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IN BEE CULTURE

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A lot of 8-frame " at a BIG Reduction.
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AT GREATLY

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new goods, but the hives when set up and
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them from new goods. All the above goods
are of the A. I. Root Co.'s manufacture and are
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We desire to call the attention of all
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Honey Market.

GRADING-RULES.

FANCY.—All sections to be well filled, combs straight, firmly attached to all four sides, the combs unsoiled by travel, stain or otherwise; all the cells sealed, except an occasional cell, the outside surface of the wood well scraped of propolis.

No. 1.—All sections well filled except the row of cells next to the wood; combs straight; one-eighth part of comb surface soiled, or the entire surface slightly soiled the outside of the wood well scraped of propolis.

No. 1.—All sections well filled except the row of cells next to the wood; combs comparatively even; one-eighth part of comb surface soiled, or the entire surface slightly soiled.

No. 2.—Three-fourths of the total surface must be filled and sealed.

No. 3.—Must weigh at least half as much as a full-weight section.

In addition to this the honey is to be classified according to color, using the terms white, amber, and dark; that is, there will be "Fancy White," "No. 1 Dark," etc.

BUFFALO.—There is no more demand for old white comb honey. As soon as I can get some nice new, can sell at a very good price. Some call for strained clover or basswood honey.

Fancy white comb, old,	14 @15c;	new,	17@18;
A No. 1 " "	" 13½@14;	" "	" 16@17;
No. 1 " "	" 13 @13½;	" "	" 15@16;
No. 2 " "	" 12 @12½;	" "	" 14@15;
No. 3 " "	" 11 @12;	" "	" 12@13;
No. 1 dark " "	" 11 @12;	" "	" "
No. 2 " "	" 10 @11.	" "	" "

White clover or basswood extracted, 7@8c; amber, 6@6½; dark, 5@5½. W. C. TOWNSEND,
July 9. 178, 180 Perry St., Buffalo, N. Y.

PHILADELPHIA. There is almost nothing doing in the honey business at the present time, very few sales having been made in the last two weeks in Philadelphia—not enough to fix the price, and no new comb honey as yet. Southern honey is being offered quite freely, a large crop having been produced in Florida. 5@5½ is the ruling price paid by dealers here to sell it again. Beeswax in good demand, and for bright yellow 30c paid on arrival. We are producers of honey, and do not handle on commission.

WM. A. SELSER,

July 7. 10 Vine St., Philadelphia, Pa.

NEW YORK.—Some new crop comb honey now arriving from Florida and the South, and fancy stock in fair demand at 14c per lb., and 12@13 for No. 1, with no demand whatever for dark grades. The market on extracted honey is in a very unsettled condition, with prices ranging from 5½@5½ for light amber, 5½@6½ for white, and the common Southern from 3@3½ per gal. Beeswax steady at from 30@31.

HILDRETH & SELGELN,

July 8. 265-7 Greenwich St., New York City.

MILWAUKEE.—The honey market is without any very interesting features; only old on hand and mostly extracted of either amber or white in cans, barrels, or kegs. Comb all inferior in quality, and quotations are almost nominal. Prospects seem favorable for a new crop of honey, which will be fine, judging from the wonderful crop of clover. We quote fancy one pound sections at 16@18; A No. 1, one-pound sections 15@16; old of any kind 8@10@15; extracted in barrels, kegs, or cans, white, 8@8½; amber 7@8. Beeswax 28@30.

A. V. BISHOP & Co.,

June 29. 119 Buffalo St., Milwaukee, Wis.

TOLEDO.—No new honey has put in an appearance as yet, but would bring as follows: Fancy white, 18c; No. 1, 17; No. 2, 16. Extracted in bbls., white clover, 6½; in cans, 8; amber, bbls., 5½; cans, 7. Beeswax, 28@30.

GRIGGS BROTHERS,

July 8. 214 Jackson Ave., Toledo, O.

ALBANY.—Honey market very quiet now. It is between seasons here now; no stock and little demand. Some light comb would sell at 15c if here; extracted quiet at 6@7. Beeswax 30@32.

MACDOUGALL & Co.

July 1. 375 Broadway, Albany, N. Y.

SAN FRANCISCO.—New comb, per lb., white, 14c; light amber, 13½. Extracted, water-white, 6½; light-amber, 6; dark amber, nominal. Beeswax, 32.

I don't buy honey. Please don't write me, as it merely wastes your time and mine.

July 1. ERNEST B. SCHAEFFLE.

CHICAGO.—At present there is little call for comb honey; some new is offered, and for fancy 14@15 per pound is asked. Extracted sells at 6@6½ for best white; amber grades 5@6 depending upon flavor, body, and package. Beeswax 30c.

R. A. BURNETT & Co.,

July 8. 199 South Water St., Chicago, Ill.

CINCINNATI.—We have reached the time when there are no settled prices in the honey market. Everybody is waiting to learn how the new crop will turn out, therefore we will sell or ask the old price. Fancy water-white brings 15@16. Extracted amber, in barrels, 5¼@5½; in cans, 6@6½; white clover, 8@8½. Beeswax, 30.

C. H. W. WEBER,

July 7. 2146-8 Central Ave., Cincinnati, Ohio.

KANSAS CITY.—No comb honey in this market. New white comb would sell for \$3.50@3.75 for 24-section cases; amber, \$3.25@3.50. There is considerable extracted honey on the market, with scarcely any demand. Price nominal at 5½@6½. Beeswax in demand at 25@30 per pound.

C. C. CLEMONS & Co.,

June 30. 306 Grand Ave., Kansas City, Mo.

FOR SALE.—Fancy comb and extracted honey; extracted in 60-lb. cans. Prices quoted on application.

WILLIAM MORRIS, Las Animas, Col.

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Buckeye Strain Red-Clover Queens. They roll in honey, while the ordinary starve.
Muth Strain Golden Italians. None Superior.
Carniolans. None Better.

Untested.....	\$.75 each.....6 for \$4.00	Select Untested.....	\$1.00 each.....6 for 5.00
Tested.....	1.50 each.....6 for 7.25	Select Tested.....	2.50 each.....6 for 12.00
		Best Money Can Buy.....	\$3.50 each.

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CLEANINGS

A JOURNAL DEVOTED TO BEES AND HONEY AND HOME INTERESTS.

BEE CULTURE

ILLUSTRATED SEMI-MONTHLY

Published by THE A. ROOT CO.
5100 PER YEAR MEDINA, OHIO.

Vol. XXXI.

JULY 15, 1903.

No. 14.



MR. EDITOR, I wish you'd ask Mr. Phillips to remove the queen from a colony, then tell us the age of the larvæ he finds in the queen-cells started. [Mr. Phillips is hereby requested to carry out Dr. Miller's instructions. I suppose you mean our head apiarist, and not Mr. Phillips the scientist of the University of Pennsylvania.—ED.]

NOTING the case mentioned by G. A. Bostwick, p. 596, I may say that I've had cases where the bees were very slow about starting cells, and I think that the amount of young brood present has something to do with it. I've sometimes wondered whether preparation of cells might not be postponed indefinitely by the constant addition of eggs and young brood.

I SMILED to myself when I read A. I. Root's desire to be free from notions, p. 600. Why, bless your heart, friend Root, your fresh notions from time to time, and the enthusiasm with which you talk about them, do us a whole lot of good. Don't take the notion that you oughtn't to have notions. Some day I expect you to be free from notions, but it will be when you're dead, very dead.

THE NEW THING in Mrs. Bulkeley's plan, page 552, is the stopping of a swarm with smoke. If that is thoroughly reliable, I'm not sure but it is less work to watch for the swarms and smoke them back than it is to keep going through the colonies to look for cells. Yes, I'm sure it's less work to smoke a swarm back than to go through the colony for cells, and each colony gives only one job of smoking, whereas it may give more than one job of cell-hunting.

REFERRING to the note of H. O. Vassmer, p. 595, I may say that, according to voluminous literature sent me by Schering &

Glatz, New York, the word "formalin" is patented in this and other countries, and applies only to the preparation made by the Schering Chemical Works. It is a guaranteed 40-per-cent preparation, used not only in liquid form, but in the form of pastils; indeed, they seem to recommend pastils as the best form for ordinary disinfecting, and claim that they are stable and reliable.

THERE HAS BEEN some difference of opinion as to whether a member of a honey exchange has the privilege of selling his honey outside the association. The secretary of the California National Honey-producers' Association clears up this point in the *Rocky Mountain Bee Journal*, so far as that association is concerned. The members "are not under any obligation to deal with the association unless they choose," only they must not sell for less than the association prices.

I'VE KNOWN for a long time that bees would carry up bits of dark comb from the brood-combs to darken the sections unless there is quite a distance between the two; I have now learned that they carry them down as well. I shook a swarm from No. 61, then put the brood over the sections. The queen stayed in the lower story, and worked there all right, although no excluder was used; but, so far as I could see, every section in the upper super was being built out with darkened wax.

I'VE JUST been out to the home apiary this morning, July 7, and I found 2 colonies with 5 supers, 18 with 4, 21 with 3, 11 with 2, and 2 with 1, while most of them have had taken from them one or two finished supers. That averages a little more than 3 supers to a colony, and they're all filled with bees. Now, if I should limit to two supers those that have 4 or 5, what would those bees be doing that are now crowded in the other two or three supers? [Good for you, doctor. May you be blessed with five supers per colony clear through.—ED.]

YES, MR. EDITOR, you're right; I meant "above" where I said "below," page 580. I'm ashamed of such blundering work. But there's a little excuse just now when

the bees are rushing me so that I must get up at 4 o'clock in the morning if I get any time to write. Say, if I should quit working with bees and reading so much about them, don't you believe I could furnish you a better quality of straw? I'd then have time to polish up each straw nicely, and not put "below" for "above" nor "above" for "below." [No apology is needed, doctor, only it does me good to "rub it into you" as a sweet revenge for your having pointed out my misplaced words. The quality of your *straw* is all right. If your strength will permit, keep on as you have been doing, and hereafter I will change the *belows* to *aboves* when they get misplaced, and say nothing about it.—ED.]

I'M DOING nowadays what I've not been able to do for several years. When a super of sections is ready to come off the hive, I just take it off without doing any thing about driving the bees out, cover up the hive, then set the super on top and let the bees take their time to march down the side of the hive to the entrance. Not the slightest hint of robbing if it stands there all day. [In other words, that means you are having a remarkable honey-flow. Some time last week, when our basswood was at the height of its run, we took some broken combs, or combs that had been built to the cover, containing honey, and set them on a board temporarily until we could take care of them. It was not long before a few robbers were hovering over them, notwithstanding the bees were dropping in at the entrance in a way that seemed as if they could not be working stronger. It is possible that the very bad weather we had been having for three weeks prior had got some bees to smelling around to see what they could steal; and these same bees, doubtless, when they ran across some honey in these exposed combs, were ready to help themselves rather than go to the fields. Heretofore I have always thought it was safe to expose honey in the height of the honey-flow. I now conclude that sometimes you can not and sometimes you can.—ED.]

A BARE WRIST, when working with bees, is more free from stings, I think, than one with the ordinary shirtsleeves whose cuff will allow the entrance of the hand. If the wristband is such that the button is sewed on, I have it sewed on far enough back so as to make the wristband a snug fit. If a detached cuff-button is used, I take my pocket-knife and punch a fresh hole further back in the part of the cuff that is under. [Yes, you are right. An open sleeve does invite the bees to sting more than one that is closed tightly around the wrist. The average shirt-maker seems to think, however, that it is necessary to have a loose band. I have been using lately, with considerable satisfaction, some oversleeves made of dark-colored material, that fit tightly around the wrist, and reach up beyond the elbow, at which point it is gathered with a rubber cord. I also like gloves with good long

sleeves reaching up to and beyond the elbow, with the fingers cut off when the weather is not too hot; and I like them also when I have to tackle a colony of cross yellow five-banded bees. And, by the by, these bees are much crosser than the average of leather-colored stock direct from imported queens; but I am not sure but they go into comb-honey supers a little more readily than the regulation Italians direct from Italy. See editorials.—ED.]

Later.—Since writing the foregoing our shop-girls have, at my suggestion, gotten out a new pattern of glove and sleeve that I like better than any thing I have seen yet. It is simply a long-sleeved glove without any fingers or thumb; that is, the *whole* of the fingers and thumb stick through holes close to the palm of the hand.—ED.]

