks up just as fast as they fall?
And shall this man dictate to us! Shall be?
Why should people of sense stop to put up a fence
While their ambulance works in the valley?"

But a sensible few, who are practical, too,
Will not bear with such nonsense much longer;
They believe that prevention is better than cure,
And their number will soon be the stronger.
Encourage them, then, with your purse, voice, and pen.
And (while other philanthropists daily)
They will scorn all pretense, and put a stout fence
On the cliff that hangs over the valley.

Better guide well the young than reclaim them when old,
For the voice of true wisdom is calling:
"To rescue the fallen is good, but 'tis best
To prevent other people from falling."
Better close up the source of temptation and crime
Than deliver from dungeon or galley.
Better put a strong fence round the top of the cliff,
Than an ambulance down in the valley! —Selected.
The "Barler Ideal" Oil-Heater

Saves Its Cost Every Year!
NO ODOR! NO SMOKE! NO ASHES!
Costs only a cent an hour to run it.

The editors of The American Bee Journal are using the "Barler Ideal" Oil Heater, and it is all right in every way. We liked it so well that we wanted our readers to have it too, so we have recently arranged with its manufacturers to sell our orders. The picture shown here is the one we recommend for general use. It is a perfect gem of a stove for heating dining-rooms, bed-rooms, and bath-rooms. It hinges back in a substantial way, and is thoroughly well made throughout. The urn removes for heating water. The brass fount, or well, has a bail, and holds nearly one gallon of kerosene oil. It is just as safe as an ordinary lamp. You wouldn't be without it for twice its cost, after once having one of these stoves. Most oil-stoves emit an offensive odor, but this one doesn't. Its height is 25.5 feet, and weighs 20 pounds, or 30 pounds crated ready for shipment, either by freight or express.

Price: Chicago, $8.50; or, combined with a year's subscription to The American Bee Journal——both for only $8.50. FULL DIRECTIONS GO WITH EACH STOVE.

If you want something that is really serviceable, reliable, and thoroughly comfortable, you should get this "Barler Ideal" Oil Stove, as it can easily be carried by a woman from one room to another, and thus have all the heat you want right where you want it.

Address, GEORGE W. YORK & CO.,
Chicago, Ill.

The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.

HOWARD M. MELBEE,
HONEYVILLE, O.

(THE CUT IS THE FULL SIZE OF THE KNIFE.)

Your Name on the Knife—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as true-perfect as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelties" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are fortunate enough to have one of the "Novelties," the Pocket-Knife will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side? The accompanying cut gives a false idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelties" must be seen to be appreciated.

How to Get this Valuable Knife.——We send it postpaid for $1.25, or give it as a Premium to the one sending us three new subscribers to the Bee Journal (with $0.10). We will club the Novelty Knife and the Bee Journal for one year, both for $3.00.

GEORGE W. YORK & CO.
St., Chicago, Ill.

#*Please allow two weeks for your knife order to be filled.

Please Mention the Bee Journal when writing Advertisers.
The Cry of Adulterated Honey, heard lately in Chicago, is bound to interfere somewhat with the sales of the pure article. The Daily Tribune, of this city, had the following in regard to this subject, in its issue of Nov. 15, introduced by a heading in large type, "Law Stops Bogus Honey!"

Glucose honey, under the attractive guise of "pure clover honey," is invading the Chicago markets to such an extent that the efforts of the bee-keeping and associated interests are directed toward investigations of this imposition. One entire carload of "honey," consigned to Dr. Dawson, of the Western Brokerage Co., 42 River street, from a California firm, was barred from the markets yesterday except as a plainly labeled adulteration.

The analysis of the "honey" composing the consignment showed that it contained from 60 to 60 percent of glucose, and honey, the stuff was condemned. The concern had the choice of selling it as a glucose mixture or of sending it back, and he chose the latter course, at the same time canceling other orders which would have brought other large quantities of the glucose honey into Chicago.

*Editorial.*

Unlike many of the adulterations which flood the market, the glucose honey is not regarded as an injurious mixture, and the Pure Food Commissioners affirm that the imposition on the purchaser is one which injures his pocket-book and not his health. The dealer has the right to sell the "honey" under the label of glucose mixture, and as such, it is worth about one-fifth as much as real honey.

One complainant, Dr. A. J. Park, 520 East Fiftieth street, said:

"I know of no place in Chicago where one can purchase a pound of pure honey. I called the attention of my grocer to the fact that his tin cases of "white clover honey" was manufactured stuff made up of glucose and paraffine. He at once called on his South Water street merchant and demanded that his money be refunded, or that the merchant disclose the name and place of the party from whom he got the mixture, but he declined."

Almost exasperating to one who is at all acquainted with the honey business to read such a paragraph as that. Of course, every doctor ought not to be supposed to know everything, and so Dr. Park perhaps should not be blamed for not knowing where in all Chicago he could get a pound of pure honey. But there are tens upon tens of absolutely pure honey in Chicago at almost any time of the year. I can take the innocent Doctor to see seven samples of the genuine article any time he will accompany me.

Dr. Park also conveys the idea that there is such a thing as manufactured comb honey—the comb made of paraffine and filled with glucose. I want to say that the Doctor has not an excellent opportunity to get a larger single fee than he ever has received, nor will likely ever receive in the future if his medical knowledge is on a par with his information about pure honey. There has been an offer of $1000 standing, but unclaimed, for 20 years, to any one who would find and present a single pound of comb honey which bees had no part in manufacturing. That offer is open yet, and I will personally guarantee that it is bona fide, or will make a similar offer. Now, gentlemen, either present that pound of manufactured comb honey, or for ever after hold your peace about it.

It is very unfortunate that the daily press does not seek its information concerning such matters from those who are in a position to know. It certainly would not go to a blacksmith to learn of the production of steel; then why should it accept the dictum of those who don't know a bee from honycomb, when they desire information on honey-production?

I do not believe that The Tribune would willingly injure any honest industry, but in publishing such matters as I have referred to, and also the cartoon on "How doth the little busy bee 's" in the Numeral that is appearing before its readers untruths, and at the same time doing untold injury to the producers of genuine honey throughout the whole country. Yours very truly,

George W. York,
Editor 'American Bee-Journal.'
SAVS MUCH HONEY IS PURE.

EDITOR OF THE AMERICAN BEE JOURNAL TAKES EXCEPTION TO STORIES OF LIQUIDATION.

That the bee-keepers as a class are opposed to the adulteration of honey is averred by George W. York, who, as editor of the American Bee Journal, is in touch with the industry. Mr. York declares that there is plenty of pure honey on sale in Chicago, and takes exception to the statements which have been made by men who are supposed to know something about pure food. In a letter to The Tribune:

"The bee-keepers have done in their power to aid not only the enactment but the actual enforcement of the laws intended to prohibit the adulteration of honey, or compelling the mixers of the countless article to label it according to its exact ingredients. In an interview Mr. Jones, the Pure Food Commissioner of Illinois, is made to say: "The California honey has a brown coloring around the cells. True honey is perfectly white. The purchaser can detect the fraud by this simple rule."

"This would be important if it were true. Unfortunately, or fortunately, there is no truth in the statement. Genuine honey is perfectly white in appearance; and, second, there is no glucose comb honey produced."

"The carload of honey referred to in the first quotation from The Tribune, is extracted honey in tin cans. We looked it up at both the offices of the Pure Food Commission and the Western Brokerage Co., and found that the labelers of the former discovered about 25 percent glucose in the sample submitted to them by the Western Brokerage Co., the latter firm having become suspicious of the honey. After hearing the result of the analysis, they reported it to the California firm from whom they bought it, (in Oakland, we believe), and were holding them accountable for the adulteration of the California firm, it being still in the car. We understand that the California firm declare it is pure honey, and that their representative is coming on to Chicago to prove it. He will likely have a hard job of it—if he comes.

"We believe The Tribune, in publishing the statements credited to Dr. Park and Commissioners, are more dangerous to pure honey than can reasonably be imagined. Because of pure honey than it can remedy in a long, long time to come. Also, the dearth of a dozen things, which pretends to illustrate how so-called "comb honey" is manufactured, is another unfortunate thing. Already, we hear that Chicago grocers are feeling the full effects of the misleading reports and misstatements published by The Tribune, and their honey sales are diminishing accordingly. One dealer said that the falling off in the sales of pure honey would be at least 25 percent. While all lovers of truth and right will appreciate the slight correction which The Tribune published a few days later, it could hardly have done less, in justice to the honest people and industry which it misrepresented, to have been "fit to print as we wrote it for publication."

"It is exceedingly unfortunate that newspapers do not apply to those who are in a position to know the facts concerning technical matters. With all the bee-keepers living in the city, and on the great lines of daily access, there need never be anything misleading, or the least bit untrue, given in the public press concerning the manufacturers of honey or honey production. But it would not be quite so discouraging if, when an error has been published, the truth was brought in close touch with the public, so that it was corrected, so that the injustice could be rectified as nearly as possible.

"Let us hope that more care may be exercised hereafter on the part of those who think they must write or speak on subjects which they are wholly unfamiliar.

CREATING A DEMAND FOR HONEY.

"How can a demand for honey be developed in a city where at present there is little or none consumed?"

Mr. Niver—I have been for six months now working up a demand for honey in my city, and I have had house-to-house canvassing, and I must say that I am delighted with my success, by going direct to the family, sitting down and telling them what we get it from the bee-keepers, and taking along some foundation, and so on. Getting them interested in the bee-talk, I can sell them, perhaps, a pound or two of honey, and in about a month I go around again. I have found that there is a demand worked up that way which grows along with its growth.

"I find that the third or fourth time I find that the demand is not diminished, but increased. People do not know that honey is the cheapest sauce that can be bought—I mean, the sauce of the hive. Everything is very high in the line of sauce. Fruits are very high, and the working people feel that very severely. Now we are having boom times, and the most prosperous times known to this country, and the hardest times for a man to support his family on his wages that I have ever seen. By going direct to the people themselves, and teaching them about extracted honey, not comb—they look on comb honey as a luxury beyond their pocket. I have tried this method in six months, and have sold two or three different towns worked up. I find that the trade is growing in most towns, and in a little while we will get so that we can get out our bulk honey into the grocers. We can not do it now. You can not sell honey in a bottle, with a nice label on it, for 25 cents a pound. You have to offer it at reasonable rates by the pound, and then you can sell it.

"Mr. Cook—How many of those lectures could you give a day?

"Mr. Niver—I don't know; I talk several hours a day.

Mr. McEvoy—What size of samples do you show them?

"Mr. Niver—My method is to take along the honey in 10-pound cans. I go into the house with a quart milk-bottle and a teaspoon inside of it, and ask for a small dish to put some honey in; and in get them all in there eating honey, and I make them use their own spoons. While they are doing this I am explaining. After that I have been selling 8 pounds for a dollar, for fine white honey. The great majority of people get paid once a month; if you go just after payday you can sell a great deal of honey, like you can before."

H. C. Ahlers—Would you kindly give us figures of what you could sell in a day in that way?

"Mr. Niver—I have sold 300 pounds in a day, and he has sold as low as 35 pounds in a day.

Mr. Ahlers—I sold a thousand pounds in two days in 3 lb. Mason jars and 13 lb. pails; ten cents a lb. straight. If a grocer wants my honey it is worth 10 cents a lb. I sell to private families for strictly cash, in Milwaukee and vicinity. I weigh in the pail. The collection year is 1895 to 1898. I bought 21,000 pounds of honey, and I weigh the pail in. This gives me about 9 7/10 to 10 cents for the pail. I lose about 13/2 cents on the pail. I sell the honey 20 cents a pound at a jar. I go to private families and keep a record of them. I know where I am going when I start. I take a thousand pounds along, and make the trip in three days. I sold 8,000 pounds in six trips, 2,000 pounds around home. I sold my own crop of 6,000 pounds, gathered from 37 colonies, and bought 2,000 lbs. Mr. Howen—I feel sorry for a bee-keeper who produces honey and can't sell it. I can't produce enough to fill my orders.

H. J. Fuller—For the benefit of comb-honey men, I wish to say a word or two. I retail comb honey, and I retail from 100 to 300 lbs. a day in small towns in Cattaraugus County, I take it from house to house, the same as these gentlemen retail their extracted honey. I am getting 15 cents a lb. for No. 1 honey, and for dark honey all the way I can get 12 cents, according to the quality. I sell on Tuesdays. Our pay-day is Monday, and I want to go when they have money.

W. L. Coggshall—The wholesale price is retail; no trouble to sell that way.

"Mr. Niver—I have heard a good deal said on what package we shall put our honey in, but I have got so that I believe I don't want any package at all. I prefer every time to have the lady produce her own package. She is sure it is clean, then.

Mr. Ahlers—Well, people offer me a package and they offer me butter-crocks. I live about 28 miles from Milwaukee. I would have to haul their butter-crocks. I allow them 10 cents a mile.

Mr. Tyrell—I would like to ask Mr. Niver what argument he uses to answer the question why extracted honey is cheaper than comb honey.

"Mr. Niver—By showing the picture of the extractor and telling them that the bees build the comb only once, and we put it back and they fill it up again.

Mr. McEvoy—I think if every State in the Union, and Canada, had some one going around in that way, talking to people, it would be a good thing.

Huber Root—For the past two
months I have been seeing a great
many people at the Pan-American
Exposition, and I find eight out of ten
of them imagine we mash the comb up
and sell the honey out through a
cheese-cloth: they know absolutely
nothing about bees, or anything about
the way extracted honey is secured.
Mr. Vinal—I think it is a good plan,
but I can't teach me how to make a
man as Mr. Coggsall is able to hire.
Mr. Tyrrell—It is true that not all
of us are salemen. The majority
of people who produce honey are not ca-
able to sell their own honey by a
house-to-house trade where we have to take
up the time to explain how the honey
is produced and why it is cheaper.
The plan that I used was to put my
honey in suitable packages, then tak-
ing a circular which was just as
brief as possible, explaining how the honey
was produced—I would use say quart
boxes, and on each box I would put a
circular, together with another small circular
telling the people why I left it
in this way. Ninety-nine out of
100 people would not step to the door,
and hear you have something to sell,
say "No," I leave the package of
honey and the circular, take the number
of them, and in a few days I will call
again on a certain day, and pass on.
Then I would go over the same ter-
ritory a second time, and I found that if
I left it long enough—perhaps a week
—if they were honey users, they had
handed the honey, found it was good,
and would pay for it.
Mr. Longnecker—I would like to ask
Mr. Vinal if he will try to sell a
package of honey at one time,
and when he came again in a
week and the honey hadn't been used
and they didn't want it.
Mr. Vinal—I found there was only
one place where anything like that
ever occurred, and that was at the
house of a lady where the honey had
decreased perhaps an inch, and she
didn't want it over the top! That
is the exception.
Duo Toeppeiner—Do you label all
your honey?
Mr. Vinal—Yes, sir, telling where
it is produced.
Mr. Toeppeiner—We label all our
first-class honey, and get the groceries
to sell it, and after the people get to
use it they will buy more, and then
Mr. Vinal—I have had a little expe-
rience in selling comb honey, and
my plan has been to put the honey in show-
cases, properly labeled, and place it
in the stores on the commission plan, and
let them sell it at retail. I get 25 cents
for it retail, and 20 cents at the stores.
Selling Honey Through the Stores.
"Would you sell honey through the
stores?"
Mr. Mason—I think that has been
answered already.
Mr. Toeppeiner—If a person has
plenty of time, I think they would do
better to retail it.
Mr. Vinal—I couldn't take it to the
groceries, for this reason: I don't
want groceries enough to pay for what
honey I have. I would rather have
some one handle it for me, and
men in my section want me to take
trade. If I want any trade I have
no objection to selling one or two
cases of honey, but where
I have the money, and don't want trade, then
I retail it and get the money for it.
Mr. Niver—I would like to ask at
what price he sells to the grocer.
Mr. Fuller—The same price—15 cents
a pound.
Mr. Niver—And what do they sell it
for?
Mr. Fuller—They make it profit
on the goods they give me.
Mr. Niver—I have been a groc-
ery-man for many years and you couldn't
trade it to me for 20 cents a pound.
Mr. Fuller—You talk about the price
of honey. I will buy 500 lbs. of comb
honey at 13 or 15 a cent a lb. delivered
at my place, for my trade at the
stores. I would pay 15 cents a
pound for 500 lbs. I can not get it in
Boston.
Mr. Fuller—I would like to ask one
more question of these gentlemen who
sell their honey in the cities, whether
they buy from the beekeepers.
Mr. Vinal—Sometimes, but
whether they have to obtain
a license to do their work, or whether
they go on without being molested
by anybody.
Mr. Ahlers—I am a beekeeper, and
I have a right, at least in Wisconsin,
to sell my own produce. Now, I don't
know if I have a right to buy the honey
and sell it, but those questions are
never asked. I have sold it to several
police men, who never asked me any
questions, and I think there will be no
trouble at all.
Mr. Granger—I have noticed one
difficulty about retailing honey, and
that is, there are so many beekeepers
who sell for the same price at retail as
at wholesale. In the district where I
live there are quite a few beekeepers in
a small way, and they generally run out
of all the honey they have for sale, and
then there is the trouble, and find they
cannot: it is all being sold at the
same price, 1 lb. or 100 lbs. When
I have sold out what little I have, and
you can't get more at wholesale, I
cannot get it.
Mr. Miller—With us we have to pro-
tect the groceries. If I sell honey
at 10 cents retail I must cut out to the
grocery store, and I always protect them by
that means. I still sell at retail, as
much as possible, and at the present
time I am getting 11 cents for my
extracted honey, including the tins.
Are Queens Injured in Mailing?
"Does it injure queens to send them
by mail?"
Mr. Mason—Yes.
Mr. Benton No. It does injure
them if they are improperly packed; if
well packed it does not, I believe.
Mr. Mason—I would agree with him,
but I warn any one well packed.
Mr. Rankin—I think the danger
to queens sent through the mail is about
as great as that of a person traveling
on a railroad, provided the bees are
properly packed.
Fred Schmidt—Do you think they
are properly handled today, the way
they are thrown out and kicked around?
I do not.
Huber Root—I think the trouble is in
the confinement in passage through
the mail, and not particularly from the
route handling. A beekeeper was asked
when she is laying well and shut her
up for several days, and keep her right
in the hive and she will not do so well after
it.
W. L. Lathrop—Take queens and
cage them properly, pack them, keep
them a week, then liberate them and
see if you can notice a difference. I have
tried quite a few good many experi-
ments. I was led to it from buying
queens. My experience is that they
do not lay so regularly. The combs
will not fill so well. They are more
"skippers," and she will begin to fail
sooner.
Mr. Benton—I receive a great many
queens from different countries, and
often as far as the Island of Cyprus,
and those queens were well packed.
I prepared the cages myself, sent them
there and gave careful instructions as
to how the beekeeper was to put them
in, and in no instance have I been
able to perceive that those queens that
had been from 14 to 20 days in the mail
sacks and traveled 6,000 miles, had been
injured by that journey.
Mr. Gemmill—Aside from the pack-
ing don't you think that the caging of
a queen a few days before she is ship-
ped is a great mistake, how do
with the safe delivery of the
queen?
Mr. Benton—I don't practice that.
One point has been brought up, that of
throwing the mail-sacks from the train.
In some places here and there, a queen
was to be thrown from the train I enclosed
the cage in a cloth-lined envelope,
which would tend to protect the cage in case of
lock.
Mr. Fuller—What kind of a cage do
you ship in?
Mr. Benton—It is a small, wooden
cage, with three corners and a back
which I invented some years ago. One
end has the food compartment; the
center compartment is a dark chamber
with only indirect ventilation; at the
other end is the queen, and is provided
with one box. You can buy it.
Mr. Fuller—How many bees do you
place in there as an accompaniment?
Mr. Benton—From 10 to 20, accord-
ing to the time of the journey.
Mr. Mason—One of two things is
certain: The queens are injured in
the mail, or else the queen-breeders
send out poor queens. I have paid as
high as $8.00 for a queen and I would
rather pay eight cents for it, a finally
and I sell 200 queens. Every last one of them—except one I
got last year—proved to be poor.
Mr. Cook—There are hundreds of
testimonies that they are good and
they do produce a good copious bees.
Mr. Mason—Yes, sir, I can give you
one good one out of eight.
Mrs. Acklin—We not only send out
queens through the mail, but we get
in queens, and I will state to you that
we get only what is not all right.
Bees Moving Eggs.
"Do bees move eggs from one cell to
another?"
Mrs. Acklin—I think they do.
I think they move an egg occasionally
from one hive to another.
MATING OF QUEENS.

"In queen-rearing, are the evils of in-breeding greater to mate father and daughter, or sister and brother?"

Dr. Miller—You are asking a question about which is the worse of two things, either of which is impossible. You can not mate father and daughter, because the father is dead before any of his children are born. You can not mate sister and brother, for the drone has no sister except his mother. In this matter of breeding it is a matter of close blood you are considering, and whatever you may call them the queen is the daughter of her mother, and also the mother of the drone with which the mother mated, but the drone is the son of his mother. Now if you say he has any father, it must be his grand-father. He has precisely the same blood as his mother. So when you are considering breeding in cattle the nearest that you can have is between brothers. And this near blood in this case is between the drone and his mother, so that if you take it in the sense that you are talking about other animals, the drone is the brother of his mother.

RED CLOVER QUEENS.

"Are the progeny of what are advertised as red clover queens better honey producers than the progeny of queens reared by other queen-breeders?"

Mr. Greiner—I notice that all queen-breeders today advertise the red clover queens; none have others.

LONG-TONGUED BEES.

"Are long-tongued bees desirable?"

Mr. Howe—As I sent Mr. Root a bee a while ago, and he sent me back word that she had as long a tongue as any he had measured that year, I would like to tell you the difference between that colony and common colonies. These bees with long tongues gathered honey when my black bees were starving to death. The black bees were really starving, and these bees weren't robbing.

SPELLING REFORM.

"Is reform spelling desirable in bee-keeping?"

Dr. Mason—Yes.

Mr. Ahlers—No.

Dr. Mason—Desirable everywhere.

SELECTING A HOME BEFORE SWARMING.

"Do bees ever select a home before swarming?"

Dr. Miller—Yes.

Mr. Calibraco—Sometimes, not always.

MATING WITH AN IMPURE DRONE.

"Does a pure-blooded queen become contaminated by mating with an impure drone, so that her drone progeny was impure?"

Mr. Cook—No.

Mr. Benton—I don't think she does, practically. There are some very curious effects, but it seems to me that the question is open to a slight dispute. That is as far as I would go in it.

Dr. Mason—Now, the queen mates with the drone and secures what seminal fluid she wants for life, does she not?

Mr. Benton—Supposed to.

Dr. Mason—Can she keep up that supply without renewing it in any way, so as to fertilize the thousands upon thousands of eggs that she lays?

Mr. Benton—I should suppose she might keep up that supply during a fairly long life, but, as we well know, that supply is sooner or later exhausted, and the queen is utterly exhausted and lays drone-eggs.

Dr. Mason—Then she doesn't in any way add to the supply of that seminal fluid from herself—no growth of it at all?

Mr. Benton—No, I don't think that is possible.

Dr. Mason—Then, if that is not possible, the progeny can not become contaminated in any way?

Mr. Benton—Except by the possibility of her having mated the second time.

Dr. Mason—Mr. Doolittle thinks that the queen does in some way add to her supply of the seminal fluid, so that she can keep that up; if she does, then may she not be making that impure?

Mr. Benton—I don't think impurity comes in that way. It is the presence in the system of this foreign substance a derivation from the male bee—which contaminates the blood of the queen and by that the drones.

Dr. Mason—Now, will it do it?

Mr. Benton—That is the question that is unsettled.

BEE SPACE OVER BROOD-FRAMES.

"Why should the top-bar of the brood-frame of the Langstroth hive be below the top of the edge of the hive instead of on the top of the frame? Is there any advantage in having the bee-space on top of the frames in the brood-chamber, or under the frames, and have the bee-space on the under side of the super?"

D. H. Coggshall—In extracting honey it is very essential to have a bee-space on top.

Dr. Mason—There certainly is an advantage in having the bee-space on top instead of the bottom. If there is no bee-space on the bottom, and you set the hives for any time on the top of the frames, you are liable to crush them. In my hives I have the top of the frame even with the top of the hive.

John Fixter—We have both above and below, and I wouldn't have a hive in the yard that didn't have a bee-space above.

Mr. Betsinger—No hive is perfect by omitting a bee-space on top of the frames. If the space is omitted on top of the frames, and the same is added under the frames, there you use the two in connection, and when the season is good, and they are somewhat crowded, they will place burr-combs between the lower frames and the frames above. Now, in removing those frames, if the bee-space is underneath the hive—not on top—then these burr-combs adhere to the ends. If the bee-space is omitted on top of the brood-chamber, and is put in the super, you are living under the same disadvantage—as you change supers from one hive to another those burr-combs must be removed.

The convention then adjourned until 1:30 p. m.

THURSDAY AFTERNOON.

The convention was called to order by Pres. Root.

CHANGES IN THE CONSTITUTION.

Mr. Abbott—I have a matter I would like to present, and that is, I do so, I would like to tell the members of this Association something that I think they ought to know. This room is occupied by the janitor who looks after it said that you had been the cleanest set of people that he ever had anything to do with: that you didn't smoke, or chew, or make the room worse, and that you ought to know it. You can see that it pays to be decent. I have here a recommendation of the Board of Directors which the directors present at this meeting recommend the following amendment to the constitution: "Art. IV., Sec. 1, to be changed reads as follows: 'The officers of this Association shall be a General Manager, a President, a Vice-President, a Secretary, and a Board of twelve directors, whose term of office shall be for four years, and their successors are elected and qualify, except as provided in Sec. 2 of this article.' Now, the change in that Article is this: The present Board of Directors shall consist of the General Manager and twelve directors, making the General Manager a member of the Board of Directors. Now, another reason why this change is that the General Manager is an employee of the Board of Directors, and we want to make it so that the Board of Directors, the members of the Board, and the General Manager a chance to do what they are empowered to do in the next Article, which I will read.

Dr. Mason—That simply provides for removing the General Manager from the position of a Director.

Mr. Abbott—That is all. He continues as secretary of the Board and as general manager. Of course a Sec. of Art. V., add the following: 'And said Board of Directors shall have power to remove from office the General Manager for cause, and fill the vacancy until the next annual election.' Now, this amendment has no reference to the General Manager. It provides for a contingency that might arise. It gives the Board power to say to him, 'We don't like this way of doing, and we will simply remove you until the next election. And then the members can elect a General Manager just as you have been electing him.'

Moved by Dr. Mason, and seconded by Mr. Benton, that the convention endorse the recommendations made by the Board of Directors, Carried.

CARNiolAN HIVE-ENDS, ETC.

Mr. Benton then exhibited some front ends of Carniolan hives which he stated he had been in use many years. He pointed out how the effect of the bees clustering in front of them, they making no impression on the board where it was painted, showed that they were in front of very smooth surfaces, such as the smooth surface of fruit. He further said: These hives open at the rear end, and in Carniola their plan is to feed hives in winter and stimulate until the time for warming comes, and get them in condition for the buckwheat harvest. Probably
19-20 of the bees in Carniolia are in boxhives.

Mr. McEvoy—How is the yield of honey?

Mr. Benton—Very good, indeed. Tho' we have only 2 acres of buckwheat. In extracting the honey, they first put it in a sack, comb and all, and then subject it to great pressure. Of course, it is 'strained' honey, and contains some colour and minerals of a green. It is excellent beer-footh, though. It stimulates brood-rearing more rapidly than the feeding of sugar.

Mr. McEvoy—And how were they to save their bees, the country would have none many?

Mr. Benton—I don't think they would. They take out their weakest colonies. Foul-broody colonies are almost sure to be taken out.

Mr. McEvoy—What are their winters like?

Mr. Benton—Very long and severe. I saw the mercury once 20 degrees below zero, and very deep snow in most places. We obtained from it, a year or two ago, in one to ten thousand feet above the sea level. It is quite cold in October, and very cold in November, and it lasts until March and April, with very long, cold spring, following away into May. The percentage of loss of bees in the winter is quite small, and spring dwindling is a thing almost unknown. The winds sometimes change very suddenly, bringing a thick fog down into the valleys, and thousands of the flying bees are killed. Only understanding that, the colonies are so prolific that they revive very quickly. During the buckwheat season the harvesting of honey occurs. I have sometimes seen all of the working force of a colony wiped away in a single hour, and thereby the hope of any future yield of surplus honey during that harvest was entirely precluded. (Continued next week.)

Contributed Articles.

Gathering Not in Proportion to Length of Tongue.

By G. M. DOOLITTLE.

During the spring and early summer of 1901 quite a little was written regarding the high gathering qualities of bees having long tongues, and many advertisements were inserted in our bee-papers, holding out inducements to purchase bees having long tongues, while bees having such were the ones which secured the greatest yields of honey; and especially so in districts where the red clover was grown by the farmer for hay and pasturage for his flocks.

At that time I did not dream that I should have any chance to prove myself of the correctness of this long-tongue matter, for nearly a score of years had elapsed since red clover bloomed or gave seed in these parts, owing to a very small amount of rainfall. And I thought in the annual clover just before the blossoms were to open, causing the blossoms, while in the bud, to burst, so that not one bud in a million came to perfection. But the past season, from some cause or other, the nectar seemed to be absent, and before I was hardly aware of it, my eyes beheld hundreds of acres becoming red with the bloom of red clover.

And at about the same time the weather became hot and favorable for honey-secretion, so that by June 20 we had a yield of honey on, according to what that I had ever known at that time of the year. In fact, the flow of nectar was nearly, if not quite, as great as any I had ever known from basswood when at its best, except that the nectar is always thinner from clover than from basswood. And this flow of nectar of clover, as it continued, in varying degree, clear through the basswood yield and up to August 1, thus helping greatly to finish up and complete nearly all the part finished sections, remaining at the close of the basswood bloom. As a result, I obtained (together with what was secured from buckwheat, which gave only a light flow) the largest average yield, from colonies not robbed for the bees, of any ever obtained in the 52 years I have kept bees, namely: an average of 176 pounds of section honey per colony at the ant-apar, and 180 pounds by the hand in the hay yard.

In the hay yard I had two colonies close to each other, one being headed by a queen from my original honey-gathering stock, and the other by a very fine-looking queen procured by way of exchange during 1901, from a breeder in Iowa. These colonies were as nearly alike as to outward appearances in early spring as two peas, but as the season advanced the brood in the colony having the Iowa queen outstripped that from the other by thousands of cells. Till I began to think I had a prize in this new queen; but when the season closed I found that I had from the colony headed by the queen of my rearing, 201 completed one-pound sections, 21 partly filled, and 134 pounds of honey; whereas the Iowa queen gave only 44 poorly filled sections, none partly filled, and had only 12 pounds in the hive October 1, so that they had to be fed 13 pounds for wintering.

Remembering that I had seen somewhere in the bee-papers that if we would be fair in testing this long-tongue matter, bees from the colony giving the poorest yield of honey should be sent as well as those from the one giving the greatest yield, I thought myself to send a dozen of these bees, (from each colony) to Prof. Gillette, of the Colorado Agricultural College, as he had asked for bees to measure, through the columns of the American Bee Journal, and I accordingly did so. When Mr. Gillette reported he gave as the average of "Lot 1" (from my queen) 25.1, and of "Lot 2" (from the Iowa queen) 25.8, the same being in hundreds of an inch. So it will be seen that the colony giving less than one-sixth the yield of the other, really had the longest tongues.

Both colonies were managed as nearly alike as could possibly be done, up to about the first of July, when the Iowa bees began to swarm, and I had to put out more than double the days of the best part of the harvest. They were not susceptible to the management of the apiarist as were the others, but with the honey harvest they went to an excess in breeding, and to the harvesters at this point it seemed a superfluous number of workers which took to swarming rather than to honey-gathering, and thus the season was frizzled away to little advantage to the apiarist.

My bees this year, as in years past, that the bee which is the most susceptible to the management of the apiarist, so that a maximum amount of bees can be brought on the stage of action, with little, if any, desire to swarm, just at the commencement of the honey harvest, with as few bees at any point to which this object, is the bee which rolls up the honey to the account of the aprist every time.

But I hear some one saying that the length of the tongues of those bees varied only very few-tenths of a hundredth of an inch, anyway. This is right, and from considerable correspondence of late I am led to believe that Italian bees from various parts of the country, and from colonies that gather little or much honey, all have tongues of practically the same length. Had those tongues of Italian bees been given the poustest yields of honey been measured on the start, instead of offering prizes for the longest tongues which gathered the most honey, more real facts would have come to light, with less of public deception.

It is always well to go a little slow until assured of the ground upon which we stand, lest some one may be deceived by statements which are made prematurely; the same being premature through our not having investigated till we have gotten at the bottom facts in the case.

Ondago Co., N. Y.

A Short Report—Selling Honey too Cheaply, Etc.

By MRS. L. HARRISON.

Our honey is all taken off, and put away nicely (Oct. 28), and I estimate that the is a supply for two families, from our apiary of 40 colonies. Our apiary, prior to this season, showed poor sections, but the losses each succeeding winter were more than the summer's increase; and this is the condition of aparies generally in this part of the State.

The newspaper who advertises largely announced lately that he had some fine honey of this year's production, which he was selling at 15 cents per pound. Honey was worth 20 cents, but he had a chance to buy 250 pounds cheap, and his customers would have the mistake of 125 honey, but no losses. When there is a short crop of corn or potatoes, the price goes up, and why should not honey? No line comb honey should be sold for less than 20 or 25 cents per pound at retail. There has been a steady decrease in the number of colonies, and a less secretion of nectar than formerly.

I think that there are more sources for honey in the city, per acre, then in the country. At almost every home a few flowers are cultivated; lawns are sprinkled frequently with a
hose attached to hydrants, and the modest white clover dots the green. Porches are shaded with Columbine or Maderia vines, which are favorites with bees; there are beds of portulaca, mignonette and other flowers. The city parks have much bloom, and sweet clover, both white and yellow, have pre-empted all unscaped lands. A failure of fall honey has never been reported in this locality.

Preparing Bees for Winter.

I get everything ready beforehand. I use new sheets of Indian-head muslin every year; tear it up so large that it will extend over the edges of the hive, so that when the cap is shut down upon it, it is utterly impossible for a bee to get up into the cap. I pick off all ravellings, iron them smooth, and pile them up on a board. I gather baskets of dry maple leaves. When all was ready, on one of our quiet October days, I uncovered the bees, put a hill's device upon the combs, spread over the sheet, and set on the cap or upper story, poured in a good bed of leaves, and a chaff cushion above them: then I cut away with a piece of section between it and the cap, thus making a little crack, so that fresh air will circulate above the packing. This was all done so quietly that the bees were not disturbed, and no smoke was necessary. The chaff cushions have been in use a good many years, so I put in leaves, as chaff is not handy to get.

The hives were all heavy with well-ripened, sealed honey, gathered from sweet clover, goldenrod, Spanish needles, boneset, polygynum, and other wild and cultivated flowers.

Mulberries.

One year the last of April, I visited the navy yard at Pensacola, Fl., and while there gathered a handful of ripe white mulberries; they were very rich, and so juicy and sweet that they made my fingers sticky. A friend, who was a missionary many years in Turkey, says that in that country they press out the juice, boil it down into a syrup, and call it 'honey.' The residue—skins and seeds—they dry, and keep to feed their donkeys during the winter.

Peoria Co., Ill.

Questions and Answers.

Conducted by Dr. C. C. Miller, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—Enron.)

Feeding Bees for Winter Stores.

I got caught in that cold spell, and one colony is short of stores; that is, it has a little over eight pounds of unsealed syrup left. 
1. Will that unsealed syrup cause trouble?
2. How can I make sugar candy? I made some last winter, but it was so hard the bees could not take it. I made it according to the book—
3. How much candy should I give that colony to carry it through the winter? That is, how many pounds of sugar should I make into candy?
4. Are four Langstroth frames full of honey enough to winter a strong colony?
5. Are forest leaves a good, warm packing?

Minnesota.

Answers—1. There is some danger of it, especially if it was late, there will be less danger of trouble in the cellar than outdoors.
2. I doubt being able to tell you any better than the books. Two kinds are given. Schol or Good candy, which is perhaps the better kind, being a stiff dough made by kneading the extracted honey into sugar; and the old kind made by evaporating sugar syrup. It is quite possible that your candy was all right. No matter what kind of candy you have, the bees in winter are not likely to take it unless it is very easily within reach. See that the candy is directly over the cluster, or else that it is in a frame hung close beside the cluster so as to touch the bees.
3. Having already 8 lbs. of syrup, 22 lbs. of candy will do for a full colony.
4. Yes, if by "full" you mean bulged out from top to bottom and sealed out to the lower corners. But as you are likely to find them in the brood-chamber, six or eight would be nearer the mark.
5. Yes, if dry, they are excellent.

Various Questions.

1. Will Italian queens reared from a thoroughbred mother mated to a black drone produce as good honey-gatherers as if mated to an Italian drone?
2. Does it take more honey to winter a colony of Italians than a colony of blacks?
3. Do queens lay during the night?
4. Do the worker-bees work in the hive at night, such as build comb, feeding larvae, etc.?
5. About how much honey does it take to winter a colony of bees in this latitude? Our bees usually start to swarming here about the first of April, if the spring is not late.

South Carolina.

Answers—1. Sometimes they will, and sometimes not. The first cross are generally good, but after that the improvement generally goes backward.
2. You will probably find no difference, if you compare 100 colonies of Italians with 100 colonies of blacks of equal strength. You will find considerable variation, however, in single colonies, whether yellow or black.
3. Yes, indeed.
4. Yes, indeed.
5. I don't know, but I think it is not safe to have a colony go into winter quarters with less than about 30 pounds unless you intend to feed them in the spring before flowers appear. If I am wrong in this I wish some South Carolinian would correct me.

The Afterthought.

The "Old Reliable" seen through New and Unrechable Glasses. By E. E. HasT, Sta. B Rural, Toledo, O.

Dr. Strickland not for "Meltose."

I hasten to make amends for a particularly atrocious meaning of my blundering pen. Dr. Strickland was not acting as a friend of meltose, ignorant of its uses, but more care in reading up the whole thing should have shown me that. He devotedly, though sincerely, located him on the wrong side of the fence and went on. Monkey at the lever of a 1½ H. P. machine is capable of mischief, is he not? Page 611.

Those twin brides.

Compliments to those twin brides and their grooms on page 721. Doubtless the boys themselves (on a slight inspection) can tell the brides apart. If the rest of the world makes a mistake occasionally, why, that doesn't signify.

Fixing Up Other People's Language.

And so Dr. Miller wants Prof. Cook and myself to settle matters between us. Might as well ask Kitty and Towser to settle their differences by a little private confab in the back yard. I just keep getting my head muddled and maddened all the time. It's just monstrous the way Prof. Phantom Cook is trying to compel 100,000,000 people to make bricks without straw. All who speak the English tongue come in contact with certain familiar objects. They have to call them something. Not one in a hundred of all these people can tell which is worm and which is larva—haven't the entomological knowledge required to do it. But here comes Phantom and says, "You must call them something." Leastwise, if he doesn't put it as badly as that, he is on the road in that direction—"I'll brand you as disgraceful perverters of the English tongue." If it was only one case, and entomology was the only science extant, we might think of yielding just for the sake of peace in the family. But science has a hundred branches (going to be); and nobody is, or possibly can be, familiar with all; but all, I fear, will have Prof. Cooks that will be emboldened to make similar demands of us, if we do not stand for our rights. Suppose a few hundred astronomers should insist that the entire English public leave off saying "shooting stars" and say "bolides." And what a supreme
as a geologist would make of himself trying to make everybody use the term "rock" precisely as he uses it! Call out the police and the ambulance. Dear Boss: I am going to throw the window open.

In some things the rich man has more rights than the poor man; and the learned man has more rights than the unlearned. That may sound shocking to some, but I will grant it freely. But—the right to have a language to express his ideas—a language which he can express his ideas, without distress, and without annoyance, and without being called a fool—that does not by any means go with the above. That's one of the inalienable rights of man, like "life, liberty, etc."

When comes, but I, for one, hardly believe that shading the lower dish will prevent the sun from spoiling the honey. Page 600.

FLOWERS INTOXICATING AND HOLDING BEES.

When only few and rare plants were accused of holding bees by some sort of intoxicant the case sounded stronger than it does now that the attempt is made to accuse the basswood of the same. But in the belief that the lower dish will prevent the sun from spoiling the honey.

The cow.

Is any home circle quite complete without the cow? I would never consent to be without this important adjunct in every home. In this day of food adulteration it is hard to know just what we are eating, but if we have our own cows, and do our own milking, we may be pretty sure on this point.

We are very fond of milk at our house, and none of us complain if a good proportion is richest cream. I take great pleasure in my glass or bowl of milk, and, I believe, as much in seeing the other members of the family as they diminish the sugar in it. We are certain that in milk there are no impurities. In it, too, we get perhaps as balanced a ration as we can obtain anywhere. It is Nature's own concoction. We never grew so fast as when in our babyhood. Then milk was our exclusive diet. I suppose in milk we get just about the right amount of sugar which has no taint of glucose in it; just the proper proportion of fat, which is certainly one of the most appetizing and wholesome of all the varieties of oleaginous material for the digestive system. We are certain that in the milk we have enough and most wholesome albuminoid.

I also like to take care of my own cow and to do my own milking. So many people are content to keep their cows covered with filth, and are so scrupulously careful not to brush or clean them as to commence to draw the milk, that I find it not at all agreeable to patronize the milkman.

My cow must be as neat and clean as my driving horse, and I would not think of commencing to milk until the cow was absolutely clean in all respects. Our private dairymen, whom I know, get the creamery price for his butter. When asked why, at one of our Farmers' Institutes, he said, "I never milk without thoroughly brushing, and, if necessary, at all thoroughly washing the cows, all about the udders." Neither would I have any one milk my cow who would wet the teats before or during the milking. Wet milking and neatness never ride in the same carriage.

We have just secured a cow coming to our neighborhood—share the milk. Four families own the cow and share equally the expense and the profit. As I have said before, I think such partnership among nearest neighbors tends to harmony, and has more to recommend it than the old-time economy gains. Also, each person in a family gets a quart of milk a day. She does a good lot of eating. I like to see her eat. Of course she must eat or she could not give us so liberally of her very substance. Where do we have a better example of real, personal sacrifice than we see in the cow? I fancy our cow has a sort of a benignant look in her very eyes. Mrs. Cook remarked only a few minutes ago, "How kindly our cow looks at us: and what a pretty face she has." I thought to myself, "Why not? If any one has a right to look kindly it is surely one who gives herself, as does our cow, to add to the pleasure and happiness of others."

Our cow has been giving milk only a few days. The spring into action of the great milk-glands has made the udder tender, so that as I draw the milk the parts are irritated, and she raises her foot, often many times, when I am milking, and not always in gentlest fashion. There are many ways to meet the all too numerous things. I could use my boot or stool, and possibly she might be cowed into quietness. No doubt in doing this, even though I did succeed in quieting her, I should do it at the sacrifice of milk. Rough treatment makes milk go with the wind, as we say. If milk does not go together.

The other course is to milk very gently, and perhaps very slowly, and thus not hurt even the sensitive milk.

I hardly need say that this is the way that I have proceeded, and I am very happy to state that it has worked like a charm. I am sure, too, that treating or getting the full and a full milk, and just assure that I am in no danger of ruining the cow.

I wonder if we all realize that we are never violent with our animals, especially with our cows, exhibiting to great extent. We hardly realize how delicately sensitive our cows are to any disturbance. A large dairyman told me a few days since that he never changed his cows from one pasture to another without losing several pails of milk; and this happened through he put the cows to a pasture where the disturbance attending the change was what reduced the milk flow. The dog, the milk-stool, and the boot too often bring the same result.

Propos to the above is the too common habit of pouring milk because she does not "give down" her milk. The philosophy of yielding or withholding the milk is this: The milk is in very numerous small tubes, which are thickly set in muscular tissue. These small muscles are the striated type, and are entirely beyond the control of the will. Thus, we are absolutely sure that the cow has no direct control of the matter. Rough treatment, which will produce a nervous shock, may effect to press the milk down the teats. It would be only a few that we have made a bad matter worse, and done a beastly, mean thing. In all such cases stoning or kicking are strictly in order; but the cow should not be the recipient.

CATS AND DOGS.

I don't mean cats and dogs in the sense of "scraps" in the home. Oh! that parents who suffer ill-will, fault-finding, family-jars to invade the sacred precincts of the home could realize their terrible mistake! They are the only real legacy to the ones entrusted to their care. Divorce has always seemed to me one of the blackest pages in our social history. Separation between the chief partners of the home circle is nearly as bad. Yet, I quite agree with Mrs. W. H. Page in the Christian Register, "The daily spectacle of a discordant home is worse for the child than the known separation of its parents." Cats and dogs, then, as used to designate fierce word battles, where word-fights have no business, is not my theme— I mean real cats and dogs.
We have two tiger cats. We all like them, and if purring is a sign of contentment—and who can doubt it?—then our cats are not pining for a new home. No one would wonder at this, if he should see the great basin of freshest, sweetest milk that I give them twice daily, as I come always attending them with a high cup, full, of course. I always watch them as I milk. So I have to be neat and particular, as I am always watched. My wife and daughter insist on this full milk ration. I am not the only one who thinks nothing of our good cats. I often hint to them that if ever I do get jealous of those cats it will surely not be without provocation.

One of these cats is a beauty. He is as boldly striped as a veritable tiger. Everybody praises "Toots." "He is such a beauty." Toddlies is more plain in garb. Few visitors discover on their first visit that any woman is clad in clothes as dotsy as Mrs. Cook and daughter take his part, and warm up as they portray his good points. These cats are treasures. Mice used to run riot in the barn, and took too generous toll of hay and meal bag. Now I never see any mice except as Toots or Toddlies come to me one that specially pleases them, and, like well brought up cats, wish to share the pleasure with me.

— Even a better use than this is the pleasure they give the dear ones of our home circle. It is good for us to lavish attention and care even on a feline member of the family. And I am sure that loving them insures more love to those of the household more deserving of love. Neither do our cats disturb any of our neighbors. Indeed, they are fondly petted by all.

I don't feel so about dogs. I wouldn't have one. They do not catch mice, and are only valuable as pets. And are they not too often a nuisance to all the neighbors? No hour of night is sacred against their vociferous yelps. And how few are too well bred to pitch wildly out at the passing carriage or equestrian? Unless we can get real gentleman dogs—and they are rare in California—let us replace every dog on the place with a good, handsome cat.

**DIVORCE THE LAWN AND TREES SHRUBS.**

What are so exquisitely graceful as date-palms—the Phoenix canariensis? They are great, living fountains of golden milk. A neighbor had one right on the lawn. It had no business there. An open lawn is too beautiful a feature of the landscape to be invaded even by handsome tree or shrub. Again, the grass seems to have learned this, and proceeds at once, upon occasion, to throttle the very life from any invader. Thus it was that the date-palm was yellow and sickly. Why, my date-palm, almost near enough to shake hands with the other, grew more in three years than did that one in more than double the time. The grass washed the water and the fertility, and took it, and the poor palm could only turn yellow—not green—with envy.

A new neighbor has purchased the place. As the palm was on the edge of the lawn, or to one side, she digged about it and put the too-greeny grass-blades to route. And, presto! the palm doesn't look like the same plant at all. The sickly yellow is replaced with brightest green, and it has grown more in one short year than in several long previous ones. It just laughs now, and were it not that its strong roots had gotten such a hold, I veritably believe it would dance.

Let us all keep trees and shrubs away from the lawns.

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EMERSON TAYLOR ABBOTT, Editor.

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**THE AMERICAN BEE JOURNAL.**

Dec. 5, 1901

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**THE BEE IN LAW.**

Bee are free nature, i.e., wild by nature, and possess no substantial value as having what is called animus revocandi, or a usual habit of returning whence they have escaped. During this temporary absence they remain the property of the original owner (2 Kent, Com. 348). The law, as Blackstone says, "defines this possession...for instance, the purpose or more unusual occupation; for my tame hawk that is pursuing his quarry in my presence, though he is at liberty to go where he pleases, is nevertheless, as to his own use, the hawk of my neighbour." So are my pigeons, and bees that are flying at a distance from our house and are chased out of my park or forest, and is instantly pursued by the keeper or forester; all which remain still in my possession, and I still preserve my qualified property in them. But if they stray without my knowledge, and do not return in the usual manner, it is then lawful for the stranger to take them" (2 Blackstone, Com. 352).

So, in the civil law, Gains says: "In respect of such animals as are in the habit of going and returning, as pigeons and bees and deer, when the owner is accustomed to go into the woods and fields and come again, we have this traditional rule: That if they cease to do the thing, and it is very rare that they also cease to be ours, and become the property of the first taker; now they appear to cease to have the animus revocandi when they have discontinued their habit of returning. This theory may be compared to the rights of property in animals at common law, when the law requires certain artificial measures such as taming them or offering them food and drink, but not, as in the case of invading animals, which return from the natural wild. The highest authority is that the only ownership in them is residuary. In consideration of the facts that a character is bestowed on every Freeman to be entitled to the honey found within his own woods, affords great consideration to the doctrine that a qualified property may be laid in bees in consideration of the good nature, the common possession, and the benefit of the remote neighbors also."
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of the property of the soil whereon they are found."

Identity.

One of the chief difficulties in reclaiming bees is in the almost impossible identification thereof. Many curious cases of doubtful or disputed identity might be illustrated by the singular fortunes of resemblance between bees, not only in their general appearance, but in certain characters of the accidental or ordinary. Positive recognition of peculiar habits and working of bees is too difficult to suffice to the claim of identity. Courts have recognized photography as a proper means of identification of the thing in dispute; but there is error in the record, so far as we have been able to discover, where a claimant has been able to reclaim his bees by means of photography. Various other cases of identity are illustrated by the concurrence of their several characteristics. This proof is too remote, and the question of identity is in the jury. The court cannot presume identity of bees.

Transportation of Bees; Contract of Carriage.

The exact character of the contract for the carriage of animals has been the subject of much judicial discussion. The prevailing opinion, however, is that common carriers are liable for injuries to animals when resulting from the acts of God or the public enemy, or from the peculiar nature of the body of animals, unless they are carried in transit with railway companies whether they will accept the full responsibility of transporting bees, yet if they do so without any express restriction, they are liable as common carriers. But they may, for a less hire, agree simply to transport bees, furnish cars, etc., and if the shipper and owner of the bees agrees to the lower rate, he can not hold them as common carriers. For a given reward they profer to become his carrier; for a less reward they profer to furnish the necessary means that the owner of the bees may be the owner and carrier (Kinds v. McElroy, 91 N.Y. St., 247). In the case of Mrity v. Derenay, 54 Fed. R., 718, the United States court held that, vessel stricken and destroyed, and filled with water, and a cabin containing bees floated to the shore, but no effort was made by the master to use the bees in saving them, the steamboat line was held liable for damages to them, though the vessel was insured and was abandoned to the underwriters as a total loss.

Bees the Subject of Larceny.

Bees in the possession of the owner are the subjects of larceny, says the Indiana Supreme Court in State v. Murphy, 8 Bledsoe, 418. Further, the court holds that, when bees are in the possession of any person, they are the subject of larceny, and, on that subject, whatever constitutes possession. Generally it is


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regarded that the owner of the soil upon which the bees may be found is the possessor thereof. While the rights to animals *free miter* and to the soil and others, have been fairly settled by a considerable series of cases, the relative rights of parties, both of whom acknowledge the superior rights of the owner of the soil, seem never to have been precisely described. But in a recent Rhode Island case (Leicester v. Bowers, 10 R. I., 39,) the plaintiff, without permission, placed a hive of bees upon the land of the defendant, and in the superior court, also a trespasser, removed the bees and honey which had collected in the hive. The court found that there was no action of action, holding that neither plaintiff nor defendant had any title or right to possession to the bees or the honey. It then searched through the law to find a basis of action, and a trespasser. The court seems to have found just what a person has the right of possession to collect the honey and bees which has collected in the hive. The court quite correctly decided in favor of the plaintiff, reasoning that the title to the soil is not dispossessed from the possession of the person who has the right to take the bees and honey which have collected on it.

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**Fair Honey Crop.**

In our locality we have very changeable weather in winter—from extremely cold to warm. We seldom have over one week that bees do not fly, if left on the summer stands. In the case of the bee-keepers in my kind whether it would be an advantage to winter bees in a cellar under such conditions or not. Our honey crop was fair the latter part of the season. Bee-keepers in this locality do not read bee-papers; one reported fool brood, which on inquiry, proved to be broad in the supers. C. W. SUTHER. Garfield Co, Utah, Nov. 20.

**Bees Worked on Strawberries.**

I was very busy the past summer. In fact, I believe I never worked harder in my life, but it has been a good year for me. I had $500 worth of strawberries, and they were fine, big, and fine flavors—green leaves and a good fruit. I have 200 cherry bushes in June. My bees did quite well, but I did not have time to attend to them at the proper time. My best colony filled 10 frames and 50 sections of hives, but in two super frames and after reducing them for honey. I plan to do 50 pounds to the hive, but my scales weigh only 60 pounds, and I put a brick on for a weight of 50. I think this weight would not weigh them. I think they are all right for winter. My lightest colony weighs 47 pounds, being the only colony which is not reduced to a mere skeleton. I do not think I will have to feed for this winter. Basswood bloomed very

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An American Association
I am a bee-keeper, fruit-grower and farmer.
I have about 20 colonies of bees, and so far
have succeeded, with the help of the "Old
Bee-Keeping," to sell a large crop of nice comb
honey every year, besides having it on the table at meal time, as my family and I
find we can get along without it. We have
honey the last few years to the same store-
keeper for 12½ cents per pound, and next
year's crop is ordered before this year's
is sold.