SPEAKING of having the empty super under or over, you say, Mr. Editor, p. 580, "In the one case the bees are induced to finish up the work already begun; in the other case they begin another job before finishing the first, with the possibility that neither will be finished as it should." That's just it; in the first case a lot of bees must stand looking on while the job is being finished, while in the second case they are all at work. Even if you object to that statement, you must admit that, when induced to commence work sooner in the added super, there is just so much more ground for the bees to be at work on. The argument in favor of foundation because it gives at once a larger field on which the bees can be working applies with equal force to placing the supers in such position as to get the bees working on a larger surface as soon as possible. "The possibility that neither will be finished as it should" is a very remote possibility at the beginning of a season when I have every reason to expect from the colony 3, 4, 5, or more finished supers. All the same, I'm doing more at putting empty supers on top than I ever did before; and I heartily thank O. L. Hershiser for stirring us up about it. [I do not really know on which side of the argument I am. The events of the past week have shoved me one day on this side and the next on the other. But I am glad that Mr. Hershiser has called attention to this matter, for the fraternity at large had begun to assume that it was good practice always to put the empty super *under* the partly filled one, at the beginning of the honey-flow at least. But (would you believe it?) in some cases colonies that were treated on the tiering-under plan, new super put *under* the one partly filled, commenced work in the new supers, and actually abandoned the upper supers, or nearly so, where the work was already begun. I was astounded—never saw the like of it before. Then I began to feel that, *if* I had followed Hershiser's plan of putting the empty super *over*, the bees would have continued their work in the lower super, and gradually worked into the super above.—ED.]



BEE-KEEPERS' REVIEW.

The July issue is a fine one in every way. The frontispiece shows a half tone of Blanchard's Music Hall, Los Angeles, where the National convention will be held. It is a magnificent place, and an audience of 500 would be scarcely perceptible in it. A piano on the stage seems to be awaiting Dr. Miller. It is surrounded by tropical fruits of various kinds. Those who can attend this convention will be highly favored.

R. L. Taylor contributes an interesting article on what to do at the end of the season—how to equalize the sections as the harvest nears the end; how to arrange unfinished sections that are to go back on the hives. In regard to feeding back to get unfinished sections filled out, Mr. T. says:

A few years ago there was much said about feeding back honey to secure the completion of unfinished sections; but the idea seems (rightly, I think) to have gone out of fashion. Honey thus produced is not of very good appearance. It begins to candy in the fall; soon becomes solid, and is of a decidedly poor flavor. I now think it is preferable to so manage that the number of unfinished sections is so small that there is no occasion to resort to that method of disposing of them.

H. R. Boardman writes on the same subject, and says substantially what Mr. Taylor does about feeding back. (See Doolittle, next column.)

Mr. Wm. McEvoy tells how to treat foul brood after the honey harvest. This is a star article, written at first as a private letter to Mr. Hutchinson, who is now foul-brood inspector of Michigan.

AMERICAN BEE-JOURNAL.

From a very modest beginning, Miss Emma Wilson has made her department, "Our Bee-keeping Sisters," one of the best in the Old Reliable; in fact, I think it is the most so, although friend Hasty is a close second when he does write. Miss Wilson's scholars ask a good many practical questions which are ably answered.

In regard to getting a foul-brood law in California, Prof. A. J. Cook says:

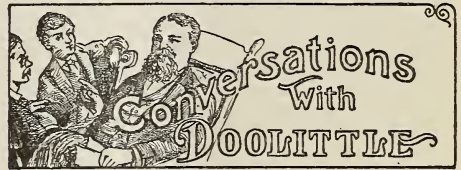
California secured an excellent law, with no expense and very little effort. Why was this? Because Southern California is very generally organized. There are many farmers' clubs. Thus they have tremendous influence. They considered as a whole the matter of legislation, and decided that they needed six laws, one of which was the foul-brood law. They went solidly to the Legislature, and secured every enactment that they desired.

The following, in regard to pre-judging queens, by G. M. Doolittle, is well worth

the consideration of all who buy queens. I deem it one of the most remarkable cases Mr. Doolittle has given us. After speaking of certain queens that were condemned by Dr. Gallup and Mr. Alley, he says:

I will say that I had one of those worthless (?) Hamlin queens sent me as a premium for securing the most subscribers to a certain bee-paper in a given time. The queen came in June; and as she was from one of the best breeders of the seventies, I thought to give her the best possible chance, which I did. Imagine my surprise to find that, with all my extra care and coaxing, I could get her to put eggs in only three Gallup frames, and very scattering at that. I came very near pinching her head off in the fall, but finally concluded to give the colony frames of brood and honey from other colonies, and thus the colony was got through the winter. The next season she proved no better than she had the year before, and I have no doubt Dr. Gallup would have called her a "worthless degenerate," and Mr. Alley would have alluded to her as "worthless as a house-fly." Was she thus? Well, we shall see.

I had her in my hand one day, being just about to pinch the life out of her, when the thought arrested me that Dr. Hamlin would not send me a worthless queen as a premium and that I would rear a few queens from her, which thing I did, she dying soon afterward, of apparent old age. All of these young queens proved to be extra good ones, and one of them was the mother of the colony which gave me 566 lbs. of honey in 1877, and was used in laying the foundation of my present apiary; 466 pounds of this honey sold at 20 cents per pound, and 100 at 15 cents, the total cash resulting from that colony that year being \$108.20. Was her mother worthless? Quite a "house-fly," wasn't she? Stood way up by the side of the best of cows as to value! The honey sold from this colony during that year amounted to \$8.20 more than Mr. Alley prized his \$100 queen at, and lacked only \$91.80 of giving as much cash in a single year as the celebrated Root long-tongued queen was ever valued at. And yet, if I do not misinterpret Dr. Gallup, he would no more have bred from that Hamlin queen than he would from those two imported worthless (?), degenerate (?), house-fly (?) queens he got of A. I. Root, which he tells us about on page 423.



FEEDING BACK EXTRACTED HONEY.

"Good afternoon, Mr. Doolittle. Do you know any thing about feeding back extracted honey to produce comb honey?"

"Just a little. But what put that subject in your mind at this time of the year?"

"I read somewhere last winter that if one were to run an apiary for extracted honey, during the harvest of white honey, and feed the same back to the bees to put into sections, said extracted honey would sell in the section form for enough more to give me a big profit. Is this a fact? And if so, how and when should extracted honey be fed back in order to produce comb honey?"

"Feeding back extracted honey in order that comb honey may be obtained is something that has been tried by very many of our best apiarists, and still remains, if I am right, an unsolved problem with some of those who have tried it. Some have re-

ported success and others a failure; but if I am right again, and I think I am from what I have read and heard, those who consider it a failure, to a greater or less extent, far outnumber those who consider it a success."

"That is something I did not expect to hear. Have you ever tried it yourself?"

"Yes; and from my experience in the matter I feel like saying that, if any one must feed extracted honey to his bees in order that comb honey may be produced, it could be better fed in the spring, in order to hasten brood-rearing, thus securing multitudes of bees in time for the honey harvest; then by putting on the sections in the right time, a large crop of comb honey may be secured if the flowers do not fail to bloom or secrete nectar."

"But suppose we get the bees in time for the harvest in some other way, do you not think it could be done at a profit?"

"My experience did not so argue. It led me to believe that it is better to secure the honey in the sections in the first place, rather than have it stored in frames of comb, and then thrown out with the extractor that we and the bees may go through with much labor and stickiness to secure the same thing which might have been secured without all this trouble."

"I do not fully understand. Explain a little more minutely."

"The practice of feeding back is on the principle of producing two crops in order to secure one, and it seems strange to me that any one would argue that such a course would pay in the long run. Even under the most favorable circumstances, such as having the bees finish nearly completed sections of honey, I could not make it more than barely pay, if I counted my time what it was worth to me in other ways. At the close of certain seasons, when I would have a large number of unfinished sections, many of which were so nearly finished that a few ounces of honey would apparently finish them, it seemed that it might pay to feed a little extracted honey to finish such; but after a careful trial of the matter, covering a period of some fifteen years, I finally gave it up as not being a paying investment, even in such cases, to say nothing about extracting with the view of feeding the honey for the bees to fill sections with from start to finish."

"What you say sounds quite reasonable; but I believe I will try two or three colonies so as to prove the matter for myself. How would you advise for the best results?"

"I have no objections to your trying the matter; but rather rejoice that you have so decided, for you may strike on something we older ones have not; and by going slow, as you propose, it will be no very serious loss to you if you succeed no better than I did. But to your question: It is generally conceded that the best results can be obtained by feeding the extracted honey right at the close of the early white-honey harvest, so that the bees are kept active."

"Can you tell me how I should prepare the hive for this work?"

"It is generally thought best, I believe, to take away all frames except those which are quite well filled with young brood, when preparing the colony for feeding back, using dummies in their places; but if all combs are filled with sealed honey, except those which the brood occupies, these combs of honey will answer as well as dummies, so far as I can see. You might try both ways, and then you could tell which you like best, should the thing prove a success in your hands."

"How about the honey to be fed? Shall I feed it just as I find it, as stored away from the extractor?"

"I think all agree that this honey should be thinned to the consistency of raw nectar, if not a little more, by adding the necessary amount of warm water."

"How large an amount can I thin at a time?"

"Only the amount needed for feeding at one time should be thinned, or two feedings might possibly answer; for if the thinned honey is allowed to stand long in warm weather it is quite liable to sour and spoil."

"How about feeders and feeding?"

"Almost any way of feeding will do. I set an empty hive at the rear of the one being fed, making a communication between the two at the bottom so the bees could come in where the feed was. In this empty hive I placed division-board feeders to a sufficient number to hold 25 lbs. of the thinned honey. This whole 25 lbs. would be carried out of the feeders the first day, and usually nearly the same amount the second 24 hours, but later on they would not carry so fast, when only what they would nearly clean up each day would be fed, as the thinned feed is liable to sour in the feeders, if the bees are several days in taking it out."

"Thank you. I must be going now."

"Before you go I wish to say that there is an item regarding comb honey produced in this way which we have not touched on."

"What is that?"

"This fed-back honey is far more likely to candy or become hard in the comb than that put in the comb at the time it is gathered from the fields."

"How is that? The writer of the article I was reading said that section honey produced in this way looked very fine indeed."

"When first taken from the hive it looks very nice and attractive; but when cool weather comes on in the fall it assumes a dull, unattractive appearance, thus showing that the honey has hardened in the cells; while comb honey produced in the ordinary way is still liquid, and will keep so for from one to three months after the fed-back article has become so hard as to become almost unsalable."

"That will be quite a drawback. But I still think I will try the matter on a small scale."



In a private letter received from Inspector N. D. West, he says he "believes" that the formaldehyde scheme is a boon. He thinks, however, that he and his colleagues deserve as much credit for its introduction as any other person, except Prof. Harrison, of Canada. He says he "believes," by which I take it he is not yet prepared to make a positive statement until some further experiments have been made.

FURIOUS SWARMING AT MEDINA.

BEES have swarmed more furiously at our home and outyards this season than we have ever known them to do before. The season was so rainy and cold up to the 28th of June that the bees were on the verge of starvation, although rearing brood at a good rate. Well, when we did have bright days and hot weather, or what the farmers call "corn weather," the nectar came in with a rush, for the fields were white with clover everywhere, and basswood was just beginning on the 28th of last month. The result was, the bees poured out of the hives like shot out of a gun. They did not stop to fill up their hives; but the long-hoped-for weather had come, and it was "hurrah, boys!" or, rather, "hurrah, girls! let us swarm now, and not wait for more cold and rainy weather to set in."

The result was, I had to drop my work here in the office, and turn out and help the "boys," who had more than they could do in giving the bees more room. I enjoyed shinning up the trees at the basswood yard, for swarms; but let me tell you I let one of the boys do most of the "shinning;" for at 41 I do not feel quite as agile as I did twenty or more years ago.

FIVE-BANDERS FOR COMB HONEY—THEIR ANCESTRY.

NEIGHBOR H., or Mr. H. B. Harrington, who years ago made a specialty of Cyprian queens, reared thousands of them, hived several swarms of five-banded bees at the home yard on Sunday, June 28, while the rest of us were at church. When I got back, he asked how long we had been keeping Cyprians.

"Why," said I, "we haven't any."

"Oh! but you have," he insisted. "They have the same markings, and act in the same nervous way. You can't fool me. I know the Cyprians well."

I believe he is right. I have always said that the five-banded bees were quite apt to show Cyprian traits, and that I believed their ancestry was pure Cyprians. But

whatever their origin, I find many of them good workers, as were the Cyprians; and, as I have said in a Straw in this issue, I think they are a little more inclined to enter comb-honey supers than the average leather-colored Italians.

The time was, when we had nothing but imported stock direct from Italy in the yards, when we could go through them almost any time without a veil, bare-armed. One season I worked unprotected for six weeks without getting a single sting, and I was in the yard constantly. Now that we have a sprinkling of five-banders as well as of the leather-colored stock, let me tell you I very seldom go through any of the yards without a veil on. This sprinkling of extra-yellow blood of Cyprian origin makes the bees crosser.

HOW TO GET SWARMS DOWN FROM THE TOPS OF TREES.