Now for a question: Would the National
Association do all it could for its members
to get justice in such a case, though honey-dealers are its specialty—
EDITOR.

Hoping for a Good Wetting.
Although I am well advanced in years, and,
unfortunately, an invalid, I manage to attend
my bee-keeping. The best way for one who
has a little extra labor-cost during the past
winter, feeding, and fighting bee-diseases, etc., I am still
"in it," and expect to stay with it, whether
the American Bee Journal as a welcome visitor
and guide.

The first rain of the approaching winter
season fell here Oct. 27, and again Nov. 9
and 11, and we are all hoping for a good
wetting. The coming winter looks set for
nothing but a healthy winter. After suffering
my bees on the summerstands, but, as
a precaution on account of the high altitude
and cold snaps, we are packed a little
warmer.

GUST VON.
Riverside Co., Calif., Nov. 16.

A Report—Red Clover.
My bees did fairly well the past season,
averaging from 25 to 35 two-pound
sections of honey each. The weather was
fair, and I started the season with 24 colonies, increasing
to 36, and two swarms left for the woods.
I have nearly all my honey in the home
market. My bees worked on red clover as
much as on the white. Clover is in good
condition this fall—a few large, and things are booming. I would like some
of the "wise heads" to tell me if red clover
would suit Southern and Northern
peoples. I believe many do not, here in Iowa; or is it locality?
Page Co., Iowa, Nov. 12.

JERRY SCOTT.

Poor Prospect for White Clover.
I do not know what we will do for honey
next year. As the white Clover is killed by the
drought. No. 1 honey here is worth 15
cents per pound by the case. I sold all I had
at the price, and I had no swarms to speak of
this year. I live the swamp on the old
stand, and the swarms have all been made
in winter quarters in good condition this fall. Although
I can not agree with it in everything, I do not see
how I can get along without a good
honey-extractor. I have read of many who can
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J. M. MOTE.

Favors the Honey-Extractor.
The honey-extractor is an article little
used by farmer-beekeepers and many others
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To prevent the adulteration of honey.
To prosecute dishonest honey-dealers.

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HOWARD M. MELBEE, HONEYVILLE, O.
The Chicago Convention held its best meeting last week. It was also the most largely attended, the room being crowded at every session—about 100 present. There were bee-keepers from three or four different states. The discussions were taken in short-hand, so we will be able to place before our readers a complete report later on. It will easily be worth a year's subscription to the American Bee Journal. There was only one paper read, all else being interesting questions, which were discussed in a manner equal to the Buffalo convention, which report is now appearing in these columns.

Can We Have Better Gatherers?—Mr. Getaz, in this journal, has expressed the opinion that, although we might increase the size of our bee-keepers' meetings yet there was little prospect of increasing honey-gathering qualities, F. B. Simpson says in the Bee-Keepers' Review:

"The bee is not a domestic animal, or even domesticated; and we have done little to change her condition of life except to give her a better home; but by most careful selection I think we will be able to continue to increase gradually the average honey-yield until we obtain great uniformity, and, possibly, an average very near our present maximum yield."

Bee-keepers will probably wish that Mr. Simpson may prove the better prophet.

The Directors' Meetings at the Buffalo convention were held during the sessions of the convention, and a straw in gleanings in bee-culture reads thus upon the subject:

"I want to say in language somewhat emphatic, that some better way should be provided than to have Directors' meetings that keep directors out of the sessions of the annual convention of the National. It isn't fair to the directors; and if they are good for anything, it isn't fair to the convention."

Editor Root then follows with this comment:

"You are right; but the time of our national conventions is so much taken up by general convention work that it is often difficult to squeeze in a little side-committee work between the sessions. I think the time will have to come when the directors will have to consult by letter, and that the discussion of these questions will have to be done through correspondence. Such a plan is unsatisfactory, in that it gives the chairman of the Board almost exclusive power to direct. If he chooses, the work of the entire Board may be conducted from an experience based on the time I was chairman of the Board; and at that time I saw how easy it was to get things done in a hurry and plan I had."

If he suggests, for instance, that such and such a thing is to be done, and gives his reasons therefor, in the absence of any counter-argument, his proposed policy is sure to carry, when it may not always be wise.

There is good ground for the objection raised, especially when at Buffalo, the president happens to be one of the directors. If the interests of the Association seem to demand a meeting of the directors in person, it might not be a bad plan for them to convene a day or so in advance of the convention, so that all their business might be concluded before the opening session of the convention. This would be asking, perhaps, rather more than is reasonable from men whose time may be of considerable value, and who in any case give their services gratuitously as directors, and it would not be a very great wonder if in some cases, since directors are only human, a director or general manager might be led to say:

"I don't want to appear mean, but attending the convention is rather expensive business at best, and since this extra burden is put on, I can hardly afford to attend this year."

Certainly it would be nothing more than fair that an allowance should be made from the treasury to reimburse at least the expenses of the extra time.

A New White Clover is praised in the foreign bee-journals. It originated in Germany, is called rotoblat botan, and is said to yield a much larger amount of fodder than the common white clover. Nothing is said of its value as a honey-plant.

The Poison of the Sting is still spoken of as being formic acid, and it is even said sometimes that formic acid from the sting is dropped into the honey in the cell; but Dr. Langer's investigations have shown that the poison is a different matter altogether, having a mere trace of formic acid in it.

Carolinum for Hive-Paint.—This new acquaintance comes from Germany, where it is highly spoken of. An editorial in Gleanings in Bee-Culture gives considerable information regarding it. Instead of forming a coating on the surface like other paints, carolinum strikes clear through the wood, so that when one side of a 1/2-inch board is painted with it a splinter from the opposite side will taste of the material 24 hours later. It costs only half as much as good lead paint, and it is said that railroad ties saturated with it last three times as long as when not so treated.

Mr. O. O. Poppleton thinks it objectionable for hives because of the strong color of creosote, and because of its almost black color, yet he has used it for some years to preserve his hive-bottoms. The dark color would make little difference where hives are kept in the shade, although objectionable where they stand in the hot sun. Even if it be not desirable to use it for anything but hive-bottoms, it may be quite an acquisition for that purpose, for it is the bottom of a hive that rots first, and in some places the bottom is rained by ants, which would be kept at bay by the carolinum.

Those "National" Conventions.—A straw in gleanings in Bee-Culture reads as follows:

"It might not be a bad idea for each annual convention to nominate three candidates for general manager. In the last three years we succeeded in selecting the three directors whose terms expire with the following December. That's a suggestion of Editor York's. The National. It's worth considering for the future."

The following paragraph contains Editor Root's opinion on this subject:

"I do not believe it would be wise to bring about conditions or a precedent whereby the office of general manager, at least, should be changed as often as once in two or three years. When we get a good man, as in the case of our present general manager, we ought to hang on to him. One who has been in the harness, and knows how to pull, should not be made to give place to one who may be merely popular in the eyes of bee-keepers or members of the Association, and yet possibly be entirely unqualified for the meeting and important duties of the office. But I do believe Bro. York's suggestion is all right for the Board of Directors. None of us who have been so long on that Board could just as well get out, and thus place the responsibility for the success of the organization on other men whose help we need."

In the suggestion made in this journal there was no contemplation of bringing about any condition or precedent looking toward any change in the office of general manager. As the matter now stands, the manager is elected or re-elected every year. His being nominated in advance at the annual meeting would not be likely to make any change. So long as the man already in office was regarded as the best man for the place, he would be sure of nomination at the annual meeting as he would be sure of election if there had been no previous nomination. In general, there would be no need of any nomination. But there is need of nominations for directors, and as the election of manager occurs at the same time as the election of directors, the nominations should be made at the same time. There will, however, come times when it may be necessary to elect a new manager, either because the old one dies or will not longer serve, or because it is thought some other
The Buffalo Convention


(Continued from page 775.)

LENGTH OF TONGUES OF BEES.

Mr. Rankin—I had hardly expected to talk to you this afternoon, and what I have to say will be entirely extemporeous. It has been my pleasure to be connected with the Michigan Experimental Station for about five years and during that time I have not been without personal contact or something in the investigation of the length of the bees' tongues. The idea came to me at one time when I had a single colony that gathered a half more honey than any other in the yard. I began making investigations with crude machines to measure the tongues. I have been working right along on that line. I have run into a difficulty in the mating of queens—getting the queens mated to the desirable drones is the difficulty. Personally, I don't know how that is unravelled, but if I am confident it will be done some time or other. I have observed right along that a colony which gathered an exceptional amount of honey was one that had correspondingly long tongues, and the tongue for one bee in the colony is the rating for the tongues of every bee in that colony; that is, the tongues are uniform. You don't get one bee in a colony with a tongue 7 millimeters or 22-100 of an inch long, and the rest of them run away down low. Now, you see a long tongue hasn't as long a tongue as a full-grown bee, but if you gather the bees which you are measuring as nearly the same age as possible, you will have a uniform length of tongue, and I think this is one of the problems which bee-keeping will solve in the future, that is, breeding bees with a longer tongue. It isn't that we need a strain of bees just as superior to that we have now as the strain of live stock we have now is superior to that our ancestors began with. Do not let us carry this thing too far and make a hobby of it and run it into the ground, but let us keep our eyes open, and if we have one colony of bees in Michigan that is giving us exceptional returns, let us rear some queens from that colony and put those queens in from the stock that is doing the best. I have found out by talking with bee-keepers all over Michigan, that bee-keepers rear their queens from wherever it happens when the colony swarms, and no matter if that queen is producing good colony, that queen is allowed to go right on and lay eggs and be the mother of that colony. If you have an exceptional strain, produce that strain in your other colonies and bring them all up to that standard, and that is the practical side of bee-keeping to-day. In relation to in-breeding, I don't think we need the very much in-breeding of a single scheme which has been brought up that a queen will be mated to drones from the same stock. If in-breeding were carried on to an extent that would degenerate live stock, it would probably degenerate the bee. I don't think that from any of our systems—anything that we can get is not systematic enough to bring this cross-breeding to such a point that there is not possible for us to inbreed enough to hurt. I do think the bee-keeper of to-day can improve his stock by selecting his queens and his drones. If you have four or five successful colonies, by all means breed from them.

FOUL BROOD IN MICHIGAN.

Mr. Rankin—As far as foul brood in Michigan is concerned, we had some of it up there. I think my record for any one day this summer was to condemn 118 colonies, and that in two yards. Those people are all going to treat theirs. I have so far visited perhaps over 4,000 colonies. I have been on the road since July 1, and came directly from the field to-night.

Dr. Mason—Are you in accord with Mr. McEvoy when he says that a hive that has foul brood in it, does not need destroying?

Mr. Rankin—The stand I take is that if the hive is perfectly free from any drops of honey, it is probable that the disease will be produced by putting a clean swarm of bees there. If you look on the other hand, if there is any honey around the hive the disease will in all probability be reproduced. But that is not the point. We have a lot of ignorant people in our State, and when you talk to a farmer about a bacterial disease and tell him what the characteristics of a germ are; when you tell him that you can put 25,000 of them on the head of a pin, you will just stand and look at you. If you take the ordinary farmer and tell him you have no use of him disinfecting his hive, it has been my experience that he will go right out and do something which there is no use in, and which renders the treatment a failure. The principal reason why I place the stress on disinfecting hives, and in washing your hands in an antiseptic after examining a diseased colony, is, to impress upon those bee-keepers more forcibly the virulence of the germs, and the precautions they must take. I think the chlorite of lime doesn't smell so bad as carbolic acid.

Dr. Mason—What do you think of salicylic acid and borax?

Mr. Rankin—I don't like it. The salicylic acid is all right if you have it in a strong enough solution, I think it will be enough to convince a man that one
thing is right and have him stick to that.
Mr. Sleeper—How long is a bee’s tongue, ordinarily?
Mr. Rankin—They range all the way from 14-100 to 21-100 of an inch.
Mr. Sleeper—How long would a tongue have to be to be a long-tongued bee?
Mr. Rankin—Anything over 18-100 is above the average. 18-100 is about what you will find in the best-bred bees of the country and throughout the States.
Mr. Sleeper—Can bees with tongues 18-100 of an inch long gather honey from red clover?
Mr. Rankin—They can when the corolla-tubes with honey up to that point. They can find them about 35-100 to 50-100 of an inch long.
Mr. Abbott—The actual fact is that this year the corolla-tube of red clover is not more than half as long as it usually is, owing to the dry weather and the bees are all working on it now.
Mr. Betsinger—How near must the bee come to the honey-tube in order to draw all the honey out of the tube?
Mr. Rankin—I don’t think a bee can draw honey any farther than it can reach.
Mr. Betsinger—Then if the corolla-tube is so full of honey that the bee can only go half way down into the honey, it can only draw as far as its tongue is inserted, and it will stop drawing from that point. I think you will find from observation that if the bee can go half way down into the honey at all, it draws out every mite of honey that is in the corolla-tube.
Mr. Rankin—I have done that same thing. I have placed a tube of water out of a flower and held it up in your fingers and let a bee draw honey from it, it will empty the tube, but it will not do that when it is in a head and pressed tight in that? Has the bee power enough to collapse that honey-tube, which it must do? The capillary attraction holds the nectar right in that tube.
Mr. Betsinger—Isn’t it a fact that the bee takes a tube alone and handles it separate from the rest?
Mr. Rankin—That is true. But the nectar tube in the head and fastened right in there. After they drop down when they are ripe, the bee has no more to do with them. They will draw the nectar out clear from the bottom, but I don’t think they will do it when the corolla-tube is in the head.
Mr. Rankin—We have examined a good many clover-heads when the bees had gone all over them. I have then drawn out the corolla-tubes and found considerable honey at the bottom of them. I could see that from the bees that needed longer heads.
Mr. Sleeper—In relation to foul-brood germs, I understood Mr. Rankin to say that they would not hatch with the naked eye. You have looked through a microscope at these germs many times?
Mr. Rankin—Yes, sir.
Mr. Sleeper—Have you found them anywhere else except in honey?
Mr. Rankin—Yes, sir; I have found them in the tissues of the larvae that were diseased, and, of course, you know that when you take any material whatever, no matter what it is, and put it under a high enough power microscope so that you will detect the germs, you will get anywhere from ten to 500,000 species of germs.
Mr. Sleeper—They exist independent of honey?
Mr. Rankin—They exist in the bodies of the larvae which are diseased. Mr. Sleeper—Don’t they exist anywhere else except in the larvae and the honey?
Mr. Rankin—I don’t think there is anything in the hive aside from the honey and the tissues of the larvae from which the germ will get sustained, existence, will not grow in acids or anything else.
Mr. Benton—Why confine it to the larvae alone? Why not say in the paper and add that the honey may be diseased also?
Mr. Rankin—Do you know that is so? I know that this is so in the larvae. I don’t think that you will find any of these foul brood in the adult bee outside of the honey-sac. I have looked for it and failed to find it.
W. L. Coggshall—How many different forms of germs do you find—is there more than one species of foul brood?
Mr. Rankin—No; foul brood is caused by one germ—bacillus alvei—which is a specific germ, twice as wide as it is long. I have found the germ of black brood under a microscope.

RESOLUTIONS ADOPTED.

Mr. Abbott then introduced the following resolutions:

"Resolved, That the thanks of this Association be extended to the Mayor; to the Buffalo Society of Natural Science; to the Board of Education; and the committee rooms; and to Dr. Smith, President of this society, for his cordial address of welcome; and to the janitor and the janitor’s wife for their watchful care of the building; and to the local bee-keepers of Buffalo for the beautiful badges they have furnished us, and for the use of a piano."

"Resolved, That we extend to the Texas Bee-Keepers’ Association our thanks for the interest they have shown in the prosperity of the National Association by sending two delegates to attend this meeting."

The resolutions were adopted.

BOILING FOUL-BROOD HONEY.

"I have read of boiling honey from foul-brood hives and feeding back. How much water should be added, and how long should it be boiled?"

Mr. McEvoy—I don’t like to answer that question, from the fact that I never advised the feeding—the public is too careless. They will give the disease through it. They merely heat it, and they might just as well give it raw. Water, I have added nearly a third water, and sometimes nearly half, and brought it to a sharp, bubbling boil. I never noticed any bad effects from it.

Mr. Rankin—If you could be certain that the honey were boiled it might be all right. Prof. Harrison, of Cedartown, Ga., wrote last year published a bulletin on foul brood. He has demonstrated to us that you can boil the spores of foul brood for something like two hours and still produce clean feeders, but I have not seen any growth there. Do we have any spores in the honey? I have never seen any foul-broody honey fed back that did not produce the disease, but I have not had the experience that Mr. McEvoy has had. I have been in this business only a short time, and I haven’t tested it thoroughly, but I do not think it is safe to recommend the feeding back of foul-broody honey in any instance whatever.

Mr. McEvoy—I told a farmer, who would insist on feeding back foul-broody honey instead of buying it, I would tell him how to do it. I went back to examine that apiary and every one of the colonies had foul brood. I said, "Did you boil the honey?" He replied, "Yes, it was boiled." "Who boiled it?" "The girls." I said to the girl, "Did you boil it?" She said, "Yes, it was hot that I could hardly put finger in it."

Mr. Sleeper—This gentleman speaks of spores. Now I understand that they are seeds, are they not? I would like to know whether these are animal, or vegetable.

Mr. Rankin—They are the same as other germs. Some authorities say they are vegetable and some animal.

Mr. Benton—I think that they are vegetable and not animal.

Dr. Mason—Is there anything in the foul-brood line in honey that will not be killed by being boiled?

Mr. Rankin—Yes, sir; and the statement of Prof. Harrison that the spores may be boiled, I think 2½ hours, before they are killed.

Mr. McEvoy—I was going to say if they would add about half water and bring it to a sharp, bubbling boil it would kill them.

Dr. Mason—Science is a fine thing, but good, practical experience is a good thing. I had at one time about 80 colonies with foul brood, and the honey which extracted was so thick that when you could start a stick of sugar, you wouldn’t go in a chunk; and I boiled that honey and fed it back to the bees and didn’t spread any foul brood. I don’t think there is anything living thing in honey that boiling won’t kill.

Mr. Sleeper—How long do you boil it?

Dr. Mason—I make sure it is all boiled. I boiled it in a wash-boiler and I dipped it up boiling, and I poured it on the sides so as to rinse down the unboiled honey, and made sure that it was all boiled; but you want to know it is all boiled, every part of it.

Mr. Benton—All of these bacilli have their certain temperatures to which they have to be heated to be killed. Now the whole thing is this, that the absolute temperature for killing these is not known. All it needs is to determine the lowest temperature and use a thermometer and be sure that the whole mass reaches that temperature. We have boiled at 210 degrees, and this mass being much thicker was probably raised to 230 degrees before it boiled, and that is about the temperature that was reached. I am not at all certain that the bacilli did not exist in great numbers in the honey, except as an accidental impurity, and that they would not thrive as live.

R. B. Rian—My experience agrees with that of Dr. Mason. I have taken foul-broody honey and reduced it very little with water and boiled it until it was almost boil; then I poured it back to my bees without any bad results.

Mr. McEvoy—You take an old, dry comb that has had foul brood in it, that has stood for ten years, and it will give foul brood.

 BREEDING FOR DESIRABLE TRAITS.

"In breeding for desirable traits,
which is the more important, the drone or the queen?"

Mr. Hutchinson—I think one would be as important as the other.

Mr. Callbrea—My idea is that there is a difference in the vitality of drones and queens, the same as there is in human beings, the one that has the great vitality will affect the progeny the most.

Mr. Benton—I should consider the queen more important.

Mr. Callbrea—Is this the way to prepare barrels for extracted honey?

Dr. Mason—Drive the hoops tight.

**BEE-CULTURE IN TEXAS.**

Mr. Davidson—Our Secretary was to furnish us with a report of the number of colonies and bee-keepers in Texas, but he hadn’t furnished it before I left home.

Our State convention instructed our secretary to furnish us with a report of that convention, but I didn’t get it in time.

Mr. Davidson—Make it out and send it to me. (I have not received it yet—Secretary.)

Mr. Davidson—I think there are something over 2000 colonies of bees in Texas. I don’t remember the number of the bee-keepers that own them. We have a good country for bees. We have no disease among our bees. I think the greatest handicap that has been a bad impression made in the North in regard to Texas honey. The northern portion of the State produces honey gathered from wild flowers and woods, and sometimes the honey is sour and is not of good flavor. Our honey is very white. I saw a good deal of honey in the exhibit here similar to it. I would like to thank the bee-keepers of the Northern States for their kindness to the Texas representatives, and also to the Canadian bee-keepers. We wish to extend an invitation to the National Bee-Keepers’ convention, to have their meeting in San Antonio, Tex., next year, or any year after that.

Mr. Root—in regard to Texas, you say you have no foul brood or bee-diseases there. Do you have any enemies to your bees that cause destruction? You haven’t the winter that we have in the North, have you anything that you have to fight?

Mr. Davidson—No, sir. We have no enemies to the bees there that I have ever found. I have been keeping bees there for 15 years, and I have never seen any foul brood there. No winter loss at all. Our bees work nearly the whole winter. The moth does not bother bees in the South where the man understands his business and keeps his bees in the right condition.

Mr. Longnecker—Do you ever feed in the spring to stimulate brood-rearing?

Mr. Davidson—Yes, sir; we have fed them early, light honey-flow that commences about the middle of February. I never fed a pond of anything to our bees yet in the spring. The source of our main honey-flow is the mesquite and a shrub. We have the surest country for honey, I think, anywhere. We raise the rain in this country and get some honey, and if it is dry we get a great deal more. The dryer it gets the more honey we get.

Mr. Davidson—Do you have any loss from heat melting the combs?

Mr. Davidson—No, sir; I have never suffered any loss from that cause. I keep my bees under shade. I hear some complain, but generally it is where they leave the hives exposed to the sun. I have seen plenty of it where it was not properly attended to.

Mr. Toeppeerwein—I can hardly expect to hear much from bee-keepers away down in Texas, like Mr. Davidson and myself.

We have come here especially to see what you people here do, and see what kinds of honey you produce and what you do with it. We intended to bring some good-sized samples of the sections we are in there, and we produce some very nice extracted honey, which we want to dispose of. There is a very poor market for honey here, and I can get any information as to how to dispose of our honey I would like to learn of it here. I have brought a few samples of honey just to show what we have and you are a great thing in Texas. Whenever we have a drought we get our honey just the same; and in spring, if it rains, there is the cat-claw that produces honey. There is a white bush which blossoms after every rain. If it is dry there will be the mesquite, which is safe every year, so it doesn’t make any difference in our portion of Texas, we do not want to sell our honey, and if any people from the North would like to have any information about bee-keeping in Texas I would be glad to give it to them. I have seen the honey candy within two or three days after being extracted. We have a method now of putting the honey hot and forming it in glass jars with a tin cap, and I think that will keep it from granulating.

Mr. McCroy—What is your average yield per colony?

Mr. Toeppeerwein—A bee-keeper who understands his business can get all the way from 60 to 200 pounds per colony. That is, if we have a right dry season. I don’t think it is necessary to have any less than 60 pounds.

Pres. Root—Do you have any seasons of complete failure?

Mr. Davidson—No, sir; it has not proven to be, but it could be if it would rain just at the time of the mesquite blossom.

Pres. Root—Do you allow your bees to swarm where you run for extracted honey?

Mr. Toeppeerwein—Yes, sir; I let my bees swarm, and get a crop from the old colony and from the swarm, too.

Mr. Longnecker—I think you will find one of the points against buying Texas honey in the North, it is canned too much. Northern consumers won’t buy canned honey.

Mr. Toeppeerwein—What are we trying to do up here is to make connection with some concern, and have stations where people can buy the home honey beehives, get the bees and ship it in cars, and the agent comes around and buys the honey at a reasonable price and ships it up here in car-loads.

Mr. Root—I would like to ask Mr. Toeppeerwein whether they produce very much comb honey there, and what the average is per colony.

Mr. Toeppeerwein—The bee-keepers down there are getting to produce this chunk honey now. It is cut out of the frames and packed in cans with eight-inch sections, but there are getting there are there to get that done because they say there is no market for extracted honey. I wouldn’t produce any but extracted myself. Another thing, if they produce comb honey, they ought to produce it in sections.

Dr. Mason—if you can dispose of chunk honey, why don’t you produce it?

Mr. Toeppeerwein—Now, chunk honey, you have to put in foundation. There is great expense. The bees will have to build that every time.

(Continued next week.)

**Other Conventions.**

**The Colorado State Bee-Keepers’ Convention.**

BY D. W. WORKING, Sec.

It was a big thing—this 22d annual meeting of ours—and all the wide-awake bee-keepers in the country ought to hear about it. Will the American Bee Journal let me tell them?

The introduction must be brief; so that the really important matters can be given appropriate mention.

We met, as was advertised, in Representative Hall in Denver’s beautiful Capitol building, and had every convenience that the most particular bee-keeper could desire. The program was carried out with very few changes.

Dr. Root was not able to be with us, but Editor Hutchinson occupied the first evening with an instructive and entertaining talk illustrated with magic-lantern views. It was of much value, and will be furnished to the readers of the American Bee Journal, the discussions in condensed form.

The address of Pres. Aikin attracted marked attention, and the paper on long-tongued bees by Professor Gillette of our State Agricultural College, was an exceptionally instructive study of this remarkable subject. It will claim a good many “explanations”.

The exhibit of bees and bee-products was an experiment, but so successful that it will be repeated under the management of the Colorado convention.

An interesting outcome was the award of the first premium for the “best ten sections of white honey” to an exhibit of last year’s product; and this in spite of the fact that the winner had new honey entered for the same premium, and the additional fact that there were several other contestants for the prize.

The premium was Editor Hutchinson—did not suspect that the premium honey was old. Moreover, they did not seem the least bit annoyed when told what had happened.

The election resulted in the choice of a new President, J. U. Harris, of Grand Junction; and a new Vice-President, M. A. Gill. The Secretary and Treasurer were re-elected. Mr. Harris was advanced from the vice-presidency, and Mr. Gill came up from the ranks.

The Association at the present time has the largest membership in its history, and there are good reasons for believing that it will not decrease in numbers and usefulness during the coming year.

Mr. Aikin, the retiring president, after eight or nine years of faithful service, received the unanimous thanks of the Association for his successful labors. As
a private (though not a common) member, he will continue to have a large influence among the bee-keepers of the State. It should be mentioned that, during the last year, the Governor was hustled away from an important meeting of the State Bee Board, and brought upstairs to see the largest assembly of bee-keepers he had ever faced. He made a pleasant off-hand speech, promising to be of use whenever it should be possible. He will have a chance next year.

The Association did not forget to be thankful (and to express its thanks) to all who had helped to make the three-day meeting successful in every way interesting and profitable.