ELSEWHERE I speak of the fact that we have been shinning up trees to get swarms. You may wonder why we did not pursue the good old orthodox plan of having the queens' wings clipped, or why the colonies had not been shaken, to stop all of this unnecessary climbing and chasing. In the first place, some of our customers object to having their nice queens clipped—don't like the looks of them. In the second place, the swarming weather caught us by surprise. We had about given up having any honey-flow, and the problem had been to keep our bees from starving. But the season opened up and the bees swarmed, and how should we get them out of our tall basswoods? No way under the sun but to climb after them. We used a jack-knife to cut off the limb on which the swarm hung, then by carefully dodging among the limbs we climbed down to the ground as best we could, handing the swarm to an attendant as soon as he could be reached. But the jack-knife in cutting jarred the limb. I finally took down a big pair of pruning-shears, two big potato-sacks, and some stout string, supplying the boy who did the "shinning" with all these before he went up the tree. The shears were handy for clearing out a space through which to let the bees down. After reaching the swarm, the boy would proceed to slide the bag up around the bees. Then he would grab the neck of it around the limb, and with the pruning-shears clip it off. He could then with his rope let down bees, limb, bag, and all, or he could climb down without danger of jarring the bees off, or without any fear of being stung. In descending through the tree, holding a limb from which a big swarm is hanging, one is liable to bump it against the foliage, dislodging many of the bees, filling the air full of them. These will in all probability alight on the limb nearest where they were first clustered, with the result that another climbing is necessary to get all the bees. The coffee-sack or bag saves all this trouble. The pruning-shears are a vast im-

provement over the jack-knife. When the bees swarmed we had to hack away with this ever-present and usually convenient tool, but which, on occasions of this kind, was any thing but convenient or suitable.

I have been wondering if it would not be a good thing for those who do not clip the wings of their queens to have a special belt gotten up in which could be fastened a small short saw, a pair of strong pruning-shears, a smoker, a rope, and perhaps some other tool that might be necessary to complete the equipment.

The majority of bee-keepers believe, and believe rightly, that the *only way* to handle swarms is to do so by the clipped-wing plan. But something will happen, on account of which they will not get at the job, or perchance some queens will be skipped. In either case a swarm or two is liable to get to the top of a tree, and nothing but climbing after it will bring it to earth again. I have seen the day many and many a time when an outfit of tools, with a pair of climbers already hitched to a belt, and ready to strap on, would be worth a good deal. There is nothing like being prepared for an emergency; and when one is a hurry, the more convenient and handy his tools are, the more effective will be the work.

THE LOS ANGELES CONVENTION; RAILROAD FARE; HOTEL ACCOMMODATIONS, ETC.

REMEMBER the National convention at Los Angeles, Aug. 18-20. A good many bee-keepers are going on the Santa Fe route, from Chicago. If we can get 18 people to go clear through from that point, the bee-keepers can have a tourist car all to themselves. About a dozen have already signified their intention of going. It will make a great trip, and we hope a few more can be induced to go. The regular fare to Los Angeles and return, from Chicago, not including berth and sleeper, is \$50.00. The tourist sleeper is \$6.00 one way for berth, and of course two can be accommodated in a berth, making actually \$3 00 per head. The extra cost of seeing the Grand Canyon will be \$6.50 for car fare, and \$2.00 for berth. Most if not all of the bee-keepers expect to take in the Grand Canyon. As many stop-overs will be allowed as desired, west of Colorado; and one can come back by any route he desires. But arrangements must be made in advance; and if you wish to get a berth in the tourist sleeper you had better engage it at once. If bee-keepers should not be able to get the required number, 18, the car will be filled up with other people, and probably every available berth will be taken, and more too. For particulars inquire of Sec'y Geo. W. York, 144 Erie Street, Chicago.

In the way of hotel accommodations at Los Angeles you can get board at from 15 to 25 cents a meal, and lodging at 25 cents a night. For particulars inquire of C. H. Clayton, 739 Aliso St., Los Angeles, Cal., or of Mr. Phillips, who writes as follows:

In regard to "eating and sleeping" the bee-keepers from the East who may attend the National meeting, let me add a word to what you have already said. As you suggested, prices have stiffened somewhat since 1901; but Dr. Müller and all who come to visit Los Angeles may rest assured of being entertained in comfort at very reasonable rates. Rooms may be had at from 25 cts. per day up. At the Savoy, directly across Broadway from the Chamber of Commerce, over the department store, also in many other rooming-houses and hotels, the inside rooms generally cost, for one person, 50 cts., and the outside ones—that is, those lighted by windows instead of skylights, cost \$1.00 (some rooms more) for two persons. But all are attractive and comfortable. The Natick House, where you stayed, advertises as follows:

"The Popular Hotel remodeled, 75 additional rooms, all newly furnished. Every thing strictly first-class. Elevator, American plan, \$1.25 to \$3.00 per day. Latter includes suites with private baths. European plan, 50 cts. up."

Then there are very numerous cheap lodging-houses; and the center of the city, or a wide circle just outside the business center, is almost wholly given up to rooming houses. It beats any city with which I am acquainted, in that regard. You must know that Los Angeles is "in the business" of entertaining visitors; in fact, it derives its principal revenue from that source. For those bloated bondholder bee-keepers who have no need of economy, or those who, being out for a once-in-a-lifetime lark, are anxious to "do the whole thing," there are the Van Nuys and the Angels, where prices are quite "respectable."

There are many 15-cent restaurants; and if you want a 10-cent meal, with meat and vegetables, well cooked, go to Warner's restaurant, on South Spring St., near Fifth, only two blocks from the Chamber of Commerce. The people who eat there are apparently as respectable and as well dressed as the average bee-keeper (I mean when the bee-keeper is "out"); and one may sit and study the scripture texts around the room while waiting for his order. It is not a charity but a money-making eating-room, and thousands of good people patronize it.

You can add to the simple meal, if you wish, one-third of a pie for 5 cts., for instance, with ice-cream added for luck.

Of course, you would not expect a "great big meal" for this price. At 10 cts. nothing can be allowed for waste.

I need only add that I have not the remotest interest in these places, but am just giving you a leaf from my own experience in a city with which I am quite familiar.

I am the merest tyro compared with the masters in the art who are to convene at Los Angeles; but, as "a cat may look at a king," I hope to see and hear the master of Marengo and the "Bee Sage" of Bernardino, along with yourself, Mr. Editor, and others whose names are household words to readers of the bee-journals.

M. H. PHILLIPS.

Covina, Cal., July 2.

PROPOSED AMENDMENTS TO THE CONSTITUTION.

PAST experience has shown the need of a new constitution for the National Bee-keepers' Association. The following proposed amendments have been submitted so that the bee-keepers, when they meet at Los Angeles, will have something as a basis upon which to work.

PRESIDENT'S OFFICE, NATIONAL BEE-KEEPERS' ASSOCIATION.

The following amendments to the Constitution of the National Bee-keepers' Association have been approved by a majority of the Board of Directors, and of the Executive Committee; but before laying them before the coming convention at Los Angeles it is desired that all shall have an opportunity to criticize and suggest, hence their publication. Suggestions and criticisms may be sent to President Hutchinson, who will lay them before the committee having the matter in charge.

ARTICLE III.—Membership.

Sec. 1. to be amended to read as follows:
 Sec. 1.—Any person who is interested in bee culture, and in accord with the purpose and aim of this Association, may become a member by the payment of \$1.00 annually to the General Manager or Secretary; and said membership shall expire at the end of one

year from the time of said payment, except as provided in Section 10 of Article V. of this constitution. No member who is in arrears for dues, as shown by the books of the General Manager, shall be eligible to any office in this Association; if such disqualification occur during the term of any officer, the office shall at once become vacant.

Sec. 2. to be amended as follows:

Sec. 2.—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 50 cents per member per annum.

ARTICLE IV.—Officers.

Sec. 1. to be amended to read as follows

Sec. 1.—The officers of this Association shall be a General Manager, a President, a Vice-president, a Secretary, whose terms of office shall be for one year, and a Board of twelve directors, whose term of office shall be four years, or until their successors shall be elected.

Sec. 3. to be amended to read as follows:

Sec. 3.—The President, Vice-president, Secretary, and General Manager shall be elected by ballot, during the month of December of each year, by a plurality vote of the members, and assume the duties of their respective offices on the first of January succeeding their election.

Sec. 4. to be amended to read as follows:

Sec. 4.—The President, Vice-president, Secretary, and General Manager shall constitute the Executive Committee.

Sec. 5. to be amended to read as follows:

Sec. 5.—The Directors to succeed the three whose term of office expires each year shall be elected by ballot during the month of December of each year by a plurality vote of the members. The three candidates receiving the greatest number of votes shall be elected, and assume the duties of their office on the first of January succeeding their election. The Board of Directors shall prescribe how all the votes of the members shall be taken, and said Board may prescribe equitable rules and regulations governing nominations for the several offices.

Article V., Sec. 3, to be amended to read as follows:

Sec. 3.—It shall be the duty of the Secretary to keep a record of the proceedings of the annual meeting; to receive membership fees; give a receipt for the same, and turn all moneys received over to the Treasurer of the Association, together with the names and postoffice addresses of those who become members; to make an annual report of all moneys received and paid over by him, which report shall be published with the annual report of the General Manager; and to perform such other duties as may be required of him by the Association; and he shall receive such sum for his services as may be granted him by the Directors.

ARTICLE VII.—Vacancies.—Amend by adding the following clause to the end thereof: Any resignation of a member of the Board of Directors shall be tendered to the Executive Committee; any resignation of a member of the Executive Committee shall be tendered to the Board of Directors.

ARTICLE IX.—Amendments.—This constitution may be amended by a majority vote of all the members voting, providing such proposed amendment has been approved by a majority vote of the members present at the last annual meeting of the Association, and copies of the proposed amendment, printed or written, shall have been mailed to each member at least 45 days before the annual election.

HONEY-CROP FOR 1903; QUANTITY AND QUALITY, PRICES, ETC.

THIS has been a peculiar season; but, taking all things into consideration, there will be more white-clover honey this year than last. The season has been exceptionally good in a great part of the white-clover region, particularly in Wisconsin, Minnesota, Illinois, Iowa, Indiana, and Ohio. In some of the Southern States the season has been poor. In the New England States there has been an almost complete failure; but recent rains have toned up the situation so that some honey will be secured. The yield of white honey has been light in many parts of New York; but, as in the

New England States, the recent rains have improved conditions, but not quite enough to affect materially the crop of white honey, but sufficient to make, probably, a fair flow from buckwheat.

In Pennsylvania the season has been poor to fair. In Nevada and Utah the season has been good, and the honey is of first quality. In Arizona the flow has been less than the average. In Kansas and Nebraska the crop has been light in most sections. In Washington the season has been poor. Texas will not come up to the average. Idaho has had a severe loss of bees. In Colorado there may possibly be the usual crop, but the season was unfavorable in the early part of it. In Southern California, notwithstanding the early prospects were so flattering, there will be only about a third of a crop. In the central part of the State the season is little if any better.

As to the quality, the honey will be extra-fine this year; and even if there should be more of it this year than last, it will be so much better that the prices ought to hold the level of last year, especially if we take into consideration the general advance in other things during the past year. In the Eastern markets, where production has been light, there ought to be a general toning-up of prices. There will not be a large amount of California honey shipped east this year, probably; so what little honey is produced ought to bring good prices.

The following reports are from leading bee-keepers and dealers in bee-keepers' supplies throughout the United States.

After writing the foregoing the weather turned cold, and this seems to be general over a great portion of the United States. If this cool weather continues it will chop the flow from white clover almost square off. That being the case, the expected crop will not be as large by considerable as seemed likely on the surface of things three days ago.

For convenience the reports are arranged alphabetically by States.

Telegram—Present indications for honey crop, less than average; irrigation water short; we expect fair prices.

WM. ROHRIG.

Tempe, Arizona, July 9.

Telegram.—One-third crop for Southern California. Price, extracted, five to six cents; comb, ten to eleven.

UNION HIVE AND BOX CO

Los Angeles, Cal., July 8.

Telegram.—Present estimate from crop reports in, not over one-third.

GEO. W. BRODBECK.

Los Angeles, Cal., July 6.

Up to the present time the prospects are not very flattering. We made our first extracting about June 20; very little poor-grade comb honey taken off thus far; but the carpet-grass may give us considerable honey later in the season, as has been the case in former years. We do not look for more than an average crop at the best.

WESSING BROS.

Nicolaus, Cal., July 8.

We are having a very late season this year, and for this reason it is hard to say at present what the crop will be. Bees come through in a rather weak condition, and many colonies are not strong enough to work in the sections yet; however, the weather conditions during the past two weeks have been favorable; and should this continue we may yet hope for a fair crop of honey.

FRANK RAUCHFUSS.

Denver, Col., July 8.

The honey crop in Mesa County promises to be a good average one. Bees began work later, but alfalfa is being allowed to bloom more fully before cutting than has been the custom in past years. This alone should cause the bees to make up for lost time.

Debeque, Colo., July 6. MCKAY & STROUD.

Our season is now over, and the poorest honey crop in thirty years.

J. E. WILLIAMS.

Sparks, Ga.

The crop outlook of white-clover yield is good. No flow from basswood.

E. C. WHEELER.

Marshalltown, Ia., July 6.

We have been having a very good flow of white honey during the past month, which continues with good prospects.

J. BLACKMAN & SON.

Nevada, Iowa, July 7.