This brief report makes no pretense of being complete. Later on—if the editor should get items of information about the meeting may be sandwiched in between formal papers and discussions. It is not to be forgotten that the meeting was a big thing.

Report of the Utah Bee-Keepers' Convention.

The last convention of the Utah Bee-Keepers' Association was held in Salt Lake City, Oct. 5. The meeting was called to order by Pres. Lovesy. There was a good attendance, and an interesting session was held.

Col. J. C. Smith, President, Geo. How, of Utah County, by request spoke on the different sizes and kinds of bees. He said that he used the Langstroth and American hives, and that the bees must be kept dry, as it was the dampness that killed them in the winter.

Wm. Blake said that he was interested in both bees and fruit, and he thought those two industries should go together; that the job of removing the thistle should be done when the thistle was not in full bloom.

J. A. Smith, of Wasatch County, spoke of the need for more bee-keepers, and said that there was a need for more bee-keepers, and said that there was a need for more bee-keepers.

J. H. Bartlett, of Uintah County, said that the beehive in that locality had produced from a third to half a crop. They had no foul brood or other disease.

FOUL BROOD CURE—NEW METHOD.

The bee-industry in our State in this the beginning of the new century, although we have received some fairly good reports, on the whole they cannot be considered as good as might be desired; while in some of the southern counties the honey-flow has been unusually good, as also in some localities in the northern part of the State. The great honey-producers of the State, who are located in the central part of the State, which last year and some other seasons produced, in some instances, an average of about 300 pounds per colony, this year in the Uintah Valley district, yielded from about half a crop to a total failure. While there may be other reasons for this falling off, the principal one are drought, a lack of irrigation-works, disease, and a shortage of reproduction. In addition to this, in Salt Lake County, at least, is the smoker smoke; while in a few instances, in the best honey localities, the bee-keeper gets enough from his bees to make it profitable. The bees always die off through the fall from the effects of smoke settling on the bloom. We have been informed that one or more companies are going in to smoke-hunters this winter. We hope all will soon follow their example, as this question is getting to be a serious one to daryenists and farmers as well as bee-keepers.

But aside from the smoke, the grasshopper plague has been the principal cause of the destruction of the honey-flow and other crops in season. We call the attention of our bee-keepers, farmers and fruit-growers to this matter. It goes without saying that it should be plain to every thinking mind that some emergency measures must be taken to suppress this pest. In some portions of Salt Lake and other counties, the past season, the grasshoppers destroyed nearly everything that grew—potato, alfalfa and flax fields were turned into a shambles, and left to the ground. In the latter part of July I visited several orchards, and there was not a sign of a leaf left in them. Some of those trees will die, as the new growth of wood, together with the hark and buds of the small branches, are eaten off; and the alfalfa will die where it is eaten down into the crown of the plant.

Now for remedies that can be made effective on the effect of the grasshopper. Our friendly friends, the gulls, came and destroyed billions of them the latter part of July, but as they do not come until the breeding season, it is too late to do anything of value. The next best remedy which can be used when desired, are turkeys or chickens. While either can be made effective, the turkeys are not as efficient if properly hatched. Make a sufficient number of strong, portable coops that can be drawn where desired, and that can be closed so as to protect the birds at night. If the scheme is followed, it will not only serve to save the grasshopper pest, but it will prove a profitable business in raising the birds for the market.

There have been some experiments of late among the bee-keepers of trying to protect our bee-keepers and fruit-growers by destroying the moth and other destructive insects, the object being to reduce the number of the pest at the same time, without the use of a poisonous spray, which has not been, and will never be, a success in reducing the number of those destructive insects.

While it will be seen, from some of the reports sent in, this dearth of honey has been by no means universal over the State, if we can succeed along the lines indicated, we believe the old time prosperity will again be recorded generally. It is desirable, also, in that it would be beneficial to all concerned to have Colorado and Utah bee-keepers come in touch with the disposal of their products.

E. S. LOVESY.

Another method of catching grasshoppers is, in cutting lucerne, to leave a swath every two rods, on which the "hoppers" will congregate. Make a sack, out of ordinary cloth, about six or seven feet long and three to four feet wide, and attach the mouth of it to a wooden frame of the same size to keep it open. Then two persons on horseback drag the sack up and down the swath where the grasshoppers are—they jump into the sack and are caught. This sack can be used wherever it can be agreed among the farmers to be dragged only at night or early morning, as the hoppers then are not so easily frightened—they seem more stupid.

E. Johnson thought it would be a good idea to encourage buying supplies and in marketing bee-products. He also offered a resolution which carried, that the officers of the association make an effort to get the fraternal union with Colorado bee-keepers.

Mr. Carlson said he had lost his bees for several years on account of the smelter smoke. He purchased more, but they always died in the fall. He said but for the smoke his bees would otherwise be healthy.

J. Ferry said that nearly all the bees in that locality were dead; the smelters were about five rods away, and he had no doubt that the smoke from the smelters killed the bees.

Mr. Falkman, of Weber County, said that, taken as a whole, the bee-industry had not proven a success the past season.

J. H. Bartlett, of Uintah County, said that the bees in that locality had produced from a third to half a crop. They had no foul brood or other disease.
Another cure for foul brood is as follows: Take equal parts of carbolic and salicylic acids, saturate a flannel cloth and put it between two thin boards, so that the bees can not touch the flannel or acid. Put this in the place of center frame of the hive, removing the frames.

Mr. Gardner gave an interesting sketch of a bee-house 9x28 feet and 7 feet high, holding over 100 colonies. He manipulated his bees in the house, keeping them in winter and summer. He has three tiers of hives on each side of the house, running north and south. The house is built with tight board rustic. The hives are pushed up against the boards of the house, with the entrance opposite- facing holes in the boards. The walls are painted several colors, in perpendicular stripes, after the style of a barber pole, each stripe being the width of a hive. In this way the bees have no trouble locating their hives. He says the house has proven a success with him, the bees being easy to handle, with much less work, and his loss has, so far, not exceeded five per cent.

The honey crop in Uintah County was short, on account of a small, white, flying insect, the insect being very numerous in all necessary blooming during July. The pest made its first appearance July 1, and remained until the bloom was killed by frost.

Mr. Neilson gave a very interesting description of a moth-trap he has invented for the destruction of the codling moth and other insect pests. He stated that by this method the moth egg and larvae can be caught and destroyed at the same time, which makes it much more effective than spraying. He said the old-time poison spray had never been a success, and never could be, because of the large number of larvae caught—often not more than two per cent—and the harm done often exceeded the benefits derived. He was sustained in this view by several practical fruit growers present, some of whom said they had given up poison spraying as an expensive luxury, and not worth following.

Contributed Articles.

Long-Tongued Honey-Bees.

Read at the recent Colorado Bee-Keeper's Convention at Denver.

By PROF. G. P. GILLETTE,

of the Colorado Agricultural College, at Fort Collins.

Who first suggested breeding for long-tongued honey-bees, I do not know. It is said that a Mr. Wankler, of Germany, inventing an invention as early as 1882, for the purpose of measuring the length of bees' tongues. So far as I have been able to learn, the first person to bring this matter prominently before the bee-keepers of this country was Mr. J. M. Rankin, of the Michigan Experiment Station, at present the bee-keeper for the State. Mr. Rankin attempted to breed up a long-tongued strain of bees and believed that his efforts were crowned with some measure of success.

During the past year, or eighteen months, the subject of "long-tongued" or "red-clover" bees has been greatly agitated in the bee-journals of the country and has come to a veritable mind. A person having queens to sell feels that he is greatly behind the times—a sort of back number in this age of progress—unless he can guarantee his queens to produce a long-tongued variety of worker-bees. The result is, he so advertises them without knowing the real facts in the case, but with the belief that his bees have tongues as long as.

To a student of biology, particularly if he be an entomologist, the idea of a long-tongued race of honey-bees coming quickly into existence, seems extremely improbable. There is no more important organ in the anatomy of the honey-bee than its tongue for the maintenance of life, and nature has been breeding this tongue to a standard length for so long a time that it is not likely to vary rapidly under artificial selection where parents can be controlled on one side only. For these reasons the writer took no interest in the matter when it was first agitated. Finally, so many bee-keepers of known honesty and sincerity of purpose began to advocate breeding for long-tongued bees, and to advertise that they had such bees for sale, that it seemed necessary that some one, having the facilities and the necessary training, should make a careful study of the subject and report the facts. The writer began to collect bees for the purpose of testing tongue-length early last summer. It was not possible to spare a large amount of time for this purpose, but I feel warranted in making this preliminary report, and am expecting to publish a fuller one after continuing the work farther.

WHAT IS MEANT BY TONGUE-LENGTH?

The so-called "tongue" of the honey-bee is a very highly specialised organ made up of many parts. The longest single piece is the ligula, which is very flexible, yellowish in color, and thickly set with short hairs. Into this the nectar of the flower is first taken. It is supported by a black, rigid, chitinous piece called the mentum, which is about one-third as long as the ligula. At the base of the mentum is a still shorter piece which is also hard and rigid—the so-called "tongue-base." This is attached to the head by two slender, stiff rods, joined at the middle and known as the cardos or hinges. These medium parts with the attached portions (the two sets of palpi and the maxillae) make up the parts of the tongue. The important questions are, therefore, to determine how our base our measurements upon in giving tongue-length?

In breeding for long-tongued bees what one would want to know is the distance the tongue can be made to reach beyond the jaws or mandibles—the "tongue-reaching." As it is often called. This is the measurement which has been given us by Mr. Root and most others, so far as I know, who have reported lengths of bees' tongues.

Glossosimeters also have been constructed to measure this tongue-reach in bees, and in this case it has been found by Mr. Root, and others, that the tongue-reach of the bee is shorter than the tongue-reach of the mandibles, as the ratios between parts in a bee are far more constant than in man. For this reason, and for the further reason that it is more easy to get an accurate measurement of the parts of the tongue when it is dissected completely out and placed upon a glass slide under a compound microscope, I have considered the entire tongue-length the best measurement upon which to base conclusions as to tongue-reach.

I believe, for practical purposes, it may always be considered true that the bee with the longest tongue has the longest possible tongue-reach. As the man with the shorter arm-reach might suggest his patriotism from the tree than his longer-armed but less active brother, so the bee with shorter tongue-reach may excite her less industrious sister in collecting nectar from flowers.

In my first measurements tongue-length only was taken into account, but of the later ones the tongue-reach, so near as I could measure it, was also recorded. An examination of the figures in the following table will show a far greater variation in the latter measurements than in the former. If the tongue-reach should steadily increase when the long-tongued bee could usually increase it by two or three hundredths of an inch by a little careful stretching, I do not mean a real stretching, but a straightening of the joints of the cardos so as to extend the tongue-reach as shown in the illustration. The tongue will not remain in this position unless held there.

HOW TO KILL THE BEES.

Chloroform, alcohol, formalin, cyanide of potassium, and boiling water, were all experienced with to determine the
best killing agent, and it was found the last was the only one that would always leave the tongue in a completely relaxed condition for measurement. The water is first made boiling hot and then the bees are either thrust into the water or the water dashed upon the bees.

MEASUREMENT OF THE TONGUE.

To obtain the tongue-reach the head of the wet bee is removed and the tongue pulled out between thumb and finger as far as it will reach and pressed in this condition upon a glass slide with the face of the bee uppermost. The slide is then placed under the compound microscope and upon a rule graduated to hundredths of an inch, and the length of li gula, mentum, sub-mentum and total length read separately and recorded.

WHERE THE BEES WERE OBTAINED.

The bees whose tongues I measured have come from Maine to Texas in this country, and I have also had bees from imported queens from Germany, Italy and the Isle of Cyprus. In several cases bees were sent from the best and the poorest colonies in an apiary, and I took pains to obtain bees from those who were advertising long-tongued or red-clover queens. I have not asked permission to use the names of parties who were kind enough to send me bees, and shall not do so except in one or two cases, where I feel confident there could be no objection.

TABLE GIVING LENGTHS OF BEES’ TONGUES.

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<th>Length of Ligula Only</th>
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<th>CYPRIANS—From Mr. Frank Benton.</th>
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Photographing a Bee—How It Was Done.

BY W. W. WORKING.

READERS of the American Bee Journal may be interested in the story of the photograph as well as in the photograph itself; for it is no easy matter to pose a worker-bee just right and to get as good a picture of her as shown on the first page of this number.

Mr. C. Collier, one of the best photographers in Denver—Mr. J. C. Collier—who takes pride in doing difficult work better than anybody else, shook his head, and said it would be impossible to get the bee to sit still long enough to make a photograph. I insisted that I thought it could be done, and Mr. Collier said I. Mr. Collier's look convinced me of the stupidity of my question before he had time to frame an answer. How could he get the bee into focus? I supposed the thing was easy enough for a professional. But we took no picture that day.

When I called a few days later, the bees were shrunken corpses. "Too bad!" said the kind-hearted picture-maker.

I wanted a photograph. So a week or two later, I caught a few more bees and carried them to the studio. Mr. Collier said, "I just make a picture to get rid of me. And at the went!" He is a patient man: has photographed dogs, cats, horses, cows, and cross babies that had to be made to look sweet. The bee was worse than any of them. I wanted something more than a life-sized portrait—as the bee-keeper will understand from the engraving—and I got it, thanks to the patience and perseverance of the photographer. But the bee was dead before we got her posed just right, with that honey made so sweetly for all the facts. It is too long past, too strong in death. She was cross enough to look at before she died—poor thing—but it all came back in time to be caught, and forever impressed on the sensitive plate in the big camera.

In the end, the picture was taken by placing the bee between two plates of a studio, and then got a new plate—a ten-minute exposure. The result was better, but still not satisfactory.

Finally, after an exposure of seven minutes by the watch, the hard lines of the old man's countenance relaxed as he looked at the plate and said: "It couldn't be better—with such light as we have." So I was satisfied. Arapahoe Co., Colo.

**The Afterthought.**

The "Old Reliable" seen through New and Unreliable Glasses.

By E. F. HASTY, Sta. B Koral, Toledo, O.

**SMOKING BEES—GETTING WORKER-COMB BUILT.**

Two ideas in Dr. Gallup's article, page 662, catch my attention. One is that frequent use of smoke makes bees cross. It seems to me that it must be a wrong reading of the facts that leads to that conclusion. Letting bees get the start of you undoubtedly makes them cross—and then your doing a lot of smoking, only makes them more so. Hence, it is not the use of smoke that is at fault, but the use of smoke with the mischief which the other circumstance did.

The other idea is moving outside frames into the center to have the comb built worker size instead of drone. I feel ashamed to confess that that almost makes me laugh. I have been working on an idea. It worked in this case, and very likely would work in most cases. It usually doesn't work to take out a center comb of a colony that swarms, and replace it by an empty frame; but that is a different affair. In hiving on empty frames and a self-farmer expects, he almost gets a frame built at all till during a strong flow they are wanted to store honey. This, of course, tends to drone-comb; while getting them built promptly, and in the center, would tend the other way, unless drone-broad was eagerly wanted.

**CABBAGES AND LEMONS.**

Cabbages two cents a pound and lemons one cent a pound, etc. Pretty good lecture on the law of demand and supply. Page 666.
FOLDED CHAFF CUSHIONS.

I can back up Mr. M. H. Hunt, page 668, that folded chaff cushions are a better fit than sewed ones—and also that they make holes in the latter after June perambulations. I hardly think the loss of the colony would always result from such attempt to swarm. I have all along thought the screen portico the best device for shutting up bees. Didn’t say much because top screens were so much more popular—and because I don’t perambulate, and therefore my own experience is very scanty. Glad to see Jacob Alpaugh, of Ontario, thinking somewhat as I do. Page 669.

SCREEN PORTICOES FOR HIVES.

So, with a big wire portico on the hives, bees think they can swarm, and sometimes try it and perish. Something of a difficulty to get the latter out of June perambulations.

SAFE INTRODUCTION OF QUEENS.

The A. D. D. Wood method of introduction is manifestly easier than caging an entire frame. I think we can accept it as nearly safe, seeing that he finds no failures. Of course, downy bees just emerged will not hurt the queen—and equally, of course, she will quit after awhile from “acting up” and provoking assault, if she has no bee of her own near her. I should not be surprised if this should turn out the most valuable practical kink which has been brought out for a good spell. Page 670.

ALSATIANS AND THE EXTRACTOR.

And so the Alsatians, at least some of them, think we invented the extractor—probably because they imported a good one from America. Page 676.

ANCIENT Temples EXEMPLIFIED IN COMB HONEY.

Mr. Ansell’s ornamental work in finished comb honey is quite a triumph in its line. Some of the first great and splendid temples that were built in the world were built in that form. Perhaps he had that thought in mind when he chose the form. Pages 673 and 676.

THE HIVE-KICKERS.

The hive-kickers seem to have had an inning at the conventional bee-keeper’s hive. The kicking bee-hive is all right if you do it in the right way—as Messrs. Kluck and Cogshall doubtless do. I suppose kicking King Edward in his palace would be all right, if you did it just right. Page 678.

Reversible Brood-Frames.

What do you think of the reversible brood-frames? How should they be used? Do you think they are of any advantage? Which is the best style to use? I have not seen anything said of them in the American Bee Journal.

Answer.—If you will turn back far enough you will find a great deal said about reversible frames in the pages of the American Bee Journal, as also in other journals. To day they are seldom mentioned. Quite a number of reversible frames were in existence, and there were also reversible hives, so that the frames could be reversed in a wholesale manner without opening the hives.

It was believed that when there was honey in the upper part of a brood-comb, reversing would make the bees carry up the honey into the super. While that result is generally achieved by reversing, there is found to be in the long run no special gain.

Another advantage was that reversing caused the bees to build their combs down to the bottom-bars. Either because that point could be gained in some other way, or because it costs more than it comes to, we hear nothing nowadays about reversing for the sake of getting frames filled out.

But the great thing that gave reversible frames and hives a real bonn was the belief that by their use we had a sure means of preventing swarming. It was claimed that when a queen-cell was turned upside down the bees would not continue it to completion. Then all that was necessary to do was to reverse often enough and no queen-cells would be sealed, therefore no swarming. Like many other things in bee-keeping, it worked better on paper than in actual practice; and it is also true that you can find any day who advocates reversing as a preventive of swarming. So it is hardly worth your while to try reversible frames.

Buckwheat—Sweet Clover, Etc.

1. Will buckwheat honey make suitable stores for wintering bees?

Answer.—I suppose that buckwheat honey was bad for winter stores, but later observations seem to show that it is all right.

2. I don’t know. One of the hardest things to find out about is the amount of nectar that can be obtained from a given area. If I should make a guess in the case, I should say that ten acres thoroughly covered with sweet clover might give profitable employment to 20 colonies of bees, but I’ll not quarrel with any one who says it ought to be three times as large, say, five times as small.

3. I don’t believe it will pay to rent land at $2.50 an acre to sow with any crop for the sake of the honey alone. But I may be mistaken about sweet clover. I do believe, however, that by taking a crop of hay from it each year it might be made to pay, the honey being so much extra.

Hive-Entrance in Winter—Keeping Combs of Honey, Etc.

1. In looking over the “A B C of Bee-Culture,” it advises leaving full width of the hive open for winter. I have mine reduced to ¾. I want to know if that is right.

2. I took off a shallow extracting super of 9 frames full of uncapped honey. I really don’t know what to do with it. I suppose it will sour before spring. I have one colony in a hive tiered up (2-story dovetailed hives), or rather a Dunz hive on the bottom and a dovetailed on top, with 9 brood-frames, each, full of honey.

3. I had two others in 2-story dovetailed hives and I put a bee-escape between them. Intending to take them off the next day, but other things called me away, and when I went back in a week the honey was uncapped and gone. The bees got under the hive-cover and cleaned it. Can you think of bee-escapes?

4. I don’t think there can be any queen in the brood-nest, as I have not seen any so far, although there is every evidence that there is a queen here. But I don’t know how to find her.

Honey from Prospects, Etc.

1. In case you will look to the “B C D” of Bee-Culture, it advises leaving the full width of the hive open for winter. I have mine reduced to ¾. I want to know if that is right.

2. I took off a shallow extracting super of 9 frames full of uncapped honey. I really don’t know what to do with it. I suppose it will sour before spring. I have one colony in a hive tiered up (2-story dovetailed hives), or rather a Dunz hive on the bottom and a dovetailed on top, with 9 brood-frames, each, full of honey.

3. I had two others in 2-story dovetailed hives and I put a bee-escape between them. Intending to take them off the next day, but other things called me away, and when I went back in a week the honey was uncapped and gone. The bees got under the hive-cover and cleaned it. Can you think of bee-escapes?

4. I don’t think there can be any queen in the brood-nest, as I have not seen any so far, although there is every evidence that there is a queen here. But I don’t know how to find her.

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California! If you care to know of its Flowers, Climate or Resources, send for a sample copy of California’s Favorite Paper—

The Pacific Rural Press,
The leading weekly agricultural and fishing paper of the Pacific Coast. Published weekly, handsomely illustrated, $2.00 per annum. Sample copy free.
PACIFIC RURAL PRESS,
330 Market Street. • San Francisco, Cal.

For Sale Extracted Honey—honey in sheets, clover or basswood, in 5-pound lots, 7c; amber, 8c; Buckwheat, in boxes, 25c; clover, 25c; various types, C. R. HOWARD, Romulus, N. Y.

REDUCED RATES for CHRISTMAS AND NEW YEAR HOLIDAYS.
The Nickel Plate Road will sell tickets Dec. 24, 25, and 31, 1901, and Jan. 1, 1902, at rate of a fare and one-third for the round-trip, to any point located in Central Passenger Association territory, good for trips and including luggage.

Send for new poultry book de-

dicated to the public by the

DANDY BIRD CULTURE.

This book gives hints on the raising of Dandy Bantams. The Dandy, the easiest turning bird in the world, is sold direct at 90c per pair. Prices, 80c up.

Please mention Bee Journal when writing.

Secured a Crop from Clover.
I secured a fine crop of honey from clover, but there was no fall flow except "just enough to fill the hives." Clovers, bearing ready at 15 cents — some sold at 20 cents the bushel near the fall. It has plenty of rain this fall, so we are looking for a good clover harvest next year. The weather has been exceedingly fine, and we have not put the bees into the cellar yet, but there is a change to-day, and I look for colder weather soon.

I have taken the American Bee Journal for over a year, and it was very helpful. I do not see how I could do without it.

Bert Gander.
Guthrie Co., Iowa, Dec. 1.

“The Proof is in the Eating.”
A Mr. Roegman visited me on some business the other day, and, on seeing the bee-hives made in and about my place, I got him the past season. On being told about $400 from 28 colonies, spring count, and an increase to 30, he could not help being pleased (as he got no honey at all); but on showing him the proof, and explaining that I was indebted to many bee-books and bee-papers which I was reading, and after offering to return him his dollar, if, after reading a year, he had not gotten his money’s worth, he decided to accept the American Bee Journal.

My bees are still on the summer stands, and have been flying nearly every day this month, though I think it has been detrimental to them. There has been but little brood reared since Sept. 15, and the wintering is going on.

F. W. Hall.
Sioux Co., Iowa, Nov. 29.

Experience with Honey-Plants, etc.
The past two seasons we have grown clover or Rocky Mountain bee-plant, as it was so highly recommended for bee-food—"fairly overflowing with nectar." We watched faithfully, but could never discover the bees at work upon the plants, nor near- ing. We have purchased, in a later section, however, in growing great quantities of Scabiosa, or "Mourning Bride," and in the latter, in the honey-cells, can strike bees around the blossoms from morning until late in the evening, and they also seem to revel among the clover, the egg-shaped flowers, or Bachelor’s Button, and Summer Sorcery.

We had a real fight the past season with the moth-millers—they never were so numer- ous. One colony was entirely destroyed in spite of our watchfulness. After opening a hive and destroying great numbers, in a few days they were all through the hive again. The robbing were also at work—bees killed and honey taken. How can we manage to save our bees from these pests?

Sarah A. Bowerman.
Monroe Co., N. Y.

Wintering Bees in Chaff Hives.
Bees in this locality went into winter quar ters with ample stores to last them until honey crops, or the clover plants we have been very fine the last week, thereby en abling the bees to have good flights, and to reach the waterings which comes the third or four days ago I noticed dandelions still in bloom. I am wintering a part of my apiary in chaff hives, where I have stories fed with chaff over the frames, and leaves on the chaff. Another portion is in the single-walled Simplicity hives, where we have paper clear around and over them, leaving the entrance so that the bees can get out when necessary. The tarred paper will keep off the snow and rain, and keep the wind from


Dittmer’s Foundation!
Retail—Wholesale—Jobbing.
I use a PROCESS that produces EVERY ESSENTIAL necessary for the best and MOST desirable in all respects. MY PRO- cess and AUTOMATIC MACHINE are beyond compare, and my own inventions, which enable me to SELl FOUNDATION and

Work Wax Into Foundation For Cash at prices that are the lowest. Catalog giving Full Line of Supplies, with prices and samples, free on application BEESWAX WANTED.

GUS DITTMER, Augusta, Wis.
Please mention Bee Journal when writing.

THE WHEEL OF TIME for all time,
The Metal Wheel.
We make them in all styles and vari- ations, — FIT TO MATCH YOUR EYESIGHT, sight or play. Fitted with any width of tire desired. Choose your own pattern. Our FIT TO MATCH YOUR EYESIGHT, sight or play.

NO BREAKING DOWN,

Electric Wheel Co., Box 90. • De Kalb, Ind. • We are making thousands of miles of Fence Annually—more than all others. Don’t buy untill you see ours—PICK WIRE FENCE CO., ADRIAN, Mich.

Send for circular regarding the oldest and most improved and original Bingham Bee Smoker. For 25 Years the Best on Earth.

Please mention Bee Journal when writing.

WE ARE MAKING...
HOW DIFFERENT IS the perfect system of regulating tem- perature and humidity in bee-keeping! MARILLA INSULATORS AND BROADCASTERS from all others. You will understand the difference at a glance. Gar- nished with a temperature thermometer. Money back if you do not find absolute perfection.

MARILLA INSULATOR COMPANY, Box 3 • ROSE HILL, N. Y.
Please mention Bee Journal when writing.

SWEET CLOVER And Several Other Clover Seeds.
We have made arrangements so that we can furnish Seed of several of the Clovers named below at a profit or express, at the following prices, cash with the order.

Summer Sweet (white clover). . . 1 lb. 10 lb. 100 lb. 50 lb. 250 lb. $1.20 $12.00 $120.00 $60.00

Summer Sweet (red clover) . . . 1 lb. 10 lb. 100 lb. 50 lb. 250 lb. 3.50 35.00 350.00 175.00

Alaska Clover . . . . . . . 1 lb. 10 lb. 100 lb. 50 lb. 250 lb. 1.70 17.00 170.00 85.00

White Clover . . . . . . 1 lb. 10 lb. 100 lb. 50 lb. 250 lb. 1.75 17.50 175.00 90.00

Alaska Clover . . . . . . 1 lb. 10 lb. 100 lb. 50 lb. 250 lb. 3.00 30.00 300.00 150.00

Prices subject to market changes. Single pound for less than the 5-pound rate, and 10 cents extra for postpaid and sale.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORCH & CO.
114 & 166 Erie St.
CHICAGO, ILL.

Please mention Bee Journal when writing Advertisers.
blowing through the openings in the hives, thereby keeping the hives dry and warm. White clover has sprung up with the late fall rains, and promises to be pretty plentiful next year. It was never better than last season.

The 'old reliable' American Bee Journal comes to hand brimful of good things about bees every week. J. M. Young.

Cass Co., N. B., Nov. 29.

Bees and Pear-Blight.

I see there is a good deal said about the pear-blight being spread by the bees. I have seen it on trees that had no blossom, so I would say that down here it is more on the water-sprouts, where there is no blossom, than anywhere else. My observation is, that if there is a freeze after the sap is up, there will be blight, bloom or no bloom; no freeze or chill, and there will be no blight. I believe this to be the prime reason of bigging would like to hear from others of the same opinion. I have noticed for several years that if there is no frost there is no blight. I like the American Bee Journal very much.

Dekalb Co., Terre., Nov. 23.

Report for the Season.

As it always interests me to read the reports of others, I take it for granted that they, also, bear of the success of those endeavoring to make a living through the agency of the busy bee. I secured 5,000 pounds of honey (1000 being comb) from 35 colonies, and increased to 65 the last season.

I have better success wintering my bees last winter than most apiarists in these parts, losing but 8 out of 65 (they having starved), when the average loss, so far as I have been able to ascertain, was 75 percent.

I put one colony on the scales last summer. It was fairly strong, and did not swarm. The following are their record:

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<td>June 14</td>
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<td>July 11</td>
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Total gain, 365 pounds from like clover and manure.

Caught in a Snow-Storm.

We have a foot of snow here, and the wind has piled it up in our roads so they are nearly impassable. The weather was unusually pleasant, up to ten days ago, that I left the bees out till too late, and those at the out-apiary are not in a very healthy condition; over which I feel rather blue, as in all probability they will now have to go in all covered with snow and ice. Those here at home I put into

NO COLLEGE EDUCATION

is needed to run the super Hatch Incubator. They are so made that they run themselves. Made of California redwood, heartfully finished; twelve ounce copper, with the bottom of the body never to wear; all parts guaranteed. Our catalogue contains hundreds of photographs of the super Hatch Incubator at work, and valuation of the super Hatch Incubator, for free.

Sure Hatch Incubator Co., Clay Center, Neb., or Columbus, O. Please mention Bee Journal when writing.

OUR NEW CATALOG, describing and listing the finest line of BEE-KEEPERS' SUPPLIES IN THE WORLD, will be ready about the first of the year. If you have not been receiving a copy annually, send us your name and address and one will be mailed you free. Prices will be the same as last season with the exception of the narrow, plain sections with no bee-ways, which will be $25 per thousand less.

G. B. LEWIS COMPANY, Watertown, Wis., U. S. A.


Excellent shipping facilities and very low freight rates for Southern and Eastern territories.

Please mention Bee Journal when writing.

26 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying 26 cents a pound—CASH—for the best yield, upon its receipt, or 28 cents in trade. Impure wax not taken at any price.

Address as follows, very plainly,

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

Why Not Buy the Best?

It costs no more than inferior styles. We claim that Adam's Green Bone Cutter is the best because it is the only Ball Bearing machine on the market. It works on the easy principle, turns easier, cuts faster and cleaner, and prepares the bone to be shaped than any other bone stone.

Catalogue No. 9 Is Free.

W. J. ADAM, - - JOPLIN, ILL.

The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only 80 cts. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this 'Emerson' so further binding is necessary.

GEORGE W. YORK & CO., 144 & 146 Erie Street, CHICAGO, ILL.
Experience with Bees.

I came here in March, 1880, and commenced farming on a farm two miles from town. My father-in-law, Abner Bliss, had kept a few colonies of bees for years and was very successful. Mr. Bliss became very much interested later, however, and commenced studying the business to learn it rather perfectly. As for me, I have been interested somewhat in years gone by. During the winter of 1883-84, I had the privilege of foraging the acquaintance of Mr. A. J. Johnson, of Douglas County, who was a successful bee-keeper, and a reader of the American Bee Journal. If I remember rightly. There I saw a Langstroth hive for the first time, a foundation machine, comb foundation, a press for putting it in the hive, and many other things. I had a few colonies of bees at the time, and so became much interested, but lost them in 1886. I had a colony or two afterwards, but lost them, still I determined to try again.

Mr. Bliss told me if I would get a Danzenback hive he would give me a swarm to put into it. Accordingly, I sent for one and got it. The first colony had some surplus honey, but the other needed feeding, so I fed them and put them into the cellar, hung up a thermometer and kept the temperature correct through the winter. Mr. Bliss has practiced keeping bees in this cellar for some years with excellent success. When we took our bees out of the cellar last spring we found them in good condition, but the mice had eaten away some of the combs.

After I had secured a start in bees again I subscribed for the American Bee Journal, and Mr. Bliss has the “A B C of Bee-Culture,” and Doolittle’s “Scientific Queen-Rearing.” I have “Langstroth on the Honey-Bee Cook’s Manual of the Apiary,” and Newman’s “Bees and Honey.” And I read last winter.

Mr. Bliss bought 19 queens, and I 6; we then began making hives. We ordered sections and foundation, and I made the machinery for putting in starters, which is adjustable, and works with a foot-lever and an alcohol lamp. I believe it a success, and beats anything I have seen.

When our queens came we had two business at home, and I thought we were remarkably successful, but we do not know it all yet. I saved six queens out of six, and made some mistakes besides. We have learned something, and appreciate the assistance we get from the American Bee Journal and the books very much. Our honey yield for the past season was fair, and of very fine quality.

R. L. WILDSMAN.

Peoria Co., Ill., Nov. 1.

$5 INCUBATORS FREE SIZE

Special offer on all new orders.$5.00 each, 4 for $18.25. Send for description of our goods.

No 11 50c, No 2 75c, No 3 1.00 and get one free.

INVINCIBLE MATCH CO., SPRINGFIELD, OHIO.

Please mention Bee Journal when writing.

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published.

Prof. A. J. COOK, Claremont, Cal.,

FOR HIS

“Bee-keeper’s Guide.”

Liberal Discounts to the Trade.

Please mention Bee Journal when writing.

Dec. 12, 1901.

AMERICAN BEE JOURNAL

Management of Foul Brood.

The Rocky Mountain Bee Journal is quite optimistic with regard to the management of a colony of bees. The Rocky Mountain Bee Journal is quite optimistic with regard to the management of a colony of bees. Mr. Bliss for producing honey and in case such a colony is affected with foul brood, saying:

Some of our largest and best comb-honey producers have for years made a specialty of producing honey. It is a well-known fact that section honey produced over brood combs is inferior in every respect; that produced over combs that are one year old, or older. In most localities there would be a big loss in having new bees work on the old combs every year. To one who has never tried it, such would seem to be the case in Colorado, but those who are practicing it assert that there is not only not any loss in the number of pounds of surplus honey produced, but an actual gain in the superior feeding quality of the honey secured, and the yield of wax from the old comb.

To secure new brood combs each season and not lessen the crop of surplus honey at the opening of the honey-flow, each colony is shaken into a new hive containing only foundation starts in the swarming condition ready to start the sections in the sections, building brood in the comb-bed only just fast enough to accommodate the material capacity of the queen. By the close of our honey season we have had brood combs to be filled, and the best possible work will have been secured in the sections.

To secure a success of any system, colonies must be strong, and the work must be done at exactly the right time. It may be said in its favor, that it effectually solves the problem of swarming.

Do Queenless Bees Prefer Too Old Larve for Queen-Rearing?

Last year I attempted to get an answer to this question. I think the result was conclusive. But Hon. H. L. Ford thought the position of the comb was such as to favor starting queen-cells from the younger brood. This year I thought I would make the test in such a way that no such objection could be made. At the same time I simplified the question put the bees, placing it this way:

“Which do you prefer, queen rearing, a cell in which an egg was laid not less than six days ago, or one in which an egg was laid not more than four days ago?” Or, assum

ing that the larva hatches from the egg in three days the question would be, “Which do you prefer, a larva three days old or one 24 hours old?”

July 16, at 10 a.m., I took from a nucleus the queenless colony an egg comb with comb we will call comb A. The queen in the nucleus had been laying about a week, and during that time, we had concluded that the comb could be morally certain that eggs had been laid just before removal. The comb was about two-thirds filled with eggs. I put it in an upper story of a strong colony over an excluder, along with other unsealed brood, which had been done in the same way. I fed the inner story, so that it would be well cared for.

July 10, at 10 a.m., I took from a nucleus (in which was my best queen) its two broodcombs, and gave it a comb that had not been used for queen rearing, but which had been used for a few cells of sealed brood, and its cells were well polished, ready for immediate use. This we called B.

July 22, at 10 a.m., I took from a full colony its queen and all its brood, putting in the center of the hive combs A and B, and filling

The Honey Bee

Revised by Daddant—1900 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to the American Bee Journal—Chas. Daddant & Son. Each subject is clearly and thoroly ex

plained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for $1.25, or club it with the American Bee Journal for one year—both for $1.75; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

GEORGE W. YORK & CO.

144 & 146 Erie Street. CHICAGO, ILL.

After the theatre or other evening entertainment, the Night Express on the Nickel Plate Road leaves daily at 11:20, from the Van Buren Street Union Passenger Station, Arrives at Cleveland at 10:20 a.m. Breakfast in Dining Car. Makes connections at Buffalo for all points East. Arrives at New York City 7:50 second morning, and Boston at 10:15. Sleeping Cars open at 9:30 p.m. Ticket office, 111 Adams Street. Phone Central 2657.

47—50 A.M.

Langstroth Oil...
—
Dec.

AMERICAN BEE lOlWNAL

12, 1901.

out the hive with combs coutaining some
honey. A feeder was on top.
The combs were thus put on an equal footing. so far as I could determine, nearly the
same amount of brood being in each comb, (t
having a little the most. Being side by side,
in the middle of the hive, neither one could
have an advantage in position.
.luly

comb

I examined comb « and
must confess that I forgot to look
23'.)
On comb a I found one

at 10 a.m.,

-'4,

b.

(

I

them

.July
cell started.

at

of

On comb

6 there

were

"28,

them not yet drawn out, only the

a few
cells

were enlarged. I may as well say here that
no other cells were started later, somewhat to
my surprise. Perhaps the bees thought it
was enough to start 29. All but one were

had their choice of
ages from eggs just laid to sealed
brood, exreptiiig larvic between the ages of
one and three days. If it were true that they
were in such haste for a queen that they
would select too old larvie, certainly one
would have expected comb a to have greatly
the preference, instead of their being content
with larvic so young as 24 hours. But their
general preference was for something younger
than the three-day larvie not onlj' younger,
but very much younger. Just one cell was
started with a larva as old as three days. One
can not b^ positive as to the age of that one,
but one can be very positive as to the other
2S.
July 24, when they were inspected, not a
larva on the comb could have been more than
three days old, as it is not possible that a cell
on that comb was at any time started with a
larva beyond that age. As they were all
started bet'urc 10 a.m. of that day, it is certain
that none of them could have been as much
as three days old, and probable that most of
them were much younger.
In

this case the bees
all

—

Some one may

ask, "

Why

are you so persistent in trying toshojv that the universally
accepted opinion Is wrong * What difference
does it make, anyway *'" The simple desire
to have the truth known ought to be incentive enough.
But there is something else that
makes it seem to me a matter of very great

consequence.
It is probable that not one in fifty of the
bee-keepers of the land takes the pains to use
the means that are now taught to be necessary to secure the best queens, using cell-cups

and that

sort of

thing.

Nor

will

they.

:

less bees prefer too old larvip cheats that man
out of the chance of easily improving his

stock.

He should

be told the truth in something

like these words:

"A

semi-annual meeting of
the Seneca County Bee-Keepers" Association,
will be held at the Bevier House, Romulus,
N.Y., Saturday, Dec. 14, 10(11, at 10 a.m. 1:30 p.m.
Hon. R. L. Taylor, of Michigan, will be present and address the meetiner. "Queen-Reariag"
discussion opened by Ira Wilson and C. J. Baldridge: ''Repairing Old Hives or Obtaining New
Ones," J. C. Howard and H. L. McLellan. Dinner will be served at the Bevier House, special
rates having been secured.

Fked
C. B.

HowAKD,

queenless colony will rarely,

if

ever,

prefer larv;t too old for good queens. None
of the most improved methods of modern
times will produce queens a whit better than
those the bees will rear in a colony you have
made queenless, so long as they have young
enough larva- to select from, .\tter the larvic
have become too old they may still start cells,
and these will produce poor i|ueens. If you
give to a nucleus or a colony two or three
good-looking cells, there is small chance of a
poor queen. Or you may give to the ([ueenless colony a fresh frame of brood and eggs
flveorsi.x days after being made queenless,
and then you need have no fear of poor cells
on any of the previous frames." Dk. C. C.
MiLLEii, in (Meanings in Bee-Culture.

1901— Bee-Keepers' Supplies!
)

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IT lyiil catalog.

nch,

Wayne

Flease mention Bee Journal

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Co.. Mich
writing

Emens,

Pres.

Vermnnt — The State Horticu
il So
etv
and the Vermont Bee-Keepers" Association, wi
hold a joint meeting at Vergennes, Dec. 17 an
M. F. Cram, Sec.

W.Brookfleld, Vt.

Wisconsin

— The Wisconsin

State Bee-Keep-

ers' Association will hold its annual convention
Jn the State Capitol, at Madison, Feb. .^ and I.,
1902.
This promises to be a large convention.
All are invited to attend. There will be excur-

sion rates of 1' fare for the round-trip, good
for all of the first week in February.
Aha L. Pickard, Sec.
N. E. Fksnck, Pres.
i

IfiONEY AND BEESWAX

You

are invited to attend. Reduced rates on all railroads; tickets can be
bought Dec. 30 and Jan. 1. good to return not
later than Jan. 4. There will be no set program,
but another of our "open congress " meetings.
Those who have attended in the past know
what that means, and those that don't should
tion in years.

find out. A novel design for badge
has been ordered in honor.of "Petoskey."

come and

Geo. E. Hilton, Pres.
York- — Bee-Keepers' meetings and institutes will be held in this State as follows:
Rochester. Dec. 11: Canandaigua, Dec. 12 and
13; Romulus, Dec. 14; Auburn, Dec. 17; Fonda,
Dec. IS. These institutes are held under the
auspices of the Bureau of Farmers' Io.stitutes,
and will be conducted by prominent bee-keepers
and speakers from home and abroad. Bee-keepers are urged to attend and show by their presence that they appreciate these institiltes, otherwise they will be discontinued.

New

W.
Pres.

New York

F.

Marks,

Ass'u of Bee-Keepers'Societies

6omb and Extracted Honeu!

kind and qua

BURNETT & CO., 19') S. Water St.", Chicago

R. A.

Please mention the Bee Journal.

33Atf

Wanted — Honey.

Chicago, Nov. 19.— Honey

wa.\.

State

214<,-214,h

a

good to No. 1, 14c; and
light
darker grades, 10@12c.
Extracted, white, S}^("7c; amber, S't^S-'ic according to quality, flavor and package. Beeswa.x good demand at 2Hc.
R. A. BtJRNETT & Co.
14K<i}'lSc;
amber, 13c, with

2.^.— The

Cincinnati, Oct.

comb honey

WEBER,

H. 11.
Central Ave., Cincinnati, O.

THE NICKEL PLATE ROAD
will sell tickets Dec. 24, 25 and 31,1"H)1,
and Jan. 1, Jy02, at rate of a fare and
a third for the round-trip to any point
located in Central Passeng^er Association territory, account Christmas and
Year Holidays. Return limit in-

New

2. l'H)2.

Through

from

sells

i2^(q)15hic.
C. H. W.

Wbbbr.

Y., Oct. 25.— Honey in good de
tjiand now, as this is the most satisfactory time
to sell. Grocerymen are stocking up and will
lines,

piece out.

when late they only buy enough to
Fancy white comb, lSfel(,c; mixed,

UfgtXSc: buckwheat, 12W13C.
t>ii@~}4c; mixed, b@6>4c.

Extracted, white,

H.R.Wright.
Omaha, Oct. 25. — New comb honey is arriving

by express in small quantities from Iowa and
Ct)lorado, and selling at $3.50 per case in a retail way.
California extracted honey is being
offered carlots at 4>^(ai4iic per pound, f.o.b. California shipping-points, but we have not heard
of any sales having been made thus far. The
production of extracted honev seems to be quite
large this year in Colorado, Utah and California.
Pevcke Bros.

New York, Nov. 8.—Comb honey is in good
demand, and while the market is not overstocked, receipts are sufficient to supply the demand. Fancy white sells at ISc, with an occasional sale at l(,c for attr.active lots; No. 1,
white, at 14c; No. 2, at 13c; fancy buckwheat
lltollj^c;

No.

and

1

2 at

from

lOiauiJ^c.

Ex-

tracted remains quiet at from f.(<it,Lic for white,
and S}4<(}5^iC for amber. Very little demand

foi^ dark at
27(al28c.

Beeswax

SXfeSMc.

cjuiet

at

from

HlLDRBTH & SeGKLKEN.

Boston, Nov. 20.— The demand for honev is
easing up, somewhat due in part to the holiday
season at which time it is much neglected.
Our market at the present time runs 16c for
strictly fancy in cartons; No. 1, 14(aiSc; Xo. 2,
12^(a)13c.
Extracted, light amber, 7^(.istic*

amber,

7c.
Blake. Scott & Las.
Des Moines, Oct. 25.— There is very little
doing here in new crop of honey. Some small
lots of near-by produced comb honev are on the
market and selling in a retail way at $3.50 to
$3.75 per case. We do not look for much trade
in this line before Sept.-l. Our market does not
consume a great deal of extracted honey.

Peycke Bros. & Cha.nev.

Detroit, Oct. 2S.—Fancv white comb honey
Ex-

14@lSc; No. 1, I3@14c; no dark to quote.
tracted, white, 6^7c. Beeswax, 25('i 26c.

M. H. Hunt

Son.

—

amber, 4@
Beeswax, 26(a^2sc.
Not much doiug in this center, but there are
no large stocks here of any description, and current values are being, as a rule, well maintained. There is more moving outward at present from southern producing points than from
here. Some apiarists are reported holding back
supplies,
spring.

,

anticipating

better

prices

in

the

Kansas

City, Oct. 25.— Up to the present
time only small lots of new comb honey have
been on the market, and these met with ready
sale on the basis of 15(S)16c per pound for fancy
white. For next week heavier receipts are expected and quotations are issued at f3.10(d)$3.25
per case for large lots, which would be equal to
about 14(ai45^c; the demand beinir quite brisk,
a firm market is anticipated. Inquiries for extracted are a little more numerous, but large
buyers still seem to have their ideas too low. In
a small way SM'*6c is quotable.

Pevcke Bros.

service

and other
Chicago Passenger
Station, Van ISuren St. and Pacific
Ave., on the Elevated Loop. For further information address John Y. t';ilahan, (Jeneral Agent, 111 Adams St.,

&

2s.— White comb, 11®

12'A cents; amber, sfSiOc; dark, 6@7 cents. Extraded, white, S}i(^t,c: light amber, 4«@5c;

City, Boston,

Eastern points.

Chicago.

is

Albany, N.

Bees-

poultry information, plans for poultry-houses,
yards, etc., chapters on practical poultry-raising, and how to make money on a small investment, etc. T^ook up their ad. on another patre,
and write them, and mention that you saw their
ad. in the American Bee Journal.

New York

honey market

rather dull on account of the warm weather.
E.itracted sells only to manufacturers from
S&oc; better grades alfalfa water-white from
6@7c; white clover from 8^9c. Fancy white

price de-

The Sure Hatch. — We are in receipt of the
Sure Hatch Incubator Compan"s fifth annual
catalog. It is a book of some l(i6 pages, over
200 illustrations, and contains a vast amount of

cluding Jan.

selling fairly

comb honey,

San Francisco, Nov.
43Atf

is

well at about the prices that have prevailed for
the last 2 months, viz: choice grades of white

'

Car Lots or otherwise: will pay highest market price, spot cash. Address, stating quantity,
quality, and price desired at your station. Wi'u
send man to receive when lot is large enough to
justify.
THOS. C. STANLEY & SON,
31Atf
Fairfield, III.

Comb Uoney and

|

MARKET QUOTATIONS.

buy
Michigan.— The Michigan State Bee-Keepers'
Association will meet in convention at Petoskey, Jan. 1 and .;, I'lo:;. This promises to be the
most largely attended meeting of the Associa-

to

We can furnish you with The A. I. Root Co'8
goods at wholesale cjr retail at their prices. We can
you treiKht. and ship promptly. Market price

S.

Sec.

It

looks like too formidable an affair. So 4i1
out of the .'>0 might be supposed to talk something after this fashion
" I am told I ought to breed from my best
stock.
I can make queenless the colony having my best queen, and
start queen-eels
galore, and from these I can have all the
queens I want. But if I do that the bees will
select larvi¥ too good for old queens, and I
can't use the complicated plans that queenbreeders use, so all I can do is to go on as I
have done." And that means to have hi.?
increase and his queens from swarming colonies instead of honey-gathering colonies. And
so the persistence of the fallacy that queen-

>1 >li >Jt >K. >!t >K. >li >te >ti >li Jte. Sit afe i*

New York.— The 3sth

18. 1901.

completed.

brood of

CONVENTION NOTICES.

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RAISED POULTRY
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Aiwnys strong and vl(rorhealthy frt.Hk. \^>^hlponIy fBrm
our new pot.Krv Guldi- and make big
Worth #26.
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JOHN BAUSCHER,

JR.,

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Words by EUGENE SECOR.
Music by GEORGE W. YORK.

This song was written specially for the Buffalo convention, and was sung there. It is written for organ or piano, as have been all the songs written for bee-keepers. Every home should have a copy of it, as well as a copy of

"THE HUM OF THE BEES IN THE APPLE-TREE BLOOM"

Written by EUGENE SECOR and DR. C. C. MILLER.

Prices—Either song will be mailed for 10 cents (stamps or silver), or both for only 15 cents. Or, for $1.00 strictly in advance payment of a year's subscription to the American Bee Journal, we will mail both of these songs free, if asked for.

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New Branch Office. We beg to announce the opening of a branch office and warehouse at 438 W. Houston St., San Antonio, Texas. Rates of transportation from Medina in less than car-load lots are high, and it takes a long time for a local shipment to reach Southern Texas points.

Low Freight and Quick Delivery—San Antonio. It has great railroads—the Southern Pacific R. R. east and West—the International and Great Northern R. R. from Laredo up through San Antonio and Central Texas, the San Antonio and Arkansas Pass R. R., and San Antonio and Gulf R. R. It also has the American, Wells Fargo and Pacific Express Companies.

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Our Managers. We have secured as managers Mr. U. D. Toepferwein, formerly of Leon Springs, and Mr. A. Y. Walton, Jr., both of whom are well known to the bee-keepers of South and Central Texas. They are also thoroughly familiar with practical bee-keeping and all matters associated with it, and any orders sent to this branch will receive prompt, careful attention.

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Our Catalog. We do not undertake to compete in price with all manufacturers. Bee-keepers have learned that it does not pay to buy cheap supplies, for a saving of 10 cents on the first cost of a hive may be a loss of many times this amount by getting poorly made and ill-fitting material. Every year brings us many proofs that our policy of "the best goods" is a correct one.

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National Bee-Keepers’ Association

OBJECTS:—
To promote and protect the interests of its members.
To prevent the adulteration of honey.
To prosecute dishonest honey-dealers.

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If more convenient, Dues may be sent to the office of the American Bee Journal, when they will be forwarded to Mr. Secor, who will mail individual receipts.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.

Note.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to have one of the buttons as it will cause people to ask questions about the busy bee, and many a conversation that might otherwise have ended with the sale of more or less honey at any rate, it would give the bee-keeper a splendid opportunity to enlighten many a person in regard to honey and bees.

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it.

Price, by mail, 6 cents; two for 10 cents; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

[This Cut is the Full Size of the Knife.]

The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.

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Basswood Honey

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

Prices of Alfalfa or Basswood Honey:
A sample of either, by mail, 10 cents, to pay for package and postage. By freight—two or more 60-pound cases of Alfalfa, 75 cents per pound; Basswood, 50 cents more per pound than Alfalfa prices. Cash must accompany each order. You can order half of each kind of honey, if you so desire. The cans are in two in a box, and freight is not prepaid.

Order the Above Honey and then Sell It.

We would expect that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

49 Please allow about two weeks for your knife order to be filled.
That Hoary Lie about the adulteration of comb honey seems still to retain much vigor. Here is a sample of its guiltlessness, kindly sent to us by Chas. F. Hoiser and others:

On my vacation in Michigan last summer I got some real honey—the real sweet kind, with a comb that choked up because it was so good. But I could not find it. Of course, every grocery store had what it said was strictly pure honey, in the finest looking containers; too nice looking; it was plain that it was all manufactured. A few days ago my grocer told me he had seen some real honey this time. I was certain of that, too, as soon as I saw it. I have worked with bees and know the cut-marks of their handwriting, and that comb was just irregular enough, imperfect enough in places to fool me. I bought two pounds. And when I got it home and took a mouthful the comb was not very sweet—it was a poor grade of glucose; and the comb melted in my mouth—l Volunteers.

No fading away of vigor about that, is there? Indeed, it has gained a robustness that exceeds its former self; for in former stages it only claimed that a minor part of the comb honey in Chicago was adulterated; now there is none of the genuine to be found in Chicago, although it be sought carefully for three months!

The amazing part about it is that this vigorous slander is not found in some obscure place, spoken by some ignoramus in the country grocery at the crossroads, but it is an opinion delivered in all seriousness before a body of supposedly brainy men. It is an extract from a paper read by the proprietor of the Farmer's Call, at the annual meeting of the National Agricultural Press League, and published in that sprightly periodical, Agricultural Advertising, published by Frank B. White Co., Mr. Frank B. White is well known as a man of unimpeachable reputation, and the soul of honor. Taken altogether, after so many years of battling with a great wrong, bee-keepers may be excused for feeling just a little discouraged as to getting anything like a semblance of justice.

More may be said of this hereafter.

Influence of the Queen. There has been some discussion as to whether the queen or the workers has the most influence upon the character of young royalty, some asserting that when black workers rear a queen from the egg of an Italian queen it would be the same as if reared by Italian queens, while others say the black nurses make of it a different being. Very far from this last view is that put forth in this country and in Europe, that a queen not only influences the character of her own offspring, but produces in some way, by her presence, a direct change upon the workers of another queen. The assertion is made that when the queen of a very cross colony is removed, and a queen of gentle stock introduced, not only will the colony be gentle when all the old workers have died off, but the crossness will all disappear within two or three weeks from the introduction of the new sovereign; in other words, while the bees of the cross colony are daily hatching out, and as yet there is not a single worker of the new colony.