Fields are white with clover blossom; nights too cold for nectar secretion. No basswood blossoms; perhaps $\frac{1}{2}$ crop; 25 sections to colony, spring count. No honey up to June 15. Bees flitting on blossoms; too much moisture in the ground; sweet clover in bloom.

JAS. CORMAC.

For Jackson Co., Ia., the white clover crop is beyond all precedent. It began about June 1, and will continue two weeks longer if weather conditions are favorable.

F. M. MERRITT.

LaMotte, Ia., July 6.

Prospects are better than last year; excessive cold rains and cloudy weather; swarming more natural than a year ago. If the 65 colonies give me enough for my own table I shall be satisfied. Let's go fishing, Ernest.

J. P. BLUNK.

[Yes, when I come up your way again. Thanks.—Ed.]

The prospect for a honey crop is very good here, and the honey is snow-white. I never heard of so much swarming and absconding. The crop is all clover honey, before sweet clover bloomed—something I never heard of before.

JOSEPH MASON.

Fairdale, Ill., July 9.

Bees swarmed too much. More white clover than common. Flow of honey good, and good quality. I think the hot sun will soon dry up and stop the flow.

E. PICKUP.

I can report an extra good harvest from white clover—about 40 lbs. average of section honey, finished to this date.

F. H. COGSWELL.

Virden, Ill., July 7.

This part of the world is covered with white clover, hence a good flow of honey—the best for years.

JAMES P. HALL.

Wyand, Ill., July 4.

I will place the fourth super containing forty $1\frac{1}{2}$ -in. sections on one colony, all from white clover. Who can beat it? While I work bees I have a deputy to work the office.

M. S. BREWER, P. M.

Philo, Ill., July 5.

The white clover here is unusually good. Honey-flow is very good since June 15. Honey is white as snow. Cold and rain interfered for a few weeks in June. Bees are booming now; sweet clover is also coming bountifully—best year in twenty.

Springfield, Ill., July 4.

M. HARTS.

One hundred miles west of Indianapolis. Honey crop good here—one of the best in the past seven years. Home market is good also, and dealers pay 15 cents by the case for comb.

C. F. BENDER.

Newman, Ill., July 7.

The honey-flow up to date has been by far the best I ever saw; fields white with clover which is full of nectar.

R. B. RICE.

Mt. Carroll, Ill., July 4.

Located five miles south of LaSalle. White clover abundant and yielding well.

E. H. WHITAKER.

LaSalle, Ill., July 7.

I never before saw such a sea of white clover, and never expect to see it again. Nuclei become so crammed with honey that I must be constantly taking out the filled frames; and combs with a little honey set out weeks ago for the bees to rob out have still honey in them, although a few bees seem always at work on them.

C. C. MILLER.

Marengo, Ill., July 8.

Our reports show that the far East has practically no honey, and the far West perhaps not more than half a crop. The central portions of the country seem to be having an enormous flow; especially is this true of the locality within, say, 300 miles of Chicago. The demand for bee-keepers' supplies has not been so great in ten years. It seems that everybody wants a

lot of supplies, and wants them right away. There seems to have been a great deal of swarming, and a good yield from white clover. Personally, we have never seen such a perfect mat of white-clover bloom as there is in this locality this season.

We doubt if it will be necessary for the price of honey to be lowered very much, if any, from the price of last season. We think the people are ready to buy honey more freely than ever before. This, we think, will be especially true as the bulk of the honey produced is of white clover, and that seems to be the kind preferred by the majority of the people; at least they think that is the kind they ought to have. The joke is usually on them, as they are apt to call nearly all kinds of honey clover honey. There is practically no new honey on this market as yet, but we suppose it will come to come in very soon.

GEORGE W. YORK.

Chicago, Ill., July 1.

The crop is very good right around us, all clover. The cool weather did not seem to do it any harm, and we believe that there will be a very good crop of bright-colored honey. Personally we have harvested a larger yield than for 13 years past. Our home apiary will average over 130 lbs. per colony at this date, besides more swarms than common, for we rarely have much swarming.

DADANT & SON.

Hamilton, Ill., July 2.

Generally, throughout the State, the yield has been the best for ten years. The flow has been prolonged, and I have had several reports from reliable sources of an average of over 100 lbs. to the colony from white clover.

WALTER S. POWDER.

Indianapolis, Ind., July 1.

I wish to state that the honey prospects for Northeast Indiana have not been better in the last twelve years. June 25 I placed a fair average colony on scales and found they gained 7 lbs. during the day, and also for two preceding days the gain was 7 lbs. per day. As this colony is only one out of forty doing equally well, it certainly ought to make the heart of any bee-keeper rejoice. White clover is abundant everywhere.

S. FARRINGTON.

Kendallville, Ind., June 29.

We have not a pound of honey in this immediate locality for market. It requires some help from the bee-keeper to keep bees alive, or abundant enough for use next month. March maple bloom during 15th to 20th caused bees to whiten combs even more than fruit-bloom later, and three to four weeks later farmers were reporting swarms. Some have been taking a super from best hives—dark honey. Some white clover with honey-dew mixed. One farmer reported honey-dew from oats-field. I think we should be safe in counting 40 to 75 lbs. average, according to ability and management of bee-keeper with our best apiaries, and of this crop our home markets have been using nearly all. Prices will be maintained as well as last year, as our market is well sold out, and towns north of us will need supply.

W. VICKERY.

Evansville, Ind., July 3.

White clover is splendid; basswood, off year. Colony on scales gained 38 lbs. in five days; best day, 9 lbs.; poorest, 7. Many working in third super.

Kendallville, Ind., July 6.

S. FARRINGTON.

Throughout the fore part of the season the outlook was poor, though the earth was covered with white clover. The weather was so damp and cool the bees did not fly. But about the middle of June a wonderful flow began, and has kept up to the present. I have about 1000 well-filled Danzenbaker sections, and nearly that many more on that bid fair to be filled, as the flow is as abundant to-day as ever, owing to powerful rains a few days ago (49 colonies). At the north Mr. Baker has done still better. His 50 colonies will yield him 5000 lbs. He has about half that amount already.

JACOB TATE.

Peru, Ind., July 4.

Bees have done but little, just barely kept alive, too cool and wet. The freeze of April 30 and the flood of June 1 have taken all the bloom. The second crop of alfalfa is now just coming on, and in a week or ten days it will be in bloom. I fed my bees through June to pull them through; no swarms but 5 out of 100, and had to feed them to save them. Outlook is slim for a honey crop unless the alfalfa does well from now on.

Hutchinson, Kan., July 6.

J. J. MEASER.

April, May, and part of June, mostly cool and rainy. Even when the sun shone we had many cool days, and bees could not gather nectar to amount to any thing, and brood-rearing was much retarded. White clover bloomed in greater abundance, I think, than I ever saw it. Since about June 7 the weather has been

more favorable, and bees have done fairly well. They are now working on red, white, alsike, and sweet clovers. I have taken 32 lbs. from my best colonies run for comb honey. Some colonies (the best) have filled two ten-frame bodies, 18 frames. Will extract in a few days. Prospects for fall crop fair to good. The latter seldom fails entirely here.

Bluffton, Mo., July 4. S. E. MILLER.

Prospects here are very promising for good honey crop—better than for several years. I now have 20 colonies, and some have supers two-thirds full of honey, and very little swarming. J. H. DIERKER.
St. Louis, Mo., July 6.

Good honey-flow from clover—best in years; basswood not in yet, but not half the trees show buds. Collins, Mich., July 6. GEO. E. GOODWIN.

Clover honey in comb will be 40 lbs. per colony, spring count. Basswood light; not many buds to open. GEO. H. DENMAN.
Pittsford, Mich., July 6.

The honey crop in this vicinity is the best that we have had for a number of years; fruit-bloom coming with good weather, and abundance of clover following. So far as we are able to judge, the crop will be good throughout our section of the State. We would make special mention of Huron and Sanilac Counties as being the banner counties so far as we can judge from reports coming in. The price remains good at present, and with it a tendency to market the crop early. White clover will probably yield for some time yet. There is little basswood in our vicinity, and we can not tell what the prospects are elsewhere.

Bell Branch, Mich., July 7. M. H. HUNT & SON.

We have not had such a season in ten years so far for the production of honey, and, so far as I can learn from my extensive correspondence, and the amount of goods shipped, it is quite general over the State. The conditions are favorable for a good crop of clover honey. Beyond that I can't predict, and I can't say as to the prices that may be secured; but the quality so far is good, and it should bring as much as it did last year, as the quality will be much better.

Fremont, Mich., July 2. GEO. E. HILTON.

Clover-honey prospects good. In June I extracted some dandelion and wild-cherry honey, besides building up colonies strong. J. KIMBALL.
Duluth, Minn., July 6.

Our bees at home, Ft. Snelling, Lake Garvias, Lake Phalen, and Mora are all doing well. The willow-herb at Bruno, Minn., looks as nice as I ever saw it, and we expect as large a crop as we had three years ago from the willow-herb, giving us over 200 lbs. average per colony. Reports from all over this State and North Wisconsin are all good—many say, "Best white-clover crop for years," etc., amounting to about the same. Not many have spoken about the basswood, but some say it looks well; and what we see here, at Mora, and Bruno, Minn., looks well. I see no worms on the trees. H. G. ACKLIN.
St. Paul, Minn., July 3.

The season commenced with a severe drouth lasting to June 1, when the whole country seemed burning up and shrouded in smoke followed by heavy rains for two weeks, since which time we have had partly fair, partly cloudy but cold weather, especially cold nights, and the whole country covered as I never saw it before with clover bloom, but no honey. Bees have gathered very little honey to date, and cast but few swarms. At present they are up to the swarming-point, hanging on. From reports received, and from the present outlook, not over a third of a crop will be secured, and prices should rule higher than last year. J. B. MASON.
Mechanic Falls, Me., July 8.

Prospects for honey are poor; too dry up to June 10; now too much rain; basswood just opening, but not many trees will bloom. Some colonies starved during the cold backward spring. BURDETT HALL.
Chittenango, N. Y., July 5.

Fruit-bloom furnished the necessary stores for brood-rearing, but no surplus. Colonies were slow in building up during the spring on account of continued cool weather. There has been a good growth of clover, but constant rains kept the bees from work during the first week or ten days after it opened. Considering the abundant bloom, the bees are not gathering honey as fast as might be expected, and it now looks as though there would not be more than half a crop of clover honey from clover in this portion of the State. Sweet clover and basswood promise fairly well. There are very few basswood-trees left in this locality. I am

informed that, owing to the drouth, there will be no white-clover honey to speak of in the middle and eastern part of this State. OREL L. HERSHSER.
Buffalo, N. Y., July 9.

The outlook for a crop of honey is very good. Up to about one week ago the prospects were poor; but now the weather is warm and sultry, and bees are working in the sections, and we have reports of beekeepers extracting. We think the season will be 50 per cent better than a year ago, and price for honey will probably be the same as last year. F. Boomhower writes, "Have taken 100 lbs. of comb honey from one hive." F. A. SALISBURY.
Syracuse, N. Y., July 6.

Honey crop here almost a total failure. Too wet during clover bloom. A. W. SMITH.
Parksville, N. Y., July 8.

We are having a heavy flow from catnip, hoarhound, and the clovers. I already have on my fifth 10-frame hive. My best colony has given over 400 lbs. surplus already. Basswood did not bloom in southeastern Nebraska this year. The flow along the Missouri line will be light. J. L. GANDY.
Humboldt, Neb., July 3.

Fourteen miles east of Columbus. A tremendous flow of honey here, and the end is not in sight; crowding the queens out. Sweet clover is just coming in; catnip in bud. FRANK MCGLADE.
Pataskala, O., July 6.

The prospects for a honey-yield are above the average for this locality. Basswood is yielding well, and white clover is plentiful, and still looking thrifty and bright, and we think it will yield all of this month if weather is favorable. We are getting 15 cts. for comb honey. MCADAMS SEED CO.
Columbus Grove, O., July 9.

No rain from April 15 until June 1; rained 22 days in June, and 3 in July. My bees are swarming. Spring City, Pa., July 6. GEO. CULLUM.

We have nothing to report as to the season, except that orders continue to pour in, and a good many customers are reporting many swarms and taking off full supers of honey. PROTHERO & ARNOLD.
DuBois, Pa., July 1.

Bees wintered well. The spring and early summer have been favorable for the development of strong colonies. Recent rains have interfered with honey-gathering, but have prolonged the clover season two or three weeks. Basswood is budded full, and the acreage of buckwheat will be more than the average. In fact, prospects for a large honey crop are bright in Northern Pennsylvania. CHARLES N. GREEN.
Troy, Pa., July 7.

We have had much peculiar weather. Prospects were at the first of the season for a big crop. Bees did very well, and about 25 per cent ahead of June 1 the previous year, but during June bees did scarcely any thing, and consumed all the honey in their brood-chambers for increase, and now they are starting in to work again very freely, and using considerable of it in the first story, and we think this condition is the same in New Jersey, Delaware, Pennsylvania, and Northern Maryland. This has made things dull in June. I would sav, on the whole, that the crop in this section will be only fair, using your terms, or about half a crop comparing with a period of ten years. WM. A. SELSER.
Philadelphia, Pa., July 3.