As the newspapers say, "This needs confirmation!" and it would be well if those who have the opportunity would observe at what time a change of deportment may be seen when a gentle queen is put in place of a cross one.

Brood-Frame End-Spacers.—Opinions of bee-keepers are not so diametrically opposite as to many things as they are about the change made in frames which shortens the top-bars and depends upon staples driven into the end-bar to hold the frames in place lengthwise. Some claim that the change is a real boon. The bee-space at the ends of the top-bars prevents deposition of glue at that point, making it much easier to handle the frames. Others say the staples are constantly driven in and, as soon as driven in far enough there is the worst kind of trouble. The difference in the thickness of top-bars or end-bars may account for the difference of opinion. With a top-bar less than half an inch in thickness, and a 1/4-inch end-bar, the staple will not be firmly held, and will soon be out of place. With a thick end-bar, or with a top-bar so thick that the staple will be driven through the end-bar into the top-bar, there ought to be little or no trouble.

A Swarming Story.—The following has been sent to us as the report of something remarkable:

A Bee Story. James D. Noeland, an 80-year old farmer of Pike township, has had an unusual experience in his apiary this month.
The Buffalo Convention.


(Continued from page 900.)

FEEDING BEES FOR WINTER.

"Would heavy candied combs of honey alone, be safe to winter bees on, or cakes of candy alone, be safe, without any combs of honey?"

A. I. Root— I think the most successful feeding I did was with cakes of combs and I have leftover cake cakes on colonies in the fall with almost no combs at all, and laid cakes of maple sugar over the frames and wintered them all right. I think there is a good deal of difficulty about wintering bees without combs; if the candy gets damp and sticky, the bees will stick to it and will die, and if they get the dysentery they will die. Candied honey is not exactly satisfactory, but sometimes it will answer. In sugar feeding, sometimes the sugar comb in the combs, and I have known the bees to let a lot out on the bottom and then seem to die for want of moisture. The difficult thing is to furnish enough moisture along with the feed. I am here in New York State where you have colonies by the hundreds or thousands you cannot bother with candied honey. Maple sugar is a very poor thing to build up colonies where they are short of stores. I put it on the fall and left it on all during the winter, and in the spring when they have been short of stores I have put it over the frames to stimulate them. One of our most successful bee-keepers in Ohio wrote to me that she had 50 or 60 colonies of bees and they did not work but she used cakes of maple sugar and put over the combs, and she said that she had one of the biggest yields that they had in Ohio. She attributed it to the maple sugar, but it needs watching and care.

BEE-STINGS AND THEIR REMEDIES.

"What can we do if badly stung? Should every bee-keeper have a bottle of ammonia? How is it administered? What is to be done to a horse when badly stung?"

W. L. Coggshall—I never had any horse stung.

Mr. Niver—I cover up so I don't get stung.

W. L. Coggshall—I feel as if I had been very successful in that line. I have handled a good many bees and we haven't had any accidents yet.

A Member— My mother was very badly stung all over, when she hived a swarm of bees, and they gave her salt and water to keep the poison from her stomach as much as possible, and we saved her life, but I don't know if it was done by a professional nurse.

Mr. Alpaugh—I have a remedy from an outsider that doesn't keep bees, that is a complete one, which is simply a little coal-oil.

Mr. Baldridge— My son was stung when very much heated, just under the chin, and so much affected that he swelled all over. We sent for the doctor at once, but before he arrived my son vomited and the swelling went down at once.

Mr. Longmecker— A remedy which I have seen used is to bathe the part with a strong solution of ammonia. It is very cooling and satisfactory.

Mr. McEvoy— The doctors generally recommend aromatic spirits of ammonia, half a teaspoonful; and if it doesn't work in a few minutes don't wait long—repeat it.

Dr. Mason—I believe that whiskey is better than ammonia.

Mr. Fuller— My remedy is chloroform. Just a few whiffs inhaled always relieves me.

SECTION SIZE—BLEACHING HONEY.

"Which is preferable, the 4", or the 4x5 section?"

Dr. Mason— That depends upon locality.

"Can extracted honey be bleached? If so how?"

W. J. Craig— It can be improved. We have had extracted honey exposed in a room where the sunshine could penetrate and we found that the honey in which we had exposed in that way was much lighter within a week than the same honey which was confined in a dark place. We put it in 5 or 10 lb. cans.

EXTRACTING HONEY—COMB HONEY GRANULATING.

"In running for extracted honey, should one spread the combs, and then when uncatching cut deep?"

W. L. Coggshall— I spread six or seven combs and uncatch them evenly.

"What is the cause of comb honey in sections becoming granulated soon after being removed from the hive, or much earlier in the season than in former years, in some localities?"

Mr. Fuller— My experience is with comb honey, if you will keep it at a temperature of about 92 to 95 degrees it won't granulate.

COM-BEE HINTS.

"What strain of bees is the most profitable for comb honey?"

Mr. Alpaugh— I would say a good cross between Italian and a black. Blacks are very good of themselves, but I don't like them, for the reason that they are a little awkward to handle, but I do think that a good cross between an Italian and a black would be all right.

Mr. Baldridge— I like good yellow-colored Italians for all purposes.

Mr. West— The best that I have seen
for the past two years was a cross between the Carniolans and the Italian.

Huber Root—I have found a cross between a Carniolan and an Italian a good cross.

Mr. Fuller—I can get the best results by having full-blooded Italian queens and let them mate as they please.

Mr. Greiner, chairman of the committee on the score card, then handed in their report, but not being quite completed it was left in the committee’s hands to be completed and forwarded to the secretary.

Mr. McEvoy moved that the report be adopted as read. Mr. Smith seconded the motion, which was carried.

The convention then adjourned to meet at 8 p.m., at the Epworth Hotel, in Joint Session with the American Pomological Society.

(Continued next week.)


The Illinois State Bee-Keepers’ Association met at Springfield, Nov. 19 and 20, 1901, and was called to order by Pres. J. Q. Smith. The forenoon session was mostly spent in visiting and getting acquainted, except the usual preliminaries—secretary’s report, and reports of committees.

The afternoon session was called to order by Vice-Pres. S. N. Black.

Dark Uncandied Honey.

“What is the dark mixture in honey that does not candy?” was asked. It was too hard a question to receive an answer till Mr. Smith came in. He said his bees stored quite a lot of that kind of honey one year, and he found, on the alighting-board, dead from the milk-weed, and there was a great field of the weeds in full blossom; and he found his bees working on it strongly.

Mr. Black—I have seen bees fastened on milk-weed blossoms, and dead.

Mr. Smith—That honey did not candy.

Fertilization of Worker-eggs.

Geo. Pointmesser had illustrations of his own pointing in evidence of the Wagner theory of the fertilization of the worker-eggs, and not of the same for the drones. He thought the theory was correct.

Mr. Black did not think the theory was correct, as he had seen where the queen had laid fertile eggs in cells so near the edge of the comb as not to have depth enough to cause the contraction of the queen’s abdomen in depositing them; others had seen the same thing.

Honey-Dew, etc.

“Is there such a thing as real honey-dew, aside from the so-called ‘bug-juice’”?

Many illustrations were given to prove that there was, and it was unanimously decided that there was real honey-dew honey, and that of good quality.

“Do bees always select their place of destination before swarming?”

Arguments were advanced to prove both sides, and the question is still open for argument. Mr. Black cited a case where bees surely went 20 miles across a prairie.

Second Day.

The meeting was called to order by Pres. Smith, and a discussion was opened on the premium list. Mr. Black moved that the executive committee, which is the President, Secretary and Treasurer of the Association, be made the premium-list committee, and that the revision of the same be left to them.

Carried.

Mr. Becker moved that the meeting proceed to election of officers for the ensuing year, which was carried, and resulted as follows:

President—J. O. Smith; 1st Vice-Pres.—Miss E. C. Kennedy; 2nd Vice-Pres.—S. N. Black; 3rd Vice-Pres.—A. N. Draper; 4th Vice-Pres.—George Pointmesser; 5th Vice-Pres.—J. E. England, Secretary—Jas. A. Stone, R. R. Springfield; Treasurer—Chas. Becker.

Cellar Wintering of Bees.

“Is it best to put bees into the cellar in this latitude?”

Several said no, not if well protected.

Mr. Smith—I just take slats out of the super, cover the brood-frames with a piece of gunny, then fill the super with dry leaves, and I never lose any.

Longer-tongued Bees.

Mr. Draper—“Do we need longer-tongued bees?”

Mr. Black—Yes. The reason our Italians store honey from red clover is that our soil is so worn that it does not produce clover-heads as large, with as deep cups, as it did old.

Secretary—I think the whole cause is that they are apt to be too far apart. When the cups are open so that they reach the nectar just as easily in the largest heads as in the small ones. I have watched them and seen them go as readily to the largest heads as to any other.

Mr. England—I think we need longer-tongued bees.

Messrs. Smith, England and Poin- messer reported good crops of honey this year.

The executive committee chose for the date of the meeting next year, the third week in November, Tuesday and Wednesday, the 15th and 19th.

On motion the convention adjourned.

JAS. A. STONE, Sec.

Contributed Articles.

No. 4.—Apiculture as a Business.


By R. C. Akin.

I have previously referred to a fact which I think is generally conceded, that alfalfa is a slow yielder of honey, and, so far as I know, I have never seen a bee with a plump pellet of alfalfa pollen. I think if bees were to depend upon alfalfa pollen they would starve, if a lack of it would starve a colony. In my locality there is never a superabundance of it in my locality—and this is true of many other Col- orado fields, and at times there is a dearth of it both in and out of the hives.

Pollen, in early spring, has much to do in the matter of building up a colony, and leave them in good condition when the flow comes. Here, there is no pollen in the fields until about April 15, nor is there much, often none, in the hive, either. To supply the need, bees are greedy for anything in the nature of flour, getting into chop-feet bins, into horse feed troughs, mills and granaries, in fact wherever any floury substance is found. I have seen them raking dust out of rotten wood, sawdust, and such. Unless the matter is looked after, by manipulating, this is what happens with bee-keepers who are not apiculturists.

There is also a considerable part of the spring up to June to 15 in which there is no nectar coming in. I call attention to these facts to show that it is business to look after the bees, instead of leaving the hives in the hands of an apiculturist, who is not in the habit of making money on his bees.

Pollens are often the most difficult things for the average apiculturist to manage. Having failed to get as many bees as might have been obtained, the flow begins with weak colonies. Supers will be put on, but work will not be begun in them, and apiculturists—or rather, bee-keepers—wonder why the bees are not doing much. They are looking the brood-combs with honey, and while the queen wants to lay freely she cannot, because she has no more empty comb in the brood-chamber, and they go about with sacks full of honey, secreted wax freely, start queen-cups, feed their limited amount of br.; I freely, queen lays in the queen's hive.
Moving Bees Short Distances.

BY C. P. DARANT.

WOULD it be safe to move 20 colonies of bees now, or would it better be delayed till pasture is wanted? I gave two moves only 20 feet north and 20 feet east.—John T. Pattin, Johnson Co., Iowa, October 17, 1903.

As there are many such enquiries, I will give my manner of moving bees, and the reasons for it, in more detailed form than in the private reply I gave to Mr. Pattin.

When we move our bees, we must bear in mind the instincts and habits of the worker-bees. At its first flight, out of the hive, the young bee takes a survey of its location by flying in circles slowly and carefully, evidently to examine all surrounding objects, and these first flights of young bees, which always take place early in the afternoon of a warm day, are well known to apiarists, because usually several hundred, and sometimes several thousand, bees thus take flight almost at the same moment. The beekeeper, and those who regard the bees that circle about to recognize the spot where they have found honey. But the robber-bee is restless and hurried, and, to a certain extent feels ashamed and acts more or less sneakingly, while the young bees have a contested, peaceful flight, like a selection of a young whose conscience is at ease, and whom nobody pursues.

At the second flight, the young bee still looks about, but with much diminished care, as it feels more sure of its location. After that, the worker-bee strikes out like an arrow, without looking behind. Its flight is quick, and natural, and the result is that the expression, "take a bee-line," is equivalent to saying, "take a straight, short course over hills and valley."

When we move our bees it is important that we should remember this. If the hives are moved during cold weather, so that the flight of the bees is interfered with, this may cause the slight disturbance; or, if we move them during warm weather so carefully that they do not realize that anything is wrong, we may very positively expect that when they issue out of the hive they will do as usual—take a bee-line without stopping to look back. If the hive has been changed in position a short distance, they will vainly seek it on the old spot, and will wear themselves out in a short time, unless one of the hives is in a reasonably disturbed condition, when some bees may find it and will attract the others by the drumming of their wings. But many will get lost, and if the wrong hive is entered many will be killed.

If, on the other hand, we take pains to let the bees know that the hive is being moved, by closing up the entrance and leaving it closed quite a while after the hour when they might take flight during a fairly warm day; if we handle the hive somewhat roughly while they are thus confined, and do not release them till they have all been warned that something is wrong; if we also give them a few puffs of smoke when releasing them, and if they are enabled to take flight at once, and look over the ground, it is quite likely that the most of them will fully realize the fact that their location has been changed, and we may rely on their natural intelligence to find the spot again. And many of the bees do not take flight at once, even after a rough shaking up, it is well to leave with them a reminder of their change of location, so that when they, the bee goers, start out, they can have the true facts, and not things that are not what they were. This reminder we put in the shape of a board leaned up against the hive, in front of the entrance, so that the bee may be prevented, at the start, from flying in a "bee-line" toward the field. This obstruction, of course, causes the worker to look back and investigate, as soon as on the wing, and the new location is thus more sure of being noticed.

Yet in spite of all these precautions, some bees may have authority to fly off at will, and the plans before given is not fail absolutely if any empty hive or box is left where their home stood. Should any great number thus congregate, they may be given to one colony at night-fall, and with this colony they will be sure to remain.

But if the above-given instructions are carefully followed, no bad results need be feared. As a matter of course, this evidences the necessity of moving the bees at a time when they can still fly, and during such weather as will not be likely to chill them if they remain longer than usual on the wing, as
American Bee Journal

Dec. 19, 1901.

This letter is conclusive as to the method I recommend. It has been tried many times, but the latest testimony is always the best.

Hancock Co., Ill.

Swarming—Eucalyptus Trees—Ball ing Queens.

BY DR. E. GALLUP.

The remarks of Mr. E. E. Hasty, on page 633, seem to call for something more from me. I had to cut down four eucalyptus trees and move three colonies—one 12 feet, one 25, and one 34. The first two I shook into the clustering box early in the morning, before the bees were out to work; the last, from the very strong colony, and I did not get it until afternoon, consequently a strong force was out in the field. Of the first two, not a bee went back to the old stand; the other kept coming in until nearly night, but I learned the lesson after getting all the clustering bees and shutting them up. There is a big swarm of the bees has about, finally clustering in it, when I carried them to the new stand and shook them in front of their hive; the following day not over half a dozen bees returned to the old stand. It was a novel sight to see from two to three quarts of bees together, and nearly every one loaded with different-colored pollen.

The Eucalyptus Tree.

Now, a little about the eucalyptus tree. Eight years ago last July I set out 80 small seedlings, and now one of the four I cut into stove-wood measures 12 inches across the stump, 12 inches from the ground, the tree measuring 80 feet in length. The eucalyptus blossoms from December to March, so the bees are humming on it all winter. I have often wonder ed if the leaves do plant disease or not. They are self-irrigating after the first season, as the leaves condense the moisture from the atmosphere at night, and one often sees puddles of good size under the trees in the morning, after a rain. Eucalyptus always get wetted with a pall the first season, soon after they were set out. Eucalyptus makes the best of fire-wood, and if cut in the winter the stumps send up sprouts from 8 to 15 feet in length the first season. The leaves and twigs make the finest kind of kindling for starting a fire.

Mixed Swarms Ball ing Queens.

Mr. Hasty may be right about a lean honey-flow, but I have succeeded here and in Iowa, and will give my experience.

In Ventura County, last morning, a large prime swarm issued and clustered in a big live-oak tree. I cut the limb and let it down to within four or five feet of the ground and fastened it there. I then shook the bees into a clustering box and carried them to the hive to have the queens. While doing this, out came all after-swarm and clustered on the same branch. Well, I soon had fun enough, for I had 14 or 16 (I have forgotten which, it is so long ago) swarms come out, and sometimes three or four clusters in one. They all clustered on the same branch, but as soon as I would see a great rush to the cluster I would shake them into the box, and from that into a hive placed on the cover, and then closed the hive with a quilt or blanket to keep out the swarming bees. After the

American Bee Journal

Questions and Answers

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Jour-nal office, or to Dr. Miller direct, where he will answer them. Please do not ask the Doctor to send answers by mail.—Editor.)

Rearing the Best Queens.

Can we not get a long-tongue bee, healthy bee, ambitious worker—and all of these considered good and useful qualities—by some one that can control the mating fairly well? Breed, or mate, the queen with the drone from her sister worker? It looks to me as if there would be a gain of at least one-half of a bee-generation, in the preservation of the good qualities of the workers.

ANSWER.—The project of having some one make a business of rearing queens on a large scale in something like the way you mention has had some consideration; but as yet nothing has come of it. It is true, however, that some able men are interested in rearing queens, and it is a ground to try to bring up to the requirements you mention, and there is constantly approach to the highest standard being made.

Starting with Bees.

I would like directions for a beginner to start with bees in the spring; in northern Indiana. I know nothing about bees. How should I proceed in order to insure the best success. Please give explicit directions.

I. G. NORANCE.

ANSWER.—I don't know. I'd give a good deal if I did. I've been trying for years to learn just what is the very best way to do it—sure success, but I'm not always sure of success. Sometimes the season is so bad that I can lay my failure en-
tirely at its door. Sometimes I get a notion that some new way will be an improvement, and it turns out so poorly that I wish I had not tried it. So large has been our progress, to tell you just what I think I would do if I were to begin all over again.

The first thing I would do would be to get a good textbook and study it with care. In that you ought to find much or all of the "explicit directions" you ask for. Then if you expect to go into bee-keeping somehow or in some way, it will be well to get another textbook and study that. Also read with interest what you find given weekly in the American Bee Journal, and perhaps in other journals. Thus you can spend a very profitable time in learning the business and be prepared to care for your bees than you are now. In the course of your readings you will find some things hard for you to understand. After you have puzzled over them a reasonable length of time, write for an answer in this department. Don't be afraid to ask questions. That's what this department's for. But there are two kinds of questions that may well be for you to steer clear of.

One kind of questions to avoid is the kind that you find fully covered in every textbook. Such, for instance, "Do the drones lay eggs?" "How long is it from the time the egg is laid till the young worker hatches out?"

The other kind of questions to avoid is the kind that is too comprehensive, including those that expect an answer without giving particulars. In this category would come the question: "Give explicit directions for getting a big crop of extracted honey." "What is the reason my bees stored no honey this year?"

When spring opens up, and you begin work with the bees, keep referring to your textbook, and keep asking questions. I'll try and find answers for all that are not too hard.

Moving Bees in Winter.

I expect to move 150 miles west about December 20, and want to take my 45 colonies of bees. I expect to charter a car. Can they be moved successfully at that time? IOWA.

ANSWER.—Something depends on the weather. If it should be exceedingly cold, the combs will be brittle, and there will be danger that some combs may be broken. I can give you little light additional to what you find in the books, the chief points to look after being: To have the frames stationary in the car; to have plenty of ventilation (although much less ventilation is needed than in hot weather); and to see that the hives are loaded into the car so that the ends of the frames point toward the engine.

Wintering Bees in the Cellar.

I put 30 colonies of bees in the cellar this fall, raising them one inch from the bottom-board. I put burlap over the frames, and Supers without the slats, filling them with chaff. For ventilation I left the covers off. Is this a good way? WISCONSIN.

ANSWER. — The preparation you have described is all right, and is a good deal more preparation than many feel necessary, for bees will winter well with the covers sealed on when there is plenty of opening below. Read carefully what your bee book says about temperature and ventilation of the cellar.

Feeding Bees.

When, and what and how can I feed my bees? I have two colonies of Italians, and have had them about eight months. I get lots of literature from the American Bee Journal and it seems to be for advanced beekeepers. IOWA.

ANSWER. — This department has its field and its limitations, and it is not hard to account for the fact that some things will not be found in it, nor indeed in any part of the Journal. There are some things—many things—which every bee-keeper should know when he begins the business. If these things were told in these pages, it would take several numbers, without leaving room for anything else. By the time they were all told a new set of subscribers would want the whole again, and another set of subscribers are coming in all the time the American Bee Journal would be entirely occupied printing over and over again the same things. To avoid this, instruction books or text-books on bee-keeping have been published, and one of the first things for busy bee-keeping to do is to get one of these text-books and become familiar with its contents. After he has done this he will find plenty of questions still that he would like to ask, and the very fact that there is no need to repeat the things in the textbook makes him feel as if he were more fully upon any point not fully treated in the textbook.

Upon consulting your textbook you will find that the best time to feed bees is much earlier in the year than December; and that the best thing to use for feed is combs of sealed honey and the best place to put them directly in the brood-chamber, in or close to the cluster of bees. Of course, much minute information is also given, which would occupy pages, and after you have studied it all carefully it is quite possible you may desire light upon some of it. The columns are freely open to answer any further questions you may have. If your bees do not have enough to carry them through the winter, combs of sealed honey may be yet given, the best thing being candy.
verses urge grandly to just this blessed life of forgiveness. I wish all the children of our great country might learn the great sermon teaching was spoken from the Mount. As also Romans 12th, and 1st Corinthians 13th. The last is our college chapter here at Pomona College. If we could all learn those chapters, and catch practically their spirit, how quickly we would solve not the only question of anarchy, but of all sin and evil.

One in our large class said, “If kind when the desire to be forgiven was shown?” I did not admire his words or spirit when he replied to the question, “What will bring the sorrow for sin and a right repentance so quickly as to be engulfed in the arms of love?” I might put on any arm about a human doer, but I would keep the other ready for other and possible wise use.” This remark leads to our second topic.

TRUST AND CONFIDENCE.

If we are foolishly, as voiced in the arm ready to strike, we shall never win. If we trust our children; our students, if we are teachers; our neighbors; if we show a kindly confidence we will find them slow to betray such trust. We must keep the confidence of all these; we can not expect what we do not give.

Jacob died. The brothers remembered their grievous offense—their awful sin toward Joseph—they were afraid. With no occasion they suspected Joseph. He was full of sadness the day he was spoken from the Mount. Hi lack of trust, confidence, and belief in one’s integrity of purpose from those we love? In age such a sorrow would press hardest. And so Joseph met life’s evening hour with a real heart burden. What a woeful arrayment of evil? It companions with distrust and suspicion, and thus it weights heavily even the best and truest friend.

SPORTS.

To-day our college is to meet on the football field the Indians—a very noted side of Indians who can play football. For years we have not lost a game. Last year we met this same team and vanquished them with a score of 16 to 0. This year we are stronger, yet we are not sure. When ye think ye stand, take heed lest ye fall.” Last night we all students and faculty—held in the gymnasium a meeting to arouse enthusiasm, and give courage to the team, whom all believe in. We know they have practiced hard. We expect they will win. The team expects to win. We expect as we know they will; we all feel confident. Even the girls are keenly appreciative of good, honest, work as a bright, witty speech from one last evening evinced.

A professor spoke. He showed that one ought not to become so old that he would not find play-sport a pleasure. He found when his son was rounded up, when a rival from harder, truer work has won a right to victory. All applauded, but the cheers rang out with merrier, louder note when he added, “but we do not expect defeat. Your hard, telling work makes us all very expectant. We shall encourage the games, and all pure, honest athletic sports. None who do not reach high grade in studies can take part in the games. We believe these contests are good and helpful, and that they make better, stronger men.

IS PERFECTION DEMANDED OR EXPECTED?

I have received the following from one of the American Bee Journal subscribers. For reply in this department:

On page 682, Prof. Cook, in discussing the matter of voting the prohibition ticket, says: “God does not demand perfection in any of us. ‘Only one, your Father in heaven, is perfect.’” I do not know who is the author of the words quoted by Prof. Cook, and I do not undertake to dispute them, but I do know that it was the great Preacher in his sermon on the mount who said: “Be ye therefore perfect, even as your Father which is in heaven is perfect.” I say, “Be ye perfect,” to tell me, is just much short of perfection is demanded of me. If I understand him correctly I am not required to do all I can to kill the saloon, but may stop short of voting against it. But I would like to know whether the requirement comes from God. Encourage him to do that which will prevent me from taking a glass now and then.

Imperfection.

I am glad “Imperfection” makes these inquiries. His very name shows that he sympathizes with my position. One said to Christ, “Good Master,” He answered, Cali not me good. Only one is good, your Father in heaven. Yet, this same blessed Savior said, “Be ye perfect even as your Father in heaven is perfect.” I hope I am wrong, but from my own experience from Paul’s words “When I would do good, evil is present with me.” From all my observation from the whole trend of the Scriptures, I am led to question the possibility of a perfect life in this world. Did not Christ, in his “Be ye perfect,” mean to give us this as the ideal? Maybe very late in life, just at the margin of the river, some are so happy as to reach this ideal. I trow, however, that it only comes as we rise to another side.

Are we not happier as we strive harder to reach the ideal? To let go this effort would only mean less of joy, less of satisfaction. “Imperfection” would find no relief in any abatement of effort. Our joy doesn’t come that way. We are all—required to do all in our power to kill the saloon, and any other damnable evil. But it is not my duty to condemn you if your method and mine are not the same. If all the good and the true are in the Prohibition party, then surely, we are, in sorry plight. I do not believe all the wisdom is there. Does “Imperfection?”

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main honey mouth. I had but a few colonies, and about one-fourth as much honey as the previous season. I have some black, some hybrid, one Italian, and two Carniolan colonies. The blacks gave me no surprise at all. I bought an Italian queen last year, and that colony produced three or four times as much honey as any of the rest, with the exception of five or six out of about 80 colonies. They gathered some honey nearly as bright as castor-oil; I never saw anything like it before, and do not know what was the cause of the increased production. Most of my bees spent the season rearing queens, I think. I, for one, do not want my queens clipped. I am a farmer, and cannot be here all the time. If the queen can fly they will settle and wait till I come home. If they are clipped they will come out and go back before I can get there. I lose one now and then, but I like them to be able to fly. I have just read Mr. A. E. Hors's report in the American Bee Journal for Nov. 21, in which he mentions his having a sour smell. I notice it here every year, I think, but I do not know what causes it. Bees gather bitter honey here nearly every fall, but none of mine ever candles.

Several bee-keepers have asked Dr. Miller about late drones this fall. My bees reared a lot of them very late. I like it was because they had a very good flow of bitter honey.

This is my first year with Carniolan bees, and I do not know whether I will like them or not. Although fully 95 percent of the untested queens he sent out were purely mated, next season all that he mails for us will be warranted purely mated.

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Mr. B. H. Greider, the well-known poultryman of Floria Pa., a regular advertiser with us, is now ready for distribution. He is one of the best books of its kind, and is beautifully illustrated in colors. It describes all varieties of prize-winning poultry, with a great deal of interesting and valuable information on poultry topics. It is worth a great deal more than the ten cents in silver or stamps asked for it. Address, B. H. Greider, Floria, Pa., and mention the American Bee Journal when writing.
CONVENTION NOTICES.

Wisconsin.—The Wisconsin State Bee-Keepers’ Association will hold its semi-annual convention in the city of Milwaukee, on Wednesday, Feb. 6, 1903. This promises to be a large convention. All are invited and encouraged to attend. The general subscription rates of 1½ for the round-trip, good for one year, have been announced. N. E. FRENCH, Pres.; ADA L. PICKARD, Sec.

Michigan.—The Michigan State Bee-Keepers’ Association will meet in convention at Petoskey, Jan. 1 and 2, 1903. This promises to be one of the largest meetings. All are invited and encouraged to attend. The general subscription rates of 1½ for the round-trip, good for one year, have been announced. N. E. FRENCH, Pres.; ADA L. PICKARD, Sec.

California.—The California State Bee-Keepers’ Association will hold its annual convention in the Chamber of Commerce, Los Angeles, Janu-ary 15 and 16, 1902. We will try to have a good pro- gram. Come and exchange your bright ideas with your neighbors, and get some of the most intelligent, well-informed men, and attend.

R. A. BURNETT & CO.

HONEY AND BEESWAX
MARKET QUOTATIONS.

CHICAGO, Dec. 7.—The honey market is of a slow nature with little change in price of any grades. At the close of the week the sellers of the retailers have laid in a supply sufficient to carry them over the holidays. Choice grades of white honey is 14½c. a pound; dark grades, 13¼c.; light amber, 12¼c.; dark grades, 11¼c.; brown, 9½c.; and 5c.; and 5c.; the scale of prices varying according to color, body and package.

R. A. BURNETT & CO.

NEW YORK, Dec. 9.—Honey continues to be sold at demand prices. At the close of the week, with the exception of the heavy strawberry, all grades of honey are slightly lower, and the demand is still as heavy as it has been all winter. The honey market is rather scarce. We quote: Fancy white, 15c.; No. 1, 14c.; No. 2, 12½c.; and buckwheat, from 10½c. to 10c. Extracted remains dull and inactive with plenty of supply of all kinds. Inquiries for white and dark honey are still numerous, and the winter demand is heavy. The market is in good condition.

CINCINNATI, Oct. 25.—The honey market is rather dull. Some demand for light honey is noted. Extracted sells only to manufacturers from 7c. to 8c. a pound. White honey, 10c. to 12c.; white clover, 9½c.; white clover, 8c.; and buckwheat, 10c.; white honey, 14c.; buckwheat, 12½c. Extracted, white, 6c. and 7c.; mixed, 6½c. and 6c. H. W. HARRISON.

OMAHA, Oct. 25.—New honey is coming. It is reported that it is the best honey to be seen here for a long time. It has a large, honeycomb, and the honey is of a rich color. It is available in good supply at prices ranging from 10c. to 12c. per pound, f.o.b. Cali-fornia. The market for buckwheat is also in good condition. The demand for buckwheat is also good and the price is steady at 12½c. per pound, f.o.b. California.

PICKY BROS.

BOSTON, Nov. 20.—The demand for honey is on the rise. The market is in good condition and the supply is ample for the holiday season at which time it is much neglected. Our market at the present time is in the hands of producers. We have quoted $5 per pound, f.o.b. California, for strictly fancy in cartons: No. 1, 14c.; No. 2, 13c.; 12½c.; Extracted, light amber, 75c.; and 5c. H. W. HARRISON.

DES MOINES, Oct. 25.—There is very little doing here, because there is a very scarce crop of honey. Some small lots have been bought by the retailers and selling in a retail way at $1.50 to $2.50 a pound. They are all in good condition in this line before Sept. 1. Our market does not consume a great deal of extracted honey.

PICKY BROS.

DETROIT, Nov. 25.—Fancy white honey, 14½c.; No. 1, 13½c.; no dark to quote. Extracted, white, 6½c. BEEWAY, 2½c. M. H. HUNT & SON.

SAN FRANCISCO, Nov. 24.—White comb, 11½c. per pound, f.o.b. California; 10½c. Extracted, white, 5½c. to 6c.; light amber, 4c.; and 4½c. Beeswax, 6c. to 8c. Beeswax is not doing much in this center, but there are no large stocks here of any description, and current values are being maintained. There is more moving outward at present. The German honey is not in much demand here. Some apiculturists are reporting holding back supplies, anticipating better prices in the spring.

PICKY BROS.

KANSAS CITY, Oct. 25.—Up to the present time only a small lot of some honey have been seen on the market, and most of it being for sale on the basis of 15½c. per pound for fancy and 12½c. for comb. For next season's various expected and quotations are set at $3.10 per cent for large lots, which would be equal to $3.75 per pound. A few outside parties have been heard from, and it is believed that a firm market is anticipated. Inquiries for extract are on the increase. Many of the large and small buyers still seem to have their ideas too low. In a small way $6½c. is quoted.

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The Monette Queen-Clipping Device is a fine thing for use in catching and clipping Queens wing. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00, or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address, GEORGE W. YORK & COMPANY, Chicago, IIL

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Words by EUGENE SECOR.
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This song was written specially for the Buffalo convention, and was sung there. It is written for organ or piano, as have been all the songs written for bee-keepers. Every home should have a copy of it, as well as a copy of "THE HUM OF THE BEES in the APPLE-TREE BLOOM"

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Our Invitation. Whenever you visit San Antonio you are invited to call at our office and make it your headquarters. Here you will find a display of Aparian Supplies not equalled elsewhere in Texas. You will also find on file the leading bee-journals to pass pleasantly your leisure time.

Spanish Catalog. Some of you may read Spanish, or have a bee-keeping friend who does. If so, call for our Spanish catalog. It's sent free.

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AMIERICAN BEE JOURNAL

GEORGE W. YORK.
Editor.

CHICAGO, ILL., DECEMBER 26, 1901.
FORTY-FIRST YEAR
No. 52.

WEEKLY

APIARY OF E. WHEELER, OF ALAMEDA CO., CALIF.
(See page 820.)
National Bee Keepers Association

OBJECTS:
To promote and protect the interests of its members.
To prevent the adulteration of honey.
To prosecute dishonest honey-dealers.

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A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his celler-label. It often serves to introduce the subject of honey, and frequently leads to a sale.

NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to try with one of the buttons as it will cause people to ask questions about the honey and many conversations thus started would wind up with the sale of more or less honey; at any rate it would give the bee-keeper an opportunity to enlighten many a person in regard to honey and bees."

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a plaza on the underside to fasten it.

Price, by mail, 6 cents; two for 10 cents; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

HOWARD M. MELBEE, HONEYVILLE, O.

(The cut is the full size of the knife.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the knife is placed the name and residence of the subscriber, and on the other side picture of a queen, drone, and worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the handle is made of celluloid spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise they will try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your Pocket-Knife will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side.

The accompanying cut gives a faint idea, but cannot convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending as a gift the first new subscriber to the Bee Journal (with $5.00). We will club the Novelty Knife and the Bee Journal for one year, both for $1.50.

GEORGE W. YORK & CO. St. Chicago, Ill.
The Annual Index will be found in this issue of the American Bee Journal. As many readers preserve every number, the index will be found very valuable thing. In fact, if there were nothing else in this copy but the index, it would still be worth a good deal, as it shows the wide range of apiarian subjects treated in a single year.

Breeding from the Best has been the motto for so long a time, that when F. E. Simpson advocated in the Bee-Keepers' Review that a queen of very exceptional qualities being in the nature of a freak could not be relied upon to reproduce herself, therefore it was better to breed from a queen whose progeny were only a little above the average as to results, but showing greater constancy in her royal progeny—when Mr. Simpson advocated this doctrine, it seemed a little like the explosion of a bomb-shell. No one has proved that Mr. Simpson's position is wrong, and yet the fact remains that good results have been obtained—or at least seem to have been obtained—by following the old rule, to breed from the best.

Mr. Doolittle says in Gleanings in Bee-Culture that he has followed that rule for 30 years—breeding always from the queen that gave workers most valuable in bringing in nectar from the fields, rather than from those of the most uniform markings or purity, mentioning especially one remarkable freak from which he reared nearly all of his queens as long as she lived. Not only has his average yield per colony increased, but the uniformity of yield from his colonies has been constantly on the increase.

Comb Honey by the Case.—On another page, Mr. D. W. Working, the secretary of the Colorado Bee-Keepers' Association, has a reply to both the recent article by R. A. Burndt & Co. and our editorial on the same subject.

We fail to see how Mr. Working can expect to convince any one that it is a fair way to sell honey at wholesale by the case—simply lump it off—instead of by weight. We wonder if he'd like to buy coal in that way—by the box full—may be box even full and shaken down, and may be not.

But the straw man estimates only a single generation of drones, whereas there may be two or more generations, although all the drones are not allowed to live five weeks. A considerable amount of honey should also be figured in what is used to feed the drone-brood.

Injury to Queens in the Mail is a subject of some discussion in Gleanings in Bee-Culture. Two of the somewhat numerous Miller families are not in entire accord as to the reason why it is that after a queen has been sent through the mail she will sometimes “go bad,” although having been all right before being mailed. Arthur C. Miller says the trouble is that the queen has suffered for want of proper nourishment. He says:

Remember that a queen in the full exercise of her functions is developing two and a half times her own weight of eggs every 24 hours. It is not the sudden taking of the queen from a place in which to deposit her eggs that injures (for she can and will continue to extend them as they develop), but it is the lack of sufficient proper food to restore the drain on her system. If such food is not available in sufficient quantity she starves, and on the duration of such starvation depends the extent of injury to her vitality. Knowing these things, and knowing that a queen free in her hive can ask and obtain food from thousands of bees, it is irrational to believe and assert that she will die when compelled to depend on twelve bees, only a few of which may be able to supply her needs. These statements may be readily verified by any one who cares to take the necessary pains.

Dr. C. C. Miller thinks that when a queen heavy with eggs is put in the mails, her great weight is such that is from not hold on to her place, and is injured by severe concussions. He suggests the advisability of caging a queen 24 hours before mailing, so that she will not be so heavy.

Whenever one is right, or even if both are right, might not the previous eaging be a good thing? If the trouble comes from starvation, because the queen demands such a large quantity of food, then it is not a matter of the queen ought to help, for after 24 hours cessation of laying she would not demand so much food.

Educating Tastes in Animals.—At the Chicago convention there was a decided difference of opinion as to the looking of stock for sweet clover, some saying that cattle would not eat it, and others saying they would eat it greedily. Both were no doubt correct, the fact being that there is more than is generally supposed in the matter of having the taste educated. With no thought of reference to sweet clover, A. I. Root, in Gleanings in Bee-Culture, tells about poultry having educated tastes, so that they greedily ate raw beans.

It is also said that Texas cattle that have never eaten corn will refuse to eat it at first. It is well known that cows in a state of nature are quite dainty in their tastes, yet the family bossy may be trained to eat almost anything, including dishwater. If sweet clover hay be fed dry, it will in many cases be accepted more readily than the green fodder, and perhaps in all cases a little persistency may succeed in having stock eat sweet clover either green or dry.

The Laws of Breeding, it is pretty safe to say, have never before had the attention they are having from bee-keepers and
queen-breeder to-day. At least, there never was much attention given to the subject at the present time in the bee-papers. Doubtless much more would have been written and known about the subject if the matter of bees could be controlled as in the case of other animals. It is at least within the range of possibilities that the Order of Fratellini may yet become an accomplished fact, and if it ever does come it will be well to be prepared for it. Even if we never reach any greater control than at present, a thorough knowledge of all that can be learned about breeding may be turned to account. Especially let the younger members of the fraternity inform themselves as fully as possible on the subject that may be interesting, and sometimes controversial, may be found in the bee-papers, but carefully study and take up that science which is so useful in leading toward improvement of our present stock of bees.

Weekly Budget.

APRIL OF R. WHEELER.—On the first page of this number is the picture of the apiary of R. Wheeler, of Alameda Co., Calif. It is located on the slope of a hill, and is a model apiary, showing all the hives but one. In the further right corner is a nucleus hive, containing four 3-frame nuclei, under the same roof, where he boards his spare queens. To the left will be seen a shade-roof made of shingles 3 feet long, nailed to strips of board 2 by 3, in number. It hangs on a pivot outside the hive, as shown in the picture. By throwing forward it gives room to work at the hives, changes the shade, etc. In front of the hives is a coat-sash. Between the two pieces of old boiler-tinling is planted nigmondote and primrose. The hydrant and hose are in the near right corner. All is enclosed by a wire fence 3 feet high. It is a very neat apiary.

BRITISH ESTIMATE OF AMERICANS.—It is very pleasant to know that a very kindly feeling exists between this and the mother country, especially among beekeepers. W. W. Staden, a prominent British beekeeper, who has spent some months in this country, writes to the British Bee Journal:—

‘I feel convinced that we have a great deal to learn from our American cousins. They are a progressive people, and are fast coming to the front in almost everything. The evidences of progress throughout the country, and especially in the cities, have simply amazed me. Many of the American beekeepers’ methods and appliances are unsuitable for adoption in England, on account of climate and weather conditions, but there are others that ought certainly to be valuable to us, and it is to be hoped that our people will give the matter a fair trial, so that we may not lag behind the times.’

Mr. Frank Rauchfuss, the energetic and wide-awake manager of the Buffaloo Bee-Keepers’ Association, was in Chicago a few days last week. He had been visiting various cities in the interest of his Association, which will doubtless result in mutual benefit. We had several good visits with Mr. Rauchfuss. So did Mr. Burnett, of R. A. Burnett & Co. Of course, the subject of hive-blower by case so well was discussed quite thoroughly, and we think Mr. Rauchfuss returned feeling that there is more than one side to it.

The Buffalo Convention.


THIRD DAY. EVENING SESSION.

The meeting was held at the Epworth Hotel, and was called to order at 8 p.m., by Mr. Watrous, president of the Pomo logical Society, who announced that one of the papers set down for the afternoon session, and which had not been read at that session, would be read then. After the reading of the paper, which offered no practical interest to beekeepers, President Watrous said:—‘We have with us to-night the National Bee-Keepers’ Association, and their report. I think the paper which has been read may have provided a series of discussions here which we shall next have, and without further preliminaries we will now listen to Mr. James Fletcher, of Ottawa, Ont., Canada.’

Prof. Fletcher then delivered the following address on the subject of Bees as Fertilizers of Flowers.

At the last annual meeting of the Ontario Bee-Keepers’ Association, I had the pleasure of delivering an address on ‘The Value of Bees in Fruit Culture.’ On this and other subjects, I discussed the burning question of whether bees did or could injure the fruit-growth by attacking sound fruit on the trees. The position I took at that time was that unless fruit was first broken or injured, honey-bees could not gain access to the juice of the fruits. It appears to me now, however, that the ability of bees to puncture ripe fruit need not take up so much discussion at a beekeepers’ meeting as has on some occasions been given to the matter.

If it is so very doubtful whether they can or cannot cause injury, it seems prima facie evident that even if it is possible—which I do not believe—the injury occurs so seldom that it need not be considered. If it were a frequently occurring or important injury, some of those who have watched bees would have been able to settle the matter long before this.

Another subject taken up by me at the time referred to was, ‘Bees as Fertilizers of Flowers,’ and at the request of President Root, of the National Bee-Keepers’ Association, I have prepared a paper for reading on this subject at the meeting on that subject, in which I shall direct your attention to the striking interrelation of plants and insects, and in which I shall draw to your attention facts which may be new to some of your members, must be of interest to all, and cannot but call forth admiration for the marvelous provisions which are to be seen everywhere in Nature for the bringing about of good and useful results and preventing waste. It will be found that not only are flowers absolutely necessary to bees, as the source of nectar and pollen—but that bees and other insects are no less necessary to most flowers, so that their perpetuation may be secured.

This fact should be recognized by the fruit-grower, above all others, for were it not for insects, and particularly for the honey-bee, his crops of fruit would not be seen at all. A single flower consists of two sets of organs—a protective envelopment made up of the corolla, as a rule, of a fruit which prevents insects from working actively in the flower, than to any other cause. Flowers of plants are a special development shoot for pollination, and apart from the flowers of plants are many small parts called stamens and calyx; the former of these represent the male sex, and the latter the female. The anthers—the important part of the stamen—are practically small cases containing pollen, without the agency of which the ovules or undeveloped seeds which are needed in the fruit of the pistil cannot come to maturity, or—from the fruit-growth’s point of view unless the flowers on his trees are fertilized in this way, no fruit will form, and his labor will be in vain. It is necessary that pollen should be applied to the stigma or sensitive portion of the pistil before the seeds can be developed, and it has been found that R. It is most advan tageous to a species that the seeds of a given flower shall be fertilized by the pollen from some other flower of the same species.

A study of the devices provided by Nature to ensure this cross-fertilization forms one of the most charming branches of the whole study of biology. It is a branch of the subject which may be said to have had its origin in the remarkable investigations of the great naturalist, Charles Darwin, and has since been developed in Europe by Lubbock, Anton Kerner, and Miller. In this country excellent work has been done by Messrs. Halsted, Bailey, Roberts, Waugh, and others. We are with you to-night, so that it will be seen that the study itself is quite recent, but,
now that attention has once been drawn to it, it can be recognized as a garden feature, for the flowers of these plants have been used from the beginnings of gardening, and are always of greater benefit to their descendants for flowers to be fertilized by pollen from other flowers of the same kind growing upon other plants. He seems to have arrived at this trite observation, “Nature abhors perpetual self-fertilization,” which was first enunciated in his great work on the botany of orchids. The publication of this classic work marks the beginning of one of the most important eras in the history of the science of botany. Since then endless observations have confirmed the accuracy of Darwin’s law, and it has been found that in the vast majority of plants special appliances exist which will secure a more or less frequent inter-cross, and that in many these appliances completely exclude the possibility of self-fertilization.

The cross-fertilization of some plants is ensured by the male and female organs of the same flower coming together, or by those of flowers on the same plant or the same tree, and some flowers by those of flowers on different plants. In the case of the flowers of the same plant or the same tree, the male and female organs coming to maturity at different times, sufficiently far apart for it to be impossible for the pistil to be fertilized by the pollen borne on the same flower. In many cases there are remarkable contrivances which prevent such fertilization, as in the flowers of many species of plants.

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stems, particularly around the flower-stalks. In some plants, as the fuller’s teasel, the leaves join around the stem, forming a sheath which catches rain and dew and forms an insuperable barrier. What is also doubtless a provision for the protection of the seeds of plants is the fact that the flowers of many plants can be damaged by animals or insects; it will frequently be noticed that the blossoms themselves are seldom destroyed. This may be due either to a more abundant production of thorns or bristles around these organs, or that they are rendered distasteful by certain compounds which are more abundantly secreted by them.

This fascinating branch of my subject is far too wide for me to more than refer to it now; but I am convinced that the adornment of every part of a plant has some special significance if we can only discover it. That we have not yet perceived of what advantage these are, by no means justifies us in assuming that no advantage exists, and the search for the meaning of the innumerable shapes of flowers and leaves, their positions and behavior under varying circumstances provides a limitless source of pleasure and valuable instruction to whomsoever takes the trouble of making a lifelong study of each observation and exercising every care not to be carried away by the subject and jump to conclusions.

I have with me here today some excellent charts made by my friend, the Rev. Thomas Fyles, of Quebec, the president of the Entomological Society of Ontario. These will enable me to illustrate some of the points I have referred to, far better than I could otherwise have done. JAMES FLETCHER.

Some fine, colored charts were here exhibited, and much information was given about each in turn. Some of the points explained, were as follows:

No. 1.—POLLEN-GRAINS.—Although so small, the minute pollen-grains are of exceeding interest, as their surfaces beautifully ornamented in a variety of ways. In fact, these minute objects are just as characteristic and easily recognizable under the microscope as are the different kinds of seeds. The pollens of several well-known plants were shown, as illustrative of the different shapes and markings of pollen-grains, of pine trees, which is very light, is produced in enormous quantities, and when carried on the wind and deposited at a distance, forms the basis for showers of powdered sulphur. An instance of this was brought to his notice during the past summer at Armstrong, in British Columbia. A remarkable occurrence for the extreme likeness of the pollen-grains of pine trees was one of these so-called sulphur showers on the deck of a ship nearly 200 miles from the coast. The captain of the ship, who happened to be a botanist, detected the true nature of the yellow deposit by putting some of the material on his microscope and finding that it was pollen.

No. 2.—MOUTH-PART OF THE HONEY-BEE, the bumble-bee and the wasp.—The differences in the mandibles of these insects were pointed out and explained. The mandibles of the honey-bee are provided for the working of wax, and this only when softened at a high temperature. Those of the wasp for gnawing wood for the manufacture of the pupal cases, with which their nests are surrounded.

No. 3.—FLOWERS OF THE PEA FAMILY.—These were illustrated by figures of the Broad bean, showing the distinct contrast of black and white, the Sweet pea and the Broom. The different structures were explained in their bearing on the question of cross-fertilization, attention being drawn to the brush-like stigma and the keel.

No. 4.—FLOWER OF THE SUNFLOWER FAMILY.—The many points of interest of these flowers, and the devices by which they are prevented from becoming self-fertilized, were explained.

No. 5.—FLOWERS OF THE COMMON PIMPERNEL, referred to above, showing the two forms with long and short pistols.

No. 6.—FLOWER OF TROPICOLUM.—Attention was called to the markings and tufts of hair in the throat of the garden flower known as the Nasturtium, which acts as path-finders to insects of a proper size and shape, so as to secure fertilization to the seeds when they visited the flowers for the sake of the copious nectar in the long hours.

FLOWERS OF ANTSIRIHNUM.—The necessity of a large, strong insect, such as a bee, to open the Snap-Dragon flower and reach the nectar was evident, but it was stated that certain ants do this work. One example of this is the direct entrance to the nectar at the base of the flower. After this entrance was once made, honey-bee might be prevented from finding flowers through this hole instead of entering by the proper opening. This Mr. Fletcher believed was an analogous case to honey-bees sucking the juice from injured fruits.

No. 8.—THE NIGHT-FLOWERING CATCHFLY.—The blossoms of the Pink family are extremely interesting. There are 10 stems. The flowers open after sun-down, when they are white and conspicuous, but soon fade, and during the first evening of the three in which each flower expands, five of the anthers are pushed out of the flower-tube and shed their pollen; after which the petal curls up and falls away. The next morning the petals curl up and present the appearance of a faded flower. During the day these flowers curl, but in the evening the petals again unfold, the scent returns, and the other five anthers appear. It is not until the third evening, when all the pollen is exhausted, that the petals curl up and exposes itself to receive pollen from other flowers.

Several other charts of a similar nature to the above were shown, and their bearing on the subject explained. In bringing his remarks to a close, Mr. Fletcher spoke of the great value to all classes of workers of the introduction of “Nature Study” into our schools and universities. He spoke highly of the work which had been done by Prof. Bailey and Craig of Cornell University. He knew of nothing so valuable in education as inciting a child to take a logical and scientific approach to all knowledge, concerning all the common objects which surround us on every side, an ignorance of which in most classes of the common school is such a conspicuous characteristic.

(Continued next week.)

Contributed Articles.

Selling Comb Honey by the Case.

BY D. W. WORLING.

ACTING on the suggestion of the Editor of the American Bee Journal, I read before the Colorado State Bee-keepers’ Association a proof of the article by R. A. Burnett & Co., published on page 759. This article, which seems to have been written especially for the encouragement of Colorado beekeepers, was discussed at some length by our members; and I venture to offer an abstract of their remarks.

Mr. Frank Rauchfuss, manager of the Colorado Honey-Products Association, said:

I pleased to inform one of the letters quoted in this article. If we guarantee a weight for separated, half-separated, and unseparated honey, is it not the same thing as selling by weight? In one of Burnett & Co.’s letters to us, they said they were not willing to buy an unknown quantity. I wrote back that they were buying a known quantity. In one instance the buyers got 200 pounds more than they were figuring on. It is an injury and an imposition to make the statements in that article without stating the whole thing. A house of that standing should know something of the difference between separated and unseparated honey. They want to sell 200 pounds of honey; and as soon as concessions are reached they will throw out the heavy-weight honey. It has worked that way, and it will work that way again.

R. C. Alikin—Our system is perfectly fair. It guards against wrong-doing on both sides.

H. C. Morrooke—It fully endorses those remarks. The article misrepresents the position of our people.

T. Lytle—When the buyer asks for quotations by the case, he makes a bid on the guaranteed weight. He is not injury, and is not unfair to the producer.

Mr. Alikin—Selling by the case makes it an easier matter to do business. We have rules to sell by.

Mr. Rauchfuss—None of the grading rules but ours have considered the question of weight. We have a standard section, which they do not have. I think this is a standard section, we can have a standard of weight. How can you adopt a set of rules, with a standard section, without taking weight into consideration? I can show quantities of honey in our store now, graded as No. 2 under our rules, which will be sold as No. 1 in Eastern markets. Selling by
American cases does have pack-
tions, discussion well rule must
weight. articles mentions weight
we would if it were not for those-
rules.
Mr. Rauchfuss—When honey is sold by weight only, no
distinction is made between separated and unseparated
honey. But by our rules we admit that half-separated and un-
separated honey are less desirable than separated, which is
easier to lift out without damage, by the grocer. By our
system, there is more uniformity of weights. We

guarantee weights, and give a man every pound he

says.
The attentive reader will have noticed that the foregoing
discussion is based on a Colorado grading system rather than a
criticism of the article by Burnett & Co. This is for the
Our people are familiar with the merits of their own methods;
you could not be perfectly sure of the merits of the
arguments favoring another system by a single hearing of such an
article as this to read them.

Burnett & Co. could not well be ignorant of the Colorado
grading rules. These rules have been published in the
American Bee Journal. A copy has been furnished to Burnett &
Co. and they are anxious to understand them. In spite of the knowledge which they
must have had to the contrary, they beg the whole question by
referring to the, "pig in the bag." Let me quote the Colorado
rule for No. 1 honey:

No. 1—Sections to be well filled and capped, honey white, slightly
and uniformly viscous, pollen-free, and projecting beyond the
well cleaned; cases of separated honey to average 24 pounds net
per case of 24 sections, with a minimum weight of not less
than 230 pounds net per case of 24 sections, with a minimum
weight of 20\% pounds for any single case; cases of unseparated
honey to average at least 20\% pounds net per case of 24
sections, with a minimum weight of 21\% pounds for any single case.