A drouth lasting from early April till June 8 has nearly ruined our prospects for honey here in Vermont. I doubt if there is as much honey in hives July 1 as two months ago. I have had but one new swarm so far from 500 colonies. There will be but little basswood bloom. The abundant rains of the past three weeks, with cool, cloudy weather have started a new growth of clover that is just coming into bloom, from which we hope we may secure a light crop of honey later. J. E. CRANE.
Middlebury, Vt., July 1.

Through spring, season was too wet and cold. With June came pleasant weather, abundance of white clover which has yielded well (something it does only once in several years here). Basswood promises well, but not open yet. B. J. THOMPSON.
Waverly, Wis., July 6.

White clover bloom is abundant; honey clear, and fine body; have extracted up to date 33,500 lbs. Our Cowan 4-frame extractor ran out over a ton to-day before noon, and will do as well this afternoon. Platteville, Wis., July 1. N. E. FRANCE.

According to statements made by our customers, we consider the outlook very favorable for a good honey crop, although the cool weather in the early part of summer has had a tendency to keep down swarming. The weather here of late has been such that it warrants a good crop. Price of honey is somewhat higher than last year, but finds a ready sale in this market. According to some of our customers' statements, the honey crop will be better than any that they have had within the last five years. PAGE & LYON MFG CO.

New London, Wis., July 9.

We are in the midst of the best white-clover honey harvest I have ever known. It will last ten or twelve days yet, with favorable weather. No basswood honey, although some trees are in bloom; but there are not enough trees producing this year to make any showing on the crop. C. A. HATCH.

Richland Center, Wis., July 9.

As well as we are able to determine, the honey crop through the section over which we sell hives has been fairly good this season—what might be considered a medium crop. Prices range about the same as last season, wholesaling at from 13 to 17 cents, and retailing at from 15 to 25 cents per section. The minimum retail price here is 20 cents for fancy honey. The 1 and 2 grades are anywhere from 15 to 20 cents retail.

Washington, D. C., July 8. SAFFELL & KRICK.

There has been a good crop of white clover, but there seemed to be no smell of sweetness in the air, except two or three days, owing to cold days and nights; too much rain; bees do not notice it. So far in Virginia, Maryland, Delaware, Pennsylvania, and New Jersey, I have heard of no large yields. What I have seen are hardly up to the average at this date. There is a fair show of clover still booming, with good weather since July 1, and the bees are doing better.

Washington, D. C., July 8. F. DANZENBAKER.

Telegram.—Weather unfavorable; supply of honey less than last year: prices high: will go higher.

Seattle, Wash., July 8. LILLEY, BOGARDUS & CO.

The following came too late to classify.

We had a light early flow, and we now have a good flow from mesquite; but I don't know how long it will last. No very large crop if expected. There is time yet for a fall flow. J. A. COURSEY.

Click, Texas, July 11.

Telegram.—Season is good—over average crop expected; quality extra; early shipment available, last years' prices maintained. JNO. W. LYTE.

Reno, Nev., July 9.

Telegram.—Eighty per cent of bees dead; 50,000 lbs. honey in sight. WM. W. SELCK, SR.

Idaho Falls, Idaho, July 9.

I have tried to learn what the prospects are around this vicinity, and came to the conclusion that, if the weather will keep on as now, with a few warm showers, we shall have, after all, a very good honey-crop. The weather we had brought on a second flow of white clover, and this will help us considerably. Honey in comparison with last year is offered this year so much more, and prices will rule lower.

Cincinnati, O., July 8. C. H. W. WEBER.

At present we are having one of the best white-clover honey-flows. There seems to be a widespread white-clover flora which continues beyond the usual blooming period. On account of the unusually wet spring, heartease is coming into bloom fully a month sooner than usual, and at this writing it promises a good fall honey-flow. Notwithstanding the good flow of honey in the territory referred to, there seems to be an advance in the price of honey, due to a greater demand, mainly from the working people, who, receiving better wages, now purchase honey for almost daily consumption. Heretofore they purchased honey only sparingly as an article of luxury.

Red Oak, Ia., July 7.

E. KRETCHMER.

The honey crop through the State is the best we have had in years. Judging from reports that come in to us we find that there is no portion or part of our State but is getting a big crop of honey. Taking the whole State into consideration, we believe this season's crop is twice or three times that of last year.

L. C. & A. G. WOODMAN.

Grand Rapids, Mich., July 9.

Honey-crop best for years in this locality and Missouri generally. White-clover yield has been good, and a good fall crop is expected. Prices rule fairly well. Scarcity of fruit will make a good demand for honey. We see no reason why bee-keepers should not find a ready sale at a good price.

High Hill, Mo., July 7.

JOHN NEBEL & SON.



ANOTHER QUEEN THAT PREFERS NEW TO OLD COMB.

BY H. A. HIGGINS, M. D.

I see in *Stray Straws* of April 15 that the experience of C. T. Bender confirms the view that, whenever bees have the choice between old and new comb, they prefer the old. I have not had much experience with bees, but have observed closely while I have been working, and I am of the opinion that they prefer the new comb to the old—for brood, any way. I transferred some bees into an observatory hive (glass on both sides 16×12) to observe closely their movements, for my own amusement and instruction.

I took old comb out of the box hives and put in the frames of the new hives; after they had commenced rearing brood I decided to take a frame of brood from a strong colony and give it to a weak one. I did so, taking a frame from the center of the brood-chamber, and substituting an *empty* one in its place. In a short while they had filled the empty frame with new comb and brood, so I took it out and placed it on the outside of the brood-chamber, next to the glass, where I could watch it, putting a frame with foundation in its place. In due time the bees commenced hatching out of the frame I had removed from the center; and before they were all hatched I saw the queen through the glass, laying eggs in the same comb, while the comb in the next frame nearer the center of the hive which contained old comb did not have a single egg in it, neither has it had this season. The queen certainly had a preference for new comb or she would never have come around the old comb to the outside limit of the brood-chamber to the new comb. In the mean time the bees had again filled out the frame in the center, and it was stuffed full of brood, which I have now removed to the other side of the brood-chamber next to the glass, and the bees are now hatching out, and I expect soon to see her "ladyship" around hunting that new comb again, provided the bees don't crowd her out with honey. It was perfectly natural that they would fill out the *empty* frame, and draw out the foundation in the other, when they were put in the center; but why leave the center and go to the outside after it was removed, unless it was a preference for the new comb?

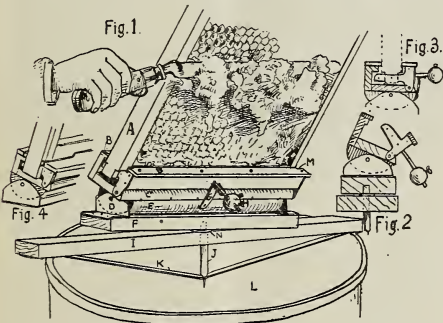
[Dr. Higgins' experience is not greatly different from mine. While I grant that it is, perhaps, a rule that queens will prefer old comb, yet there are many instances when they will seem to show a decided preference for new comb.—ED.]

HOCHSTEIN'S UNCAPPING COMB-HOLDER.

An Excellent Device.

BY C. F. HOCHSTEIN.

Having become interested in the bee business I had, of course, uncapping to do when the honey season began, and I naturally began to look about for some device to hold the combs while I was engaged in uncapping them. I found that a great many bee-keepers balanced their combs on a nail-point while uncapping them. After trying this way for a while I became disgusted with it. First, it was too slow. Second, it was difficult to put the frame always on top of the nail with one hand. Third, it bruised the end-bars of the frames. Fourth, it occasionally allowed the combs to slip off; and, all together, it was a very shipshod contrivance. I then set to work to make something better; and after a series of experiments, and the making of some ten or fifteen different models, of which I will say nothing, I finally evolved the comb-clutch in the engraving. The cross-bar I



fits on to the rim of the uncapping-can just as the cross-bar in a honey-extractor does. The strip of tin, K, is to hold the point of the pivot J, which is inserted through the hole N, in the cross-bar I; the top end of the pivot fits into the foundation-block F. Next is the horizontal pivot-block, which works on the pivot D. On to this block are affixed the fixed jaw B and the movable jaw B M (the tops of both of these jaws are lined with lead). Into the movable jaw is screwed the weight H, which opens the jaws, when the comb is withdrawn. The catch G is to catch the weight. It can be shoved down sidewise when the machine needs cleaning, as when it is down the jaws can be opened much wider.

There is a certain point that the jaws must be opened to in uncapping, as when the jaws open beyond this point the comb is apt to slip. The lead jaws are to prevent the knife from cutting away the jaws. Soft wood wears away rapidly; and any thing like iron dulls the knife too rapidly. The pivot-holds are made so that the movable top part (i. e., all above them) can not

lop over beyond a certain angle, as it is with this as with the jaws — if the top lops over further, the comb slips.

While this machine is not so cheap as the nail contrivance, it is not so trashy either; and I venture to say that a man, being equally expert with it and with the nail, can uncap from two to three combs with it while he is uncapping one on the nail, besides having his frames left whole. I am basing my statement on my experience here. I have endeavored to make this machine fill all possible requirements, and I will now leave it to the bee-keepers to say which is the best — that or the nail. I think they will find it not only best but cheapest in the long run, as it saves time. That which once is past can never be regained. It may also save some hard words, which it is altogether possible are sometimes directed at the innocent nail.

[If I am not mistaken, I have alluded to this device before. I saw it at the Hochstein apiary, and our young friend who invented it took a comb and explained to me fully the way in which it worked. In his hands it seemed to be a decided improvement over any thing heretofore used. If I am correct, the comb would stick in place sufficiently to hold its position while the operator happened to be busy at something else. I wish other bee-keepers might test it. All who are in want of the machine had better correspond with the inventor direct. His address is C. F. Hochstein, Paradero de Punta Brava, Cuba. — A. I. R.]

SHALLOW VS. FULL DEPTH SUPERS.

Prevention of Swarming.

BY W. K. MORRISON.

I foresaw that my stand on the question of starters would meet with strong opposition, particularly by conservative people who dislike an innovation. But, like the old darkey preacher down in Richmond, I believe "the sun do move," and, if so, so does bee-keeping. To Mr. Gill I will say I know what Colorado winters are like, particularly as it was in one of them I nearly froze to death; and the heat — well, oh my! But it is a good place for bee-keeping. The best way to settle a question of this nature is to try an experiment, and I hope Mr. Gill will try it and give us a report for or against. Still, before going any further I will clear the air by stating I do not believe in swarms, either forced or natural. Both mean much hard work, and that goes against the laziness of my nature. But supposing Mr. Gill puts a swarm, either forced or otherwise, into an Ideal super fitted with full sheets of wired *super* foundation, leaving the bees to get settled in it, say 36 hours before adding on the super with sections, he will find this immensely more satisfactory than hiving on five standard

frames, with starters. He will get more sections with less trouble. I believe the Ideal super is slightly too small, but it will do very well for a trial trip.

The conditions of success are these: Full sheets of foundation so that the queen will lay in all the combs as soon as possible; for as soon as a comb has eggs in it the sections immediately above it will be filled out plump and fat. I could never succeed in having the outside sections well filled or filled at all when only five combs were used. The bees invariably worked in the middle only. If the nights are cool, the Ideal super is far ahead.

The same issue in which Mr. Gill's letter appears, some remarkable testimony along this line is also given. One item alone will bear me out, and that is contained in Mr. A. I. Root's account at Bellaire, Mich.

PREVENTION OF SWARMING.

This whole subject was discussed as usual; but I got a new idea, or one that is new to me. We all agree that, by the use of the extractor, swarming can be discouraged much better than where we work for comb honey. If you give the bees plenty of room to store as near the brood-nest as possible, or, better still, right in the heart of the brood-nest, you will discourage swarming. Well, now, instead of using the extractor in throwing the honey out of the combs in the brood-nest, suppose we have half-depth stories and half-depth frames. In this way we can get a case of sections, either empty (or, where the bees have partly drawn out and filled the combs), not only close to the brood-nest, but we can get it right *in* the brood-nest. Our friend Bingham, and others who advocate these very shallow frames, perhaps can tell us more about this. Mr. Fred Somerford, of Cuba, produced a very fine crop of comb honey which was secured on half-depth frames, if I am correct. In fact, he had so large a crop he himself went with it to New York to make a sale.

Mr. Root does not seem to know that a number of persons have been recommending and practicing this same method for years. Several fine articles on this method have appeared in GLEANINGS, written principally from Texas. I have advocated it for several years, and probably lots of bee-keepers use it.

Mr. Stachelhausen advocates similar plans and practices; but, if one may judge from the symposium on forced swarms, his idea does not seem to "catch on." Both forced and natural swarms entail a great deal of unnecessary work just when time is precious in an apiary. Dr. Miller, in his usual way, has a slap at the forced swarms without awakening any one, apparently.