Will any intelligent reader of the American Bee Journal believe
that the man who buys honey guaranteed to be packed
according to that rule is buying a pig in a bag? Indeed, will
the man who does not know that the buyer, whether of one case or
card of cases, is sure to get at least a certain, definite
amount of honey?
The argument in which the "bag of tea, coffee or sugar"
figure does not lack ingenuity. But why did not this wise
logician conclude that the bag had no contents? Does it weigh
exactly a hundred pounds? Not at all. And yet flour is
quoted by the hundred-weight. We buy a great variety of
articles by the package. And the grocer who sells a section of
honey as a pound is probably giving as much weight for the
money as he does when he sells certain other "pound" pack-
ages. People who buy honey by the section can easily be
made to understand that sections are very likely to vary in
weight. Can it be that any one is so lacking in discernment as
to suppose that every section (pound section, if you please)
would be equal in weight to every other section?
Perhaps I am inexcessably ignorant; but I must confess
that I do not know of a single association of bee-keepers that is
willing to accept the ready-made, out-and-out standards I am
sure our rules make it necessary to have the scales pretty
close by when packing comb honey—as the readers can

but I am sure the rules of the Colorado State Association can not
be fairly interpreted to the hurt of the buyer. He is
sure to get at least a certain weight, but if that is
exceeded, no one will complain. Of course, there are indivi-
dual bee-keepers who can not or will not grade honestly. I
am not defending them.

Arapahoe Co., Colo.

Apriary Inspection in the State of Michigan.

To the Honorable Dairy and Food Commissioner:

Sir:—I herewith submit my report for the work done during the
months of July, August, September and October as State Inspector of Apriarys.
I have visited in the field 1,256 apiarys, in the State of Michigan,
definitely inspecting in them a total of 3,256 colonies. I have found
402 diseased colonies, making a total of 12.1 percent of those
inspected. I have found the disease present in 112 apiarys,
which is 57.7 percent of the whole number inspected. It will
be noticed that the majority of the yards that contained the
disease have in them only a few, and many times only one
colony. It is impossible to tell exactly how many of the dis-
cased colonies have been destroyed by the owner. Perhaps
50 percent of those condemned. I have been compelled to burn
only one colony against the will of the owner. These apiarys
were scattered throughout the counties of St. Joseph, Hillsdale,
Lenawee, Washtenaw, Jackson, Calhoun, Barry, Eaton, In-
gham, Livingston, Oakland, Macomb, St. Clair, Lapeer, Gene-
vanee, Clermont, Ingham, Muskegon, Montcalm, New-
ford, Benzie, Kalkaska and Altrim.

I have found the disease more prevalent in the older sec-
tions of country, that is, there is more disease in southern and
central Michigan than in the northern parts of the State.
In the north it is confined to localities, and is not of very long
standing. In almost every case it can be traced back to
the bringing in of diseased bees or fixtures from the south.
In the southern part, however, the disease is scattered promiscu-
ously and breaks out in yards, infecting many colonies, with-
out any source of contamination.

I have found many bee-keepers who are perfectly ignorant
of the disease, and even when it is present in their yards and
a large proportion of their bees are diseased, they fail to see
the symptoms of the disease. But it is the duty of the bee-keepers
of a bee-keeper to the class who keep a few bees as a side-issue, and are
not posted in modern apiculture. Then, again, I have found
the disease present in the apiarys of specialists in bee-culture,
who are unfortunate enough to be located in the same vicinity
with one of these bee-keepers who are not posted. The unin-
formed man will not listen to the advice and pleadings of the
specialist, but will leave diseased colonies to die, and be rob-
bbed out by the bees from the larger yard. In this way the disease
will spread from one locality to another, until the bee-keeper
cannot control the action of his ignorant neighbor. Then, oftentimes, when this speciali-
ist resorts to the protection of the law to compel his neighbor
to clean up the diseased yard, he is looked upon by the people
as this villain.

The most active agents in spreading the disease are, first,
that of robbing out colonies which have become weak and run
down; and, second, that of using old hives in which the bees
have died from the disease.

A grave difficulty arises when treating the bees to over-
come foul brood, in that it is a very hard matter to impress
the uneducated man with the necessity of careful work, and
the nature of bacteria. He will neglect some small but impor-
tant matter, or fail to take some necessary precaution in or-
der to insure success. As a consequence, the treatment is
 failures, and the disease will spread from one locality to another;
many apiarists are eager to learn all that is to be known about
the disease, and by careful, persistent work have stamped it
out of their yards. The treatment used by many apiarists has
been to kill the infected colony with sulphur, remove the hive
to the cellar, and cut out and save for home use all good honey,
scape clean and disinfect the hive, finally burning all refuse,
scrapping and inside furniture. This method of treatment en-
thals much less work than attempting to cure the colony, and
the honey and also the hive is saved.

The needs are great, and many localities where the disease
is known to exist have not been visited at all. Many of the
localities visited this summer must be covered again at the be-
ginning of next season, but I believe that there is no disease
in the State. I have met with the most hearty co-operation on
the part of the intelligent apiarists of the State. They have
not only manifested an interest in the work, but in many cases
have materially assisted in the propagation of the disease
in their locality. Respectfully submitted.

John M. Rankin.

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Report for 1901—Sweet Clover and Alfalfa.

By W. M. STOLLEY.

Like most of the readers of the American Bee Journal, I also will make my annual report, as usual.

Although drought-striken as was the entire West, the past season, the great value of sweet clover and alfalfa as forage-plants for honey-yielding bees is again clearly proven, by the crops of hay and honey I harvested.

Regarding the product of my apiary, my report is as follows:

From 21 colonies ran for extracted honey, I got 3105 pounds, or an average of about 148 pounds per colony. From 5 colonies in New Heddon hives run for comb honey, I got 380 well-filled and perfectly capped sections, or an average of 76 pounds of honey per colony, and, besides, 60 pounds of extracted honey. I thus got a total of 3945 pounds of surplus honey from 26 colonies of bees, spring count, and plenty for the bees for winter on beyond.

I had but 5 swarms, all told. My best colony ran for extracted honey of these 5 pounds of surplus, and my best colony ran for comb honey gave me 136 sections and 12 pounds of extracted. I got 46 pounds of bright yellow wax from cappings, and reared 19 extra-fine queens from my choicest colonies for my own use; and increased, by the nucleus plan, from 26 to 35 colonies. Ever since October 18, my bees have been packed for winter, and had a general flight to-day (Nov. 12.) But I sustained quite a loss, in the past season, as the surplus combs are not yet exchanged for the purchase of 5 queens in the late summer of 1900. The queens I got were reported as of extraordinary value, and a remarkably superior strain. When these queens arrived, they proved to be undersized; but I did not scare me, because I have seen many a small queen which was much the superior of larger queens.

But when one of those queens proved herself to be a most miserable hybrid, my confidence in this extra ‘superior strain’ was greatly shaken, and with considerable apprehension as to the value and worth of the other four, I waited results after wintering them.

The hybrid queen was replaced by another queen, and was introduced as late as October 12, 1900. In the spring following, three queens of that ‘superior strain’ of bees proved to be practically worthless, and very poor layers, which I consider a most unusual circumstance. Only the one I received in October, to take the place of the little black hybrid, proved to be a really fine queen, and her colony is one of the very best in my apiary.

Two of the queens, which I bought as superior stock, I killed in early summer, and united their colonies with the colony of the queen that was lacking, to give her a trial in the season.

The united colonies of this ‘superior strain’ did not average in strength with any one of my ordinary colonies, after forming but one colony. The united colonies, if their queen had been all right, would have given me about 450 pounds of surplus extracted honey for the season that I removed them from the manes or let them go.

While the three united colonies of this ‘superior strain’ have actually given me only 43 pounds surplus! Hence, I actually lost about 400 pounds of honey, in consequence of the death of the $25.00, a loss of $90, since I sell my honey at $5 cents per pound.

I have but a small apiary, but I aim to have a superior queen in every hive, and if any one of them is lacking, she has to make room for some other, and I aim well.

Some 18 or 19 years ago a Mr. Briggs, of Iowa, (if I remember the location rightly) made, in substance, the following proposition in the American Bee Journal, to breeders of queens generally.

Rev. Briggs (as Briggs) will pay $100 for the queen sent me by any queen-breeder, upon the following conditions, to wit:—

1.—All queens entrusted to me by any party, will receive at my hands, the very best care and attention, and an accurate record of their work will be kept.

2.—At a certain date (stated) a disinterested committee (here the widely known parties comprising that committee were named) will be the judges in the contest, and the party whose queen is declared to be the premium queen will get the $100, but the queen thus awarded becomes my (Rev. Briggs) property.

3.—I (Rev. Briggs) also reserve the right, while making this offer, to retain any and all the queens sent me, upon the payment of $2 for each queen retained by me, and I will renounce all queens not wanted by me, free of charge, if so desired by the party or parties sending me queens.

Now, I do not remember the name of the party whose queen won the $100, but I ordered one of the queens reared in the following year from the $100 queen by Rev. Briggs, and paid $5 for that queen, and it was the cheapest and best queen I ever bought.

Fifteen of the 36 queens now in my apiary are ‘Briggs queens,’ and they are in the lead as mothers of honey-producers.

I have other valuable strains of bees, obtained from other dealers in queen-bees, but the ‘Briggs strain’ proves, best of all, that ‘blood will tell.’

Now, Mr. Editor, I wish that another Rev. Briggs, as honest and reliable as was the one I have mentioned above, would work a similar scheme, and I, for one, will cheerfully pay $5 for one of the offspring of such queens reared ‘in a natural way’: but I want the bees to rear the queens under the most favorable conditions: and consider that the superior of queen-cells from bottom to top, too. No stick-made queen-cups for any queens that I wish to introduce into any colony in my apiary.

I shall with great interest the proceedings of the meeting at Buffalo, and always ‘reach out at once’ for the ‘Old Reliable’ when it comes.

Hall Co., Neb.

The Afterthought.

'The Old Reliable' seen through New and Unreliable Classes.

By E. E. HASTY, Sta. B Rural, Toledo, O.

TIME OF QUEEN EMERGENCE.

Yes, siree, Dr. Miller, if it's true with regularity, or anything like regularity, that queens emerge in full colonies in 15 days, and only in nuclei or other depressing circumstances take 16 days, then that venerable (not sweet) 16 would come out of the way. But let us not be partial. We can hardly expect the superior of queen-cells from bottom to top, too. No stick-made queen-cups for any queens that I wish to introduce into any colony when I get the 'Old Reliable.'

Swarms and Full Sheets of Comb Foundation.

Sounds reasonable that a swarm might consider sheets of foundation simply as partitions, and object to so many ridiculously narrow rooms. But a good many swarms have been successfully hived on full sheets, I take it. Page 586.

Six Honey Crops in Twelve.

Six paying crops in twelve years, as an actual experience, rather takes us down in our estimate of bee-keeping in the irrigation regions. Queens of bees can hardly be as good as six out of twelve unless there is something else besides alfalfa to prop up with. Page 595.

That Unfortunate Glucose-Feeding.

Once more I will refer you to that ton of glucose on pages 579, 681 and 707. I supposed that it marked another milestone on a road that we would prefer fenced up—or rather never graded out. It used to be the case that pure glucose would only be taken when bees were in a state of semi-starvation, and that they would stop taking it as soon as they had a rather small supply—never building comb and storing surplus with it.

When I read of so large an amount as a ton I feared that improvements of the article had changed some if not all of this. Glad if we don't have to believe so just yet. I must cry for mercy as to the dull way I read the editorial. The time of year forbids the idea of fraudulent surplus. We do not know that he succeeded in feeding it all, and to work out what he fed he may have mixed it with something better.

Starvation for Black Brood.

That was a wise remark of McEvoy's on the black-brood question, page 710. Imprinting bees off the combs for four days without feeding uses up the infected honey all right—so far, well: but it also gets the bees themselves into such a lean and inactive condition as they must not be in if they are to combat disease to advantage: and it takes days to get them out of that condition. So it is in doubt whether that particular manipulation does more good than harm, or more harm than good.
CONVENTION NOTICES.

Wisconsin—The Wisconsin State Bee-Keepers' Association will hold its usual convention in the State Capitol, at Madison, Feb. 3 and 4, 1922, when there will be a large conference of the fraternity. All are invited to attend. There will be excursions to the best local beehives, and a program of lectures and discussions. The second day will be a day of work, and the afternoon will be devoted to the election of officers.

Michigan—The Michigan State Bee-Keepers' Association meet in the city of Battle Creek, Michigan, Jan. 1 and 2, 1922. This promises to be one of the most largely attended meeting of the Association. A number of new members are to be admitted, and a number of the best beehives in the state will be visited. The Association will hold its annual convention on the Chamber of Commerce, Los Angeles, Jan. 15 and 16, 1922. We will try to have a good program. Come and exchange your bright ideas with your neighbors, and get some of the most raised off year. J. F. McLinney, Sec., G. & S. STURGEON, President.

1901—Bee-Keepers' Supplies.

We can furnish you with the A. I. Root Co's goods at wholesale or retail at their prices. We can save you freight, and ship promptly. Market price paid for bee-yards. Send for our list.

California—The California State Bee-Keepers' Association will hold its annual convention in the Chamber of Commerce, Los Angeles, Jan. 15 and 16, 1922. We will try to have a good program. Come and exchange your bright ideas with your neighbors, and get some of the most raised off year. J. F. McLinney, Sec., G. & S. STURGEON, President.

OUR NEW CATALOG, describing and listing the FINEST LINE OF BEE-KEEPERS' SUPPLIES IN THE WORLD, will be ready about the first of the year. If you have not already received a copy annually, send your name and address and we will mail you one. Prices will be same as last season. In addition to the regular plate sections with no bee ways, will be 25 cents per thousand less.

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Excellent shipping facilities and very low freight rates for Southern and Eastern territories.

A HANDY TOOL-HOLDER!

Every Manufacturer, Miller, Carpenter, Cabinet Maker, Machinist, Wheelwright and Quartermaster, Farmer, or anyone using a grind-stone, should have one of these Tool-Holders. One boy can do the work of two persons, and grind much faster, easier, and with perfect accuracy. Will hold any kind of tool, from the smallest chisel to a draw shaft or ax. Extra attachment for sharpening secythe blades included in the above price. The work is done without wetting the hands or spoiling the clothes, as the water flows from the operator. It can be attached to any size stone for hand or steam power, is always ready for use, without the exception of the narrow, plate sections, and is absolutely worth 100 times its cost.

How to Use the Holder.

DIRECTIONS.—The Tool is fastened securely in the Holder by a set-screw and can be ground to any desired bevel by inserting the arbor of the Holder into a higher or lower inch of the stone. While turning the tool against the right hand, hold with the left on the stone, which is operated by the right hand, just as you would hold a file in using a draw-shaft or draw-ax.

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The "Barler Ideal" OIL-HEATER....

Saves Its Cost Every Year! NO ODOUR! NO SMOKE! NO ASHES! Costs only a cent an hour to run it.

The editor of the American Bee Journal is using the "Barler Ideal" Oil Heater, and it is all right in every way. We liked it so well that we wanted our readers to have it too, so we have recently arranged with its manufacturers to fill our orders. The picture shown herewith is the one we recommend for general use. It is a perfect gem of a store for heating dining-rooms, bed-rooms, and bath-rooms. It hangs back in a substantial way, and is thoroughly well made through. The urn removes for heating water. The brass front, with bell, has a bail, and it weighs one little gallon of kerosene oil. It is just as safe as an ordinary lamp. You would not be without it for twice its cost, after once having one of these stoves. Most oil-stoves emit an offensive odor, but this one doesn't. Its height is 3½ feet, and weighs 20 pounds, or 20 pounds crated ready for shipment, either by freight or express.

Price, F.o.b. Chicago, $8.00; or, combined with a year's subscription to the American Bee Journal—both for only $10.00. FULL DIRECTIONS go with each stove.

If you want something that is really serviceable, reliable, and thoroughly comfortable, you should get this "Barler Ideal" Oil Stove, as it can easily be carried by any woman from one room to another, and thus have all the heat you want right where you want it.

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The book we mail for $1.25, or club it with the American Bee Journal for one year—both for $1.75; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with $3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

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SWEET CLOVER
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We have made arrangements so that we can furnish Seed of several of the best clover, or express, at the following prices, cash with order.

5 lb. 10 lb. 25 lb. 50 lb.
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Alfalfa Clover .30 1.40 3.25 6.00

Prices subject to market changes. Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sacks.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

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If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper published in the United States.

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Please mention Bee Journal when writing.

A New Bee-Keeper's Song—
"Buckwheat Cakes and Honey"
Words by EUGENE SECOR.
Music by GEORGE W. YORK.

This song was written specially for the Buffalo convention, and was sung there. It is written for organ or piano, as it has been all the songs written for bee-keepers. Every home should have a copy of it, as well as a copy of "THE HUM OF THE BEES in the APPLE-TREE BLOOM"

Written by EUGENE SECOR and Dr. C. C. MILLER.

Prices—Either song will be mailed for 10 cents (stamps or silver), or both for only 15 cents. The above is strictly in advance payment of a year's subscription to the American Bee Journal, we will mail both of these songs free, if asked for.

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The AMERICAN or United States Map on China, Cuba, Porto Rico, The Philippines, Hawaii, and Alaska, especially prepared to meet the demand for a first-class map that will give a quick, general idea of location of events the world over, and particularly to the United States and our territorial possessions. Very useful in every Home and Office. 66 x 46 INCHES IN SIZE.

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The Plates are works of art. The engraving is plain, bold, and decisive. The color work is elegantly contrasted, but not gaudy.

Perfection and Artistic Elegance a salient feature of this map not approached by any similar publication.

The 1900 Census of the largest American Cities is given.

It has been pronounced a Photograph of the World

Two maps forward it free as a premium for sending us Three New Subscribers at $1.00 each; or for $2.00 we will send the Map and the American Bee Journal for one year.

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The 1901 Edition—Every reader should to suit it every day. The plates show all the fine railroad lines and extensions, county changes, etc. Special attention is given to the geography of the country; all the principal rivers and lakes, mountain ranges and peaks are plainly indicated. The leading cities and towns are shown, special attention being given to those along lines of railroads. The Canadian portion of the map gives the provinces of Ontario, Manitoba, and British Columbia, with nearly all of Quebec and New Brunswick, the county divisions being clearly marked. The Southern portion of the map includes the Northern States of the Republic of Mexico, and the Bahamas, on the reverse side is the Library Map of the World. The largest and most accurate map on Mercator’s Projection ever produced. The political divisions are correctly defined and beautifully outlined in colors. The ocean currents are clearly shown and named. Ocean steamship lines with distances between important ports are given. A marginal index of letters and figures enables one easily to locate every country in the world. A series of short articles in alphabetical order is printed around the border of this map in large, clear type, containing valuable information concerning agricultural, mining, and manufacturing statistics, also the value of imports and exports in dollars. The area, population, form of government, and chief executive of every country in the world is given up to date, also the names of the capitals and their population. The Inset Maps are elegantly engraved and printed in colors. They are placed in convenient positions around the United States map, and will be invaluable to every person desiring a plain understanding of our possessions. An inset map of China on the World side of map adds to its value.
Change of Chicago Passenger Station.

Beginning December 29, all passenger trains of the Nickel Plate Road will arrive and depart from Grand Central Station, 222 W. Washington St., Chicago, instead of Van Buren St. Station, as formerly. 49-52A1

Don’t You Want To

Know about the price and quality of Pave Fence? We should be pleased to tell you. Write us.

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6. The ADAM Green Bone CUTTER is always clean and ready for work. Impossible to overdo it - cut to suit. The Only Bone Cutter with all bar bindings. Works quickly and easily. No choking or injuring of hands by splinters or sharp pieces. Cuts a clean light picture, and is not likely to be digested by small children. Send for Catalog No. 5. S. W. J. ADAM, JOLIET, ILLS.

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Retail—Wholesale—Jobbing.

I use a PROCESS that produces EVERY ESSENTIAL necessary to make it the BEST and MOST SUCCESSFUL INCUBATOR on the market. My PROCESS and AUTOMATIC MACHINES are my own exclusive patents, which enable me to SELL FOUNDATION and Work Wax into Foundation For Cash at prices that are the lowest. Catalog giving Full Line of Supplies, with prices and samples, free on application. BEEKEEPERS WANTED.

GUS. S. E. TILTMER, Augusta, Wis.

Please mention Bee Journal when writing.

HONEY AND BEEWAX

MARKET QUOTATIONS

CHICAGO, Dec. 19—The honey market is of a stability that is peculiar to itself, having little of the gaiety. At the close of last week the dealers had much work to do, and were active in carrying it to the market to meet the heavy demand. Choice grades of white comb honey range 10 $1.45 good to No. 1, 1.60 bright and 1.80 red, and overstocked, including buckwheat, 10 $1.95. Extracted, white, $1.45; buff, $1.85; buckwheat, 10 $1.20. Extracted honey, according to flavor and body, is in demand at various prices ranging from 25c.

R. A. HORNBY & CO.

NEW YORK, Dec. 19—Comb honey continues to be in good demand, and while the market is not overstocked, arrivals of white honey are not sufficiently large to meet the demand, while buckwheat is rather scarce. We quote: Fancy white, 10 $1.20; No. 1, 1.40; No. 2, 1.25; No. 3, 1.00; buckwheat, 10 $1.00; light amber, 10 $1.60; dark, 10 $1.85; Southern, 10 $2.00; foreign, 10 $3.00, at 25c.

HILDETH & SORLEHN.

CINCINNATI, Dec. 20—The honey market is rather dull, and the weather requires that extracted honey should be the order of the day. Extracted sells only to manufacturers. Fancy grades sell all the way from 80c. to 60c. per lb. Retail prices vary according to flavor and body, and range from 10 60c. to 10 25c. C. C. & W. WEBER.

ALBANY, N. Y., Dec. 20—Honey in good demand now, as this is the most satisfactory time for Grocers. In the up country there will be and will buy large quantities, when late this year they can buy in 10 60c. to 10 75c. piece to piece. Fancy white comb, 60c.; mixed, 60c.; buckwheat, 10 75c. to 10 95c.; light amber, 10 80c. to 10 95c.; dark amber, 10 90c. to 10 60c.; H. R. WRIGHT.

OMAHA, Dec. 20—New comb honey is arriving by express from small production, and we predict that Colorado and New Mexico and Oklahoma, shipment (attracts) with us at the 22.50 price. California imported honey is being offered to the north in increased quantities as the Florida shipping points, but we have not heard of any comb honey being produced. The production of extracted honey seems to be quite large this year in Colorado, Utah and Nevada.

PECK & BRORS.

BOSTON, Dec. 20—The demand for honey is easing up somewhat, due in part to the holiday season and to the heavy immediate harvest. Our market at the present time ranks for sweets of quality in fancy categories. We quote: Buckwheat, 10 50c.; amber, 10 60c.; light amber, 10 85c.; dark amber, 10 95c.

R. A. BURNE & CO.

CHICAGO, 31Aff.

Wanted—Honey. Car Lots or otherwise; will pay highest market price, spot cash. Address, stating quately, and price desired at your station. Will send man to receive when lot is large enough to justify. THOS. C. STANLEY & SONS, 31Aff.

THE NICKEL PLATE ROAD will sell tickets Dec. 24, 25 and 31, 1901, and Jan. 1, 1902, for the ‘Buckeye State Fair’ and a third for the round-trip to any point located in Central Passenger Association territory, according to Christmas and New Year Holidays. Return tickets include Jan. 2, 1902. Through service to New York City, Boston, and other Eastern points. Chicago Passenger Station, 111 W. Washington St., or ticket office, on the Elevated Loop. For further information address John Y. Calahan, General Agent, 111 Adams St., Chicago.

Send for circulars regarding ourImproved and original Winterbloom Bee-Boxer For 23 YEARS THE BEST ON EARTH.

T. F. BINGHAM, Farwell, Mich.
In order to accommodate the largely increased passenger business at Chicago Van Buren Street Depot, it has been found necessary to build a new and more commodious passenger station. Therefore, commencing December 29, all passenger trains of the Nickel Plate Road will arrive at and depart from Grand Central Station, 5th Ave. and Harrison St., during the erection of the new depot. 50-52A1

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Root's Goods at their Factory Prices.

Distributor of same for THE SOUTH, TENNESSEE, WEST VIRGINIA, ILLINOIS and OHIO.

Complete stock for 1902 now on hand. The freight rates from Cincinnati are the lowest. Prompt service is what I practice. Satisfaction guaranteed. Catalog mailed free—send for same. The Standard Honey-Jars, Langstroth Hives, etc., at lowest prices. You will save money by buying from me.

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214-218 Central Ave., CINCINNATI, OHIO.
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Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

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Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,

The classic in Bee-Culture—Price, $1.25, by mail.

Bee's wax wanted at all times.

CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.

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**Texas Bee-Keepers.**

New Branch Office. We beg to announce the opening of a branch office and warehouse at 438 W. Houston St., San Antonio, Texas. Rates of transportation from Medina in less than car-load lots are high, and it takes a long time for a local shipment to reach Southern Texas points.

Low Freight and Quick Delivery, San Antonio as a Shipping-point.

To secure these two necessary advantages—low freight and quick delivery—and to be better prepared to serve the interests of our Texas friends, our reason for establishing this new branch office. No other point in Southern Texas is better adapted to serve as a distributing point than San Antonio. It has four great railroads—the Southern Pacific R. R. east and West—the International and Great Northern R. R. from Laredo up through San Antonio and Central Texas, the San Antonio and Arkansas Pass R. R., and San Antonio and Gulf R. R. It also has the American, Wells-Fargo and Pacific Express Companies.

Our Managers. We have secured as managers Mr. Udo Toepperwein, formerly of Leon Springs, and Mr. A. Y. Walton, both of whom are well known to the bee-keepers of South and Central Texas. They are also thoroughly familiar with practical bee-keeping and all matters associated with it, and any orders sent to this branch will receive prompt, careful attention.

Our Goods. As usual our motto is to furnish the best goods of the most approved pattern. We do not undertake to compete in price with all manufacturers. Bee-keepers have learned that it does not pay to buy cheap supplies, for a saving of ten cents on the first cost of a hive may be a loss of many times this amount by getting poorly made and ill-fitting material. Every year brings us many proofs that our policy of "the best goods" is a correct one.

Our Catalog. Very few changes in prices will be made in our new catalog, so do not delay your order but send it at once. You will be allowed a refund if lower prices are made, and in case of higher prices ruling in the new catalog, if any, you will secure the benefit by ordering now. Catalog and estimates may be had by applying to the address given below.

Our Invitation. Whenever you visit San Antonio you are invited to call at our office and make it your headquarters. Here you will find a display of Apiarian Supplies not expalined elsewhere in Texas. You will also find on file the leading bee-journals to pass pleasantly your leisure time.

Spanish Catalog. Some of you may read Spanish, or have a bee-keeping friend who does. If so, call for our Spanish catalog. It's sent free.

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