Mr. Clare, who is so strongly in favor of starters, must be a Britisher, for he wishes me to exhibit my pedigree before swallowing anything. I may say, and the way he sticks out for the old-fashioned way is thoroughly British in every respect, I have kept bees much further north than Rideau Ferry, in Ontario, and that, too, in shallow hives, with good results. As a matter of fact, this idea is old. Over 150 years ago the Scotch adopted a hive much like the Heddon, with shallow chambers, which were often added from below. And swarming may be totally prevented by adding from below; which, being the case, enables the bee-keeper to get very good yields. The idea works as well north as south. I work-

ed it 3000 miles south of Mr. Clare; and Mr. Harry Lathrop, in Wisconsin, works it all right. No, comb foundation is a grand invention when its use is rightly understood. The business of cutting out pieces of comb, slicing off drones' heads, etc., does not suit me. It all takes time; besides, to make drone comb takes time and honey; and to raise young drones takes lots of food rightfully belonging to the working party. Altogether it is a costly experience. I have tried it.

Another thing is this: Persons who use starters have to handle combs with the greatest care; they can't ship colonies any distance; in fact, the beginner who does not use full sheets carefully wired commits a grave error; for if he decides to sell his bees later on he can sell all right; but if he does not, woe to him when he attempts to ship. Good combs well wired are the best recommendation in selling an apiary, north or south. I have had bees shipped to me 3000 miles on wired combs, without the loss of a colony. If the comb is shallow, however, and well fastened to the bottom-bar, it is all right; but that is only another argument in favor of shallow frames.

In the same issue in which Mr. Clare's letter appears, Mr. Orel L. Herisher advocates a shallow frame, and Doolittle hints about the drone comb. I will bet a cooky he has but very little drone comb about his apiary that is not wanted for queen-breeding. Mr. Danzenbaker has covered this ground very well in his "Facts about Bees." I hope Mr. Clare has a copy. No starters, but broad shallow hives, are necessities for comb honey.

[I have for several years used shallow-depth supers filled with extracting-frames to put on colonies of moderate strength in place of putting on supers of sections. Supers of Ideal depth, or those of the right depth to take 4x5 sections, were used for the purpose. A. I. R. possibly was not aware that I had been using them in this way. With these shallow extracting-supers one can very often get some honey from moderately weak colonies when he may not be able to get comb honey from them at all. They also serve the excellent purpose of giving just enough room, and no more, to accommodate the capacity of the colony.]

You speak of one disadvantage of using starters, that the combs are too frail to handle from lack of wires. Starters may be used in wired frames, and the bees will build natural comb over the wires very readily, so that natural-built combs *can* be just as secure as those built from foundation.

I can not imagine why any one should attempt to use combs of any kind unless they are wired. In buying up bees we get such combs; and to say that they are an intolerable nuisance is putting it very mildly indeed. They have to be handled just so or they will tumble out of the frames in hot weather.—ED.]

A CONVENIENT AND SERVICEABLE HIVE-STAND.

How it Works in Connection with a General System.

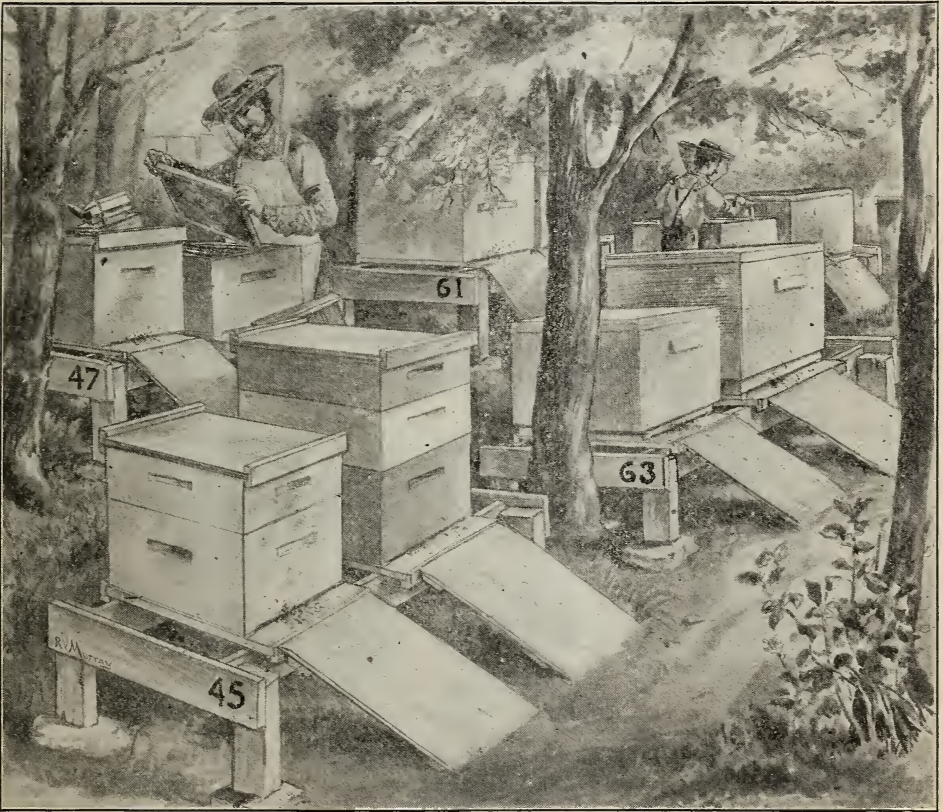
BY JOHN S. CALLBREATH.

I send you a sketch and measurements of the double hive-stand I have used since 1895. It is made of fencing, 7-inch boards, and 2×4's. It will hold two double-walled hives or three single-walled. It is a part of a system. I have all queens that are laying clipped, one hive of bees on each stand. When the colony swarms, I pick

with them. I usually cover up the old hive any way, to be on the safe side.

With clipped queens and double hive-stands it isn't necessary either to climb trees or *carry* heavy hives in order to have the swarm on the old stand. A boy twelve years old can do the whole thing.

The double hive stand especially fits in with the forced-swarm method, as the bee-keeper can not only *slide* the old hive to a new stand (the other half), and so save the work of carrying it, but the old hive is in the handiest place possible for a second and third shake of the young bees in the old hive to the new swarm.



CALLBREATH'S HIVE-STAND IN USE, WITH ALIGHTING-BOARDS.

up the queen and cage her; and after putting the cage in a shady place, I *slide*, not lift, the hive to the other end of the stand. Place the empty hive in the place of the old hive; and when the swarm begins to come back to its old place, liberate the queen and swarm, and the queen will march into the new hive. If the bees are blacks or hybrids it may be necessary to cover the old hive over with a sheet or something to keep the returning field-bees from finding it and setting up a *call*, and so persuade a part of the swarm to go in

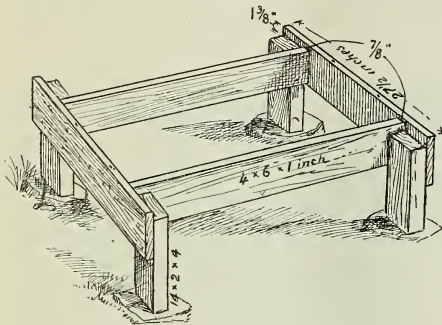
Why have the legs so large and on the *outside*? So that the stand is stronger and there is less danger of its being tipped over by frost heaving, etc. I had to learn that by a costly experience.

Why have the front and back pieces $\frac{1}{2}$ inch higher than the top of the legs? So that the bottom-board of a single-walled hive can be slid clear up to the end-board.

Why have the end-board project above the front and back pieces? So that there is less danger of sliding the hive clear off. Also, sometimes in raising queens I have

a *side* entrance for one part of the hive, and this end-board projecting up $\frac{7}{8}$ inch makes a good alighting-board. The other part of the hive—separated by a division-board, of course—using the front of their half of the hive there is a *little* less danger of the queen's returning to the wrong half of the hive and getting killed.

To prevent the upper projecting edges of the ends from warping or splitting I drive two long slim nails (10d, cement-coated) into each one, as shown.



CALBREATH'S HIVE-STAND.

Why have the stand so high—14 in. plus $\frac{1}{2}$ in. plus a flat stone under each leg? So that the hive will be dry, the entrances less likely to get stopped up in the winter when a thaw is followed by a sudden freeze, and so I don't have to stoop over so much when working at them. Such a stand is more expensive than four stakes driven into the ground, but it is more convenient. (I'd like to see some one drive stakes into certain parts of my yard.) It seems as though frost would heave the stakes, and perhaps let the hive drop down between.

In numbering I number the stands, not the hives—two numbers to each stand—the odd number on the back of the stand, and the even number on the front. That way the number of any hive can be told from either the front or back.

Rock Rift, N. Y., June 16.

MILLER'S CLOTH-PAPER HIVE-COVER.

A Good Cover.

BY ARTHUR C. MILLER.

Here is a description of an improvement in hive-covers which I know is good. It can be applied to any style of cover, but is particularly adapted to flat ones.

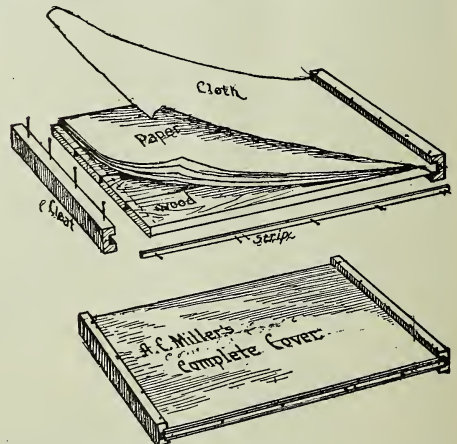
On top of the cover lay four to six thicknesses of newspaper. Over this stretch one thickness of cotton cloth (cheese-cloth is too thin). To this apply a coat of thick flour paste, using a paste-brush for the purpose. This "sizes" and shrinks the cloth. When it is dry, apply two coats of thick paint. The newspaper serves the double purpose of a poor or "non-conductor," and prevents

the cloth adhering to the cover, and wrinkling and cracking with the shrinking and swelling of the cover. In an attempt to get a simple flat cover which would not "twist" I have had some made of four strips, each four inches wide, and tongued and grooved together. The ends of these are held in grooved cleats after the well-known manner.

Before the cleats are put on, the paper is laid on top, and extends only *to* where the cleats will come, but folds over the two edges of the cover. The cloth is next drawn tightly over the cover from end to end, and the cleats forced on and nailed through from top to bottom. This binds the boards in tight. Then the cloth is drawn over the edges and held down by a narrow strip of wood. If such a cover twists I shall try two-inch strips.

The paper-cloth-paste-paint combination produces a sun-and-water-proof cover which takes but little paint, is quickly made, is light, and exceedingly cheap. Mine cost me just 11 cts. each, without the paint and nails.

The only thing in the foregoing which is in any way experimental is the narrow strips to get rid of the "twist." All the rest has been well tried, and is all and more than I have claimed for it.



Commercially such covers should find a big sale. I find that with such a covering I can use common $\frac{1}{2}$ -inch box lumber so long as it has no loose knots. End cleats are of clear pine of $\frac{3}{8}$ thickness and 2 in. wide.

Providence, R. I., Apr. 29.

[This is very similar to one we have made and illustrated in one of our older catalogs, with the exception that the board was $\frac{7}{8}$ inch; and instead of cloth for a top covering we used a heavy roofing paper. We considered this a good cover, and only abandoned it for one embodying the same principle shown as Fig. 402 in this year's catalog, made up of a double thickness of $\frac{3}{8}$ boards, air-spaced between. Its

outside appearance is exactly the same as the Miller cover.

Seven-eighths boards are bad enough to wind, but $\frac{3}{8}$ would be a little bit worse. But lumber has become so scarce now that the time is shortly coming when bee-keepers who desire to make their own goods will have to buy up dry-goods boxes for material.

When Mr. Miller says his cover is a good one I am quite prepared to believe him.—Ed.]

TO KEEP EMPTY COMBS.

Seeking Darkness Rather than Light.

BY G. C. GREINER.

A writer from Pennsylvania inquires in GLEANINGS, May 15th, how to keep empty combs. The editor, in answering this question, gives the same plan I have practiced for many years. But for the last twelve or fifteen years I have kept my combs on a rack exposed to air and view, and I find it is less trouble, and a safer way to keep them, than to store them in moth and bee-proof receptacles. Even when we think that our combs are perfectly safe in our light comb-boxes, the first we know worms are at work among them.

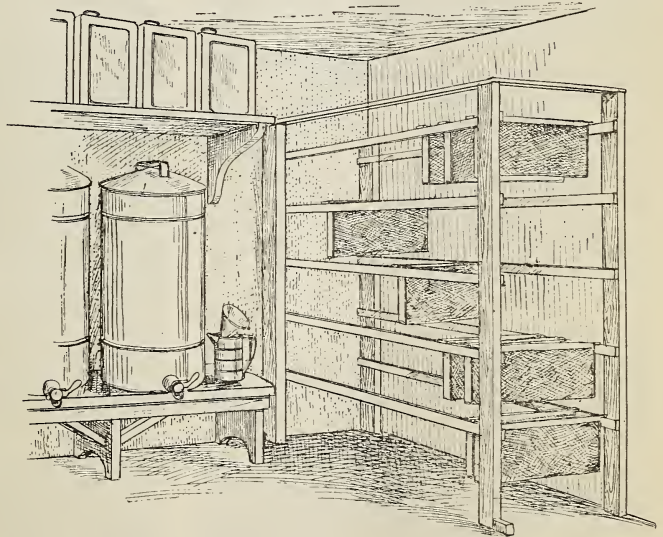
I herewith give a diagram of the corner in my honey-house, with my comb-storage. The advantages of this arrangement are several. It takes very little material in comparison with tight boxes. If we have no strips or slats of proper dimensions, they can be picked up among the refuse of any saw-mill at little expense, or a little lumber (a bass-wood plank would do first rate) can be sawed into the desired shape at any mill in a few minutes. The shelves are all accessible from the end or front. We can handle the bottom row as well as the top one. No lifting is necessary as is the case when they are stored in boxes. There is no need of fumigating. Worms are very shy. They seek the dark rather than the light (for their deeds are evil), and this accounts for their persistency in managing to find an entrance into our moth-proof comb-boxes some way. They hardly ever trouble combs openly stored. It sometimes happens that combs hang so close together that they touch one another; then of course, forming a dark place, a few scattering worms may take possession of them. But when they do, it is easily detected. A glance of a few seconds reveals the state of

affairs before any great harm can be done. To prevent any trouble of this kind, combs should not hang touching one another, but be moderately spaced, and the owner should give them an occasional glancing look when passing. If worms are at work, it can be readily seen by the webs among the combs.

It is very convenient, especially during the summer, to use certain shelves for certain kinds of combs. Some may contain extracting-combs, others brood-combs, and still other combs to patch up, etc. To have them sorted ready for use when we are in a hurry, and run to the honey-house for combs saves many annoyances.

The size of the material is not essential. I use $1\frac{1}{2} \times 2$ in. for posts, and 1×2 in. for sides or shelves; any thing that is strong enough not to spring or bend will answer. Care should be taken in arranging the spaces. They should be all alike and just right, allowing the frames to slide free, and not have too much play. The posts are all fastened to the wall except the front near one which is connected at the top with its mate.

The tanks on the left contain about 150 lbs. each; when one is being filled the contents of the other is settling, and drawn off into 60-lb. square cans. The structure is



somewhat out of proportion. Five shelves could occupy the space of three. Two inches in the clear between the combs is sufficient.

La Salle, N. Y.

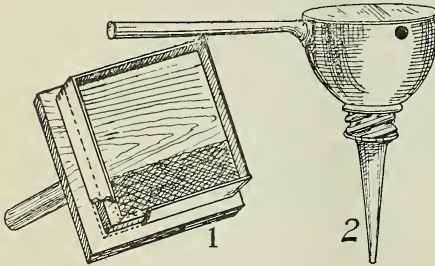
[A good many of the practical bee-keepers store their combs exactly the way you describe in your illustration. It is a fact that exposure to light will tend strongly to deter the work of the moth-worm. Keeping the combs one inch apart where the light can shine upon them is good in theory and excellent in practice. If a room of this kind is fumigated the combs will be kept doubly secure.—Ed.]



YOUNG'S SPRING-TOP OIL-CAN FOUNDATION-FASTENER.

I have made a little device I use in fastening foundation in sections, which I think is a little ahead of any arrangement that I have ever before tried for doing good and neat work. I think it might be properly called a hod or bee-keeper section-hod, as it much resembles that tool a plasterer uses to put his mortar on. It is made as follows: Take a $\frac{3}{8}$ -inch board; saw off a piece the size of your section, then nail it to the end of a round stick through the center of the board for a handle (the top end of an old broomstick makes a good one); then cut a block a trifle less than the inside measure of the section, and a little less than half its depth, allowing for half the thickness of the foundation; then nail it to the other piece.

I have remodeled a small oil-can that I use for pouring melted wax.



As to the oil-can, just get a tinner to solder a handle to the side, similar to a small dipper-handle; punch a good-sized hole on top of the side, as shown in the cut, and it is ready.

I melt wax in a small tin pail, and enough of it so I can sink the oil-can in it, and let it fill up through the hole in the side or top. Use nothing but clean wax free from sediment, then it will run fast enough through the small tube. I fix a small rack in the top of the pail to lay the can on, to let it drip off a moment when first taking it out of the melted wax. This you can do by punching a few holes about an inch below the rim of the pail, and about one-third around, and weave in some fine wire.

Now for the work. Slip the section on over the block; lay in the piece of foundation; press it close to the section, then pour on the melted wax along the edge of foundation. If you want to see what a nice little strip of wax you can get in the center of the section across the bottom or up the

sides, which I think will be quite an inducement to the bees to attach their comb to the sides and bottom of the section, keep right on pouring the wax in the corner on the bare block, always commencing at the upper corner; pour on a drop or two, then let it run as far as it will before putting on more. This hod, as I call it, you can hold and turn at any angle that suits you; but you must keep the face of it wet by dipping in water in order to have the wax slip loose, and leave it sticking to the section; and when pouring the wax on, you must reach up with your fingers and hold the side of the section close to the block to keep the wax from running through. See that your sections are folded square; press them to shape while corners are yet damp; cut foundation in the miter-box, then you will be enabled to fasten the top and one side. I cut mine diagonal, using a half-sheet fastened in one corner.

Now, Mr. Editor, I should like to have you or some of your help make and test one of them before you publish this. Do not use a wax tube if it works as poorly as mine does, for this work. Keep your work to the right, where you can do the reaching with the right hand, holding the hod in the left.

Robertson, Ia.

N. YOUNG.

[Your plan of a little hod that can be twirled in the hand offers a special advantage in fastening foundation to the top and one side; but when the wax is so fastened, are you not liable to have trouble when the section goes into the super? If I mistake not, the foundation will be inclined to buckle or warp if the section is crowded in the super so as to throw it a little out of square. The scheme of fastening to the end as well as the top has never been practical so far as I know. Our British cousins have used sections grooved on top and sides, slipping the foundation into the grooves; but even then one would have to work very carefully or his foundation would be bulged. If it would be practicable to have the wax fastened on three sides we should get plumper and prettier sections.—ED.]

RHEUMATISM FROM TOO MANY STINGS.

I have had a long spell of rheumatism, and haven't been able to do any thing this summer. The doctor says it is from getting so many bee-stings. What do you think about it? I have been working in bees steady in the summer for four or five years, from a few stands to 250, besides transferring and working with other people's bees all over the country, and I never wear any veil, and, of course, I get lots of stings.

Mountainburg, Ark.

S. M. CAMPBELL.

[I have never heard of a case where bee-stings were alleged as the cause of rheumatism; but there have been scores of reports where the poison from the bee has actually cured that disease, and in many cases

where it has been of great relief. I do not know any thing about your doctor; but I can not for one moment believe he is right. If you ask the average physician he will tell you that bee-stings will have nothing to do with causing disease, but that they may mitigate it somewhat. Your trouble may be due to some other cause. Perhaps when you are among the bees you catch cold, with the result that the symptoms are aggravated somewhat. I certainly should advise you to begin wearing a veil—not because it will make your rheumatism better or worse, but because too many stings may injure you other ways.—ED.]

BEEES NOT INCLINED TO WORK ON FOUNDATION BELOW.

Early this spring I bought two colonies of black bees in L. hives, but comb was built so crooked I could not get the queen out to put in an Italian without cutting the comb to pieces; so put another brood-chamber below them with frames filled with foundation, thinking they would work down on to lower frames, and then I could find the queen and remove her. Well, seeing they were very strong I went yesterday into the hive, thinking I could find her, and found they had not touched or drawn out the foundation in the lower box, though very much crowded in the upper one. I was planning, as soon as they had another queen, to drive them from the upper box, when to-day they started to swarm out, and had been gone; but I happened to see them in time to flood with water, and stop them. Now, is not that a rather strange result? I felt sure, as they needed space, they would work down in the bottom box; but actually they have never touched the foundation sheets, so far as working them out is concerned. The fact that they swarmed shows I am not mistaken in thinking that there was an abundance of bees and honey.

Paducah, Ky., June 8. W. M. JANES.

[You made the mistake of putting your foundation *under* the general brood-nest. I should hardly expect the bees to go below to draw it out, even if the brood apartment above were crowded. If you had put it above, the results might have been very different. In order to draw out combs, the compartment or super should be very warm; as heat naturally rises, comb-building progresses best in the top of the hive. You may set it down as a rule that bees will not generally leave a brood-nest above to go into an empty space below, even though that brood-nest is crowded for room.—ED.]

[A copy of the foregoing was sent to Mr. Janes, who writes further:]

Yes, I see the mistake made, but was trying to get the black queen off the crooked comb to where I could get hold of her. But I can give something which is not a mistake, and may be made useful as I have been doing. Old strong colonies can be made to work out as much new all-worker

comb from starters as is wanted—no uncertainty as to drone comb involved—by simply putting an empty box with starters *below*, except one straight comb for the queen to start on, putting *her below*, with excluding zinc above her. This gives all storage comb above that the bees need, and they will make comb below only as the queen presses them for it, and every cell will be worker. I find this works every time without any regard to age of queen, size of colony, or other conditions, and they at once begin to make what she needs too. Extracting and comb-building can be run together thus very successfully, and no drone comb made. W. M. JANES.

Paducah, Ky., June 29.

[Yes, this plan will work when the bees will go below; but usually they will swarm if honey is coming in slowly. When it comes in more rapidly, and swarming has ceased, as it does in some localities, then the bees will, of course, work downward and build worker comb.—ED.]

BEEES DYING IN IDAHO; IS IT POISON OR WHAT?

Please tell, if you can, the cause of my bees dying. They were put in a cellar all winter, and wintered very well. They seemed to be very healthy for about three weeks after they were brought out, and then they began dying off. They acted just as if they were freezing, although the weather was warm, and they had been out working for two weeks at least. They would fly out, sit on the edge of the hive for a few minutes, then fall off dead, until they all died. I lost 14 stands in about one month and a half. They certainly did not starve, for the hives were two-thirds full of honey, all ten-frame hives. I, however, am not the only one who has lost bees. One of my neighbors has lost over 100 colonies; another neighbor has lost 38 and one 60. Nearly every one has lost his bees, and they all seemed to act nearly the same as mine did. Owing to the loss of so many bees, a very poor honey crop is predicted this year. Alfalfa is just going into bloom.

GEORGE H. SMITH.

Poplar, Idaho, June 16.

[Your question is a hard one to answer. I first thought it might be poison that the bees had gathered from fruit-trees that had been sprayed while in bloom; but if that were the case the trouble would disappear as soon as the spraying ceased. But from what you write I judge that the malady, whatever it is, is apparently going on with its destructive work. If so, the only thing I can suggest is bee-paralysis. The bees will behave somewhat as you describe, but I never knew this disease to be very serious in the North. A paralytic bee has a black, shiny, greasy appearance; its abdomen is considerably swollen; the bee will have a trembling motion, and will crawl into the grass from the entrance, and

die. If it is crushed, there will be a transparent, slightly yellow fluid from it as if it were in the nature of dropsy in the human family. I should be glad to hear from some of our subscribers, and also to receive specimens of the dead bees. It may be a new disease.—ED.]

QUESTIONS ABOUT SHAKEN SWARMS.

I had two colonies of bees that swarmed one day apart. I hived them in separate hives, shook the bees off the combs of each old colony in front of each new hive, leaving enough bees in the old hive to take care of the brood. Eleven days later I repeated the shaking with the one, and ten days later with the other; twenty-one days from the time they swarmed I shook all the bees off the combs in front of the new hive of the one colony; the other, twenty days from the time they swarmed. About 1000 bees went back into the old hive of the one colony, and about 2000 bees went back into the old hive of the other colony. Five days after the last shaking I shook the remaining bees from each old hive in front of each new hive. The one with about 1000 bees, as nearly as I could see, killed them all. The one with about 2000 bees I could not see that they killed any. Would you please inform me why those two colonies of bees acted so differently, as there was only one day's difference in swarming? I can't see why they acted so differently unless it was that the one that killed the bees had the old queen, and the other the young queen.

L. H. LINDEMUTH.

Lehmaster, Pa., May 26.

[This was referred to Mr. L. Stachelhausen, who replies. He is possibly the best-posted bee-keeper on the subject of shaken swarms in the United States.—ED.]

I see that, 20 and 21 days after swarming, you shook all the bees from the old hives in front of the swarms; but in one case 1000 and in the other case about 2000 of the bees returned to the old hives. Right here is something I do not understand—21 days after swarming, all the worker brood has hatched; and if all the bees are shaken in front of the swarms, you have broodless combs, nothing else. What is the reason for keeping them on the old stand? I would remove the old hive entirely, and use the combs somewhere else. If some of the field-bees would return they would find the old hive gone, and try to enter one of the neighboring hives, and they will be accepted if they have their honey-sac filled.

Now, you say that you have shaken these few bees in front of the swarm 5 days afterward. In one case they were nearly all killed; in the other case none were killed, and you want to know *why* this difference.

It is always difficult to explain some things if we do not know all the circumstances. Two different explanations are possible.

1. Field-bees with an empty honey-stomach, if introduced to another colony,

are generally killed; but if they come back from the field with a load, and try to enter a wrong hive, they are not molested at all. In the one case Mr. L. may have disturbed the bees sufficiently, which caused the bees to fill themselves with honey, and they were accepted. In the other case they probably could not do so, for some reason unknown to me, and were killed.

2. Whether the swarm had an old or a young queen will make no difference, I think, in this respect; but something else is to be considered. Bees of an after-swarm can hardly be united with a colony having a fertile queen. It seems that the bees see the danger that a young virgin queen may kill the old fertile mother. On the other hand, queenless bees are generally accepted. This may explain Mr. L.'s case in another way. If with the 1000 bees there was some kind of virgin queen it is not astonishing that they all were killed by the colony having a young or old fertile queen; and if among the 2000 bees no queen at all was present, and they had full honey-sacs, they were accepted all right.

L. STACHELHAUSEN.

Converse, Texas.

THE UPPER-STORY PLAN OF SUPERSEDING QUEENS.

Doolittle in his books on queen-rearing, which I have translated into German (and published), says on page 111, second edition: "If you desire to supersede any queen, etc., all you have to do is to put on an upper story with a queen-excluding honey-board under it; place a frame of brood with a queen-cell upon it, in this upper story; and after the young queen has hatched, withdraw the queen-excluder, and your old queen is superseded without your even having to find her, or having the least bit of time wasted to the colony.

Concerning this method I have found no mention made of it in your A B C. Pray tell why. Is it practically worthless? or have you mentioned it in the A B C? I should be very grateful if you would be so kind as to answer my question.

A. STRAULI.

Scherzingen, Switzerland, Jan. 29.

[The item you refer to in Doolittle's book is one among several good things found therein; but, from the nature of our work, we were able to give only extracts or brief sketches of some of the methods referred to in his excellent work. For that reason we did not include the part you refer to. As to the plan itself, I have not tested it, and therefore referred it to Mr. Doolittle, who replies.—ED.]

The plan Mr. Strauli asks about worked perfectly in all trials before the book was published; but since, when bees were inclined to rob, as no nectar was coming from the fields, it has sometimes failed.

I find bees are very "freaky" things, and every little while they will upset rules that have worked for 10, 15, or 20 years—

kill queens, refuse to build worker comb, and even fail to build queen-cells on larvæ given when queenless; yes, and swarm without any queen at all. I feel often, of late, like saying, "I don't know," with Dr. Miller. G. M. DOOLITTLE.

Borodino, N. Y., June 16.

[We did try, come to think of it, something similar—raising cells in upper stories over perforated zinc. It worked during a honey-flow, but not after.—ED.]

THE POISONOUS FUMES OF THE HIVE; KEEPING HONEY IN TIN CANS.

I read of persons being poisoned by gases from hives. I think this can be remedied by uncovering for a while the hive to be manipulated, before one works it. This will allow the ventilation of the hive, which carries off most of the gas.

Please let me know if keeping honey in a common tin Novice extractor for a long time will injure it, say two months.

ALBERT D. WARNER.

Warsaw, Va., June 13.

[There is only about one person in fifty thousand who is at all affected by the fumes of bee-sting poison from a strong colony. Leaving the hive open for a few minutes might possibly allow the vapor or gas to pass off. But if one is so sensitive to the poison as this, ventilation probably would not help very much. In cool weather, when a hive is open bees will elevate their stings; and if you watch closely you will see a tiny drop of the poison on the end. If there is a pungent odor given off from this poison, the mere matter of ventilating possibly might disperse it some.

Honey can be kept in tin vessels for a great length of time. It prevents corrosion of the metal, and the honey itself will keep indefinitely.—ED.]

ARTIFICIAL PASTURAGE.

I have been keeping bees for four years and have never been able to have them make any surplus of any kind. During this time I have studied the trouble thoroughly, and have decided that it is in the pasture, so I will have to plant some or quit bee-keeping. I should like to have you give me some information on the subject of pasture for this section. I don't know of clover being grown within one hundred miles of me, and the people say it won't grow here. What shall I plant? W. H. PATRICK.

Bamberg, S. C.

[There is no artificial pasturage that will pay you just for bees alone. You would have to put out hundreds of acres, and even then you might not get enough to supply the bees with any more than their daily consumption. If there is not natural pasturage sufficient to give your bees a surplus from year to year, and that is a condition that is very unusual in the case of a few

colonies, you had better give up bee-keeping as a business.—ED.]

FORMALDEHYDE FOR BEE-MOTH.

After reading the articles in GLEANINGS on the use of formaldehyde gas for the treatment of foul brood, it occurs to me that the eggs of the bee-moth might be treated in the same way. But in making the gas strong enough to kill the worms, would not the larvæ and eggs of the bee be destroyed at the same time? W. L. SHORT.

Vicksburg, Miss., June 12.

[What would kill the one would kill the other, undoubtedly; but as long as there is eggs in the combs they would, of course, be in the custody of the bees. If they had any Italian blood in them there would be no danger from worms. The only combs that would require fumigating would be those that were empty or out of the care and keeping of the bees. As a matter of precaution it would be good policy to fumigate with the formaldehyde all combs in the fall of the year. This would disinfect them of foul brood as well as kill any eggs of the moth-miller that might be in them.—ED.]

GLEANINGS SATISFACTORY AS IT IS.

I notice the criticism on pages 552, 553, regarding advertisements in GLEANINGS, especially numbering the advertisement pages and keeping them separate; but I should be very sorry to see it done. I also save the copies, putting them together as soon as I get them, having them bound at the end of the year. *But I want the advertisements bound with them* so that I may have them also to refer to.

I like GLEANINGS very much. I took it eight months before I got my bees. I hardly know which part I enjoy most, from Stray Straws to the notes by A. I. R.; but I think those two are excellent, and I should miss either of them very much. I also enjoyed the writings of Rambler, and it seemed like the loss of a personal friend when I heard of his death.

I think GLEANINGS is about perfection, and that you understand both the bee business and running a bee-paper.

STEPHEN J. GRIFFEN.

Bridgeport, Conn., June 19.

PICKING UP QUEENS TO CLIP.

I was much amused at the description given in GLEANINGS, of catching and holding a queen to clip. Why not lift her at once with the thumb and fore finger by the thorax, and as you raise her from the comb pass the middle finger under her, removing the index finger? then you have her in about the position you describe, thus avoiding not only the delay of transferring the queen from one hand to the other, but of lifting the scissors, which, with this method, are placed in the right hand in position before the queen is lifted. Some

years ago I caught her between the finger and thumb, and left her on the comb while clipping; but I found it necessary quite often to wait for her to withdraw a leg from between the scissors; and I found by lifting her from the comb this difficulty was entirely avoided as you so nicely describe.

London, Can., June 5. F. J. MILLER.

[But it seems to me your plan is more awkward, and more liable to do injury to the queen, than the one that I described. A beginner (and it was to that class I was writing) could do better work by using his right hand. When one attempts any thing of this kind for the *first time* he should use that hand (probably the right) that is the most natural and easy for him. The transfer from one hand to the other is but the work of a moment; and, really, *time* should cut no figure in this. It is a question of safety to the queen. The average person, even if he were a bee-keeper of some years' experience, might do bungling work with his left hand.—Ed.]

DO BEES COVER OFFENDING OBJECTS WITH WAX OR PROPOLIS?

While in conversation this morning with several friends, the matter of bees came up for discussion. I was reading GLEANINGS, and a gentleman to whom you have sent several sample copies was commenting on its merits. It was remarked by one of the party that bees would cover any foreign object which might get in the hive—say, for instance, if a mouse got into the hive and died, the bees would cover it with a coating of wax, thus virtually hermetically sealing it in a case from which no odor could arise. I have in my experience had a mouse in the hives several times, but never a dead one (he died soon after I discovered him). Did this matter ever come to your notice? and is it so that the bees will cover an object with wax as stated? This might be of interest to others.

C. L. SNIFFEN.

Spring Valley, N. Y., June 11.

[It is quite true that bees will cover any foreign object which they can not remove, with wax or propolis. They have been known to cover up a thing as large as a beetle; but it is doubtful if they would attempt to cover a dead mouse. If his little carcass became too offensive the bees might swarm out. I do not know what they would do.—Ed.]

PLURALITY OF EGGS IN A CELL.

I send you by a separate package a small piece of drone comb which, you will notice, has more than its share of eggs. This queen was raised by me, and this is her first work. She laid two frames and a half full, clear to the edge of the frames.

FLOYD L. EDDY.

Santa Barbara, Cal.

[The comb was examined, and as you say contained a large number of eggs in each cell. This is probably the work of a

drone-layer or laying workers. A good queen, however, sometimes when she begins laying will lay more than one egg in a cell; or sometimes a normal queen that has too small an amount of comb will do the same. But in your case I should say you had either a drone-layer or laying workers, either of which should be destroyed.—Ed.]

QUEENS BITING INSTEAD OF STINGING.

I noticed a short article on page 550, about queens stinging human beings. It was only a few days ago that I helped a queen out of her cell and allowed her to crawl up my arm. She gave me (what I thought to be) a *bite* and not a sting as reported by the correspondent. As her movement was very slow, and watching her intently, I feel sure of the source of the pain.

W. G. RICE.

Champaign, Ill., June, 18.

[As before stated, it is only rare that queens sting human beings. They are more apt to bite, under certain provocation.—Ed.]

THE YELLOW BANDS IN ITALIANS.

I should like to ask a question of Ernest and call Dr. Miller's attention to it. If the yellow bands we so much admire are yellow because of the fluid back of them, then the fluid in the black bees and the gray Carniolans must be a different color. Not being a scientist myself, I should like to have you explain that in GLEANINGS, if not too much trouble.

W. BOWLING.

Stratford, Ont., Canada.

[The corresponding bands in the blacks are opaque, not transparent, as in Italians. The fluids are the same in both.—Ed.]

FORMIC ACID IN HONEY.

Can you tell me whether catnip honey has more formic acid than alfalfa honey or than other honeys?

ROY A. WILSON.

Kearney, Neb., June 15.

[I do not know that it has been definitely proven, although that seems to be the general assumption, that formic acid does exist in honey. I should not suppose that there was more in one source of honey than in any other.—Ed.]

CANVAS LEGGINGS FOR KEEPING BEES OUT OF THE TROUSERS.

Say to Dr. Miller, try a pair of light canvas leggings for keeping bees out of the trousers, and note the improvement.

C. E. WOODWARD.

Punta Brava, Cuba.

Where is the queen generally located in a cluster of bees after they have swarmed and alighted on a tree or bush?

Wabuska, Nev.

J. G. YOUNG.

[The queen-bee in a cluster is generally on the outside.—Ed.]



Charity is not easily provoked; thinketh no evil; believeth all things, hopeth all things.—I. COR. 13:5, 7.

When my thousand bushels of potatoes were ready to harvest last fall, I was a great deal worried about the amount it was going to cost me to get them to Medina. To haul them by wagon over the hills to the nearest railway station would cost between \$50 and \$100; but at the foot of the long hill on the edge of the bay there was a dock where vessels of various kinds stopped to get lumber, and I could get the potatoes down there at very little expense, because it was all the way down hill. Then the question was to get the steamer to stop there and take them on and carry them around by the "Soo" to Cleveland. I presented the matter to the Northern Michigan Transportation Co., whose agent was at Traverse City; and after presenting the matter to the general freight agent of the company he said they would take my potatoes from the Bingham dock and turn them over to the railway company at Cleveland at 12 cents per 100 lbs.; but they said I must have a carload or more piled up on the dock as an inducement for the steamer to stop and take them on. The plan was carried out without any trouble, and my potatoes were delivered at our potato-cellars in Medina at a cost of about 13 or 14 cents a bushel. But our people here in Medina notified me that the railroad company demanded an overcharge of something like \$20. I suppose our friends are aware that, to facilitate business, these overcharges are always paid; that the railroad company agrees to look into all matters of this kind; and where the money received is not according to agreement, or more than the agreement, they will pay it back. This method of doing business has been severely criticised, especially by the farming community, and on this account I wish to take a little space right here to defend the railroads and the great navigation companies.

In all kinds of business where the owner or owners can not be right on hand to decide in regard to difficult questions, it is pretty generally agreed that the best way, and, in fact, almost the *only* way, is to pay the charges and adjust the differences afterward. For instance, if you are traveling on a railway, and there is something wrong about your ticket, you can pay your fare, and the railroad company will refund the money afterward—that is, if you are in the right and the conductor is in the wrong. In the nature of things, the railroad companies can not give their conductors unlimited discretionary powers.

A few months ago I sent Mrs. Root's ticket to the headquarters of the Pere Marquette railway to have the time extended.

Before the ticket got back, however, we had notice that my mother was near death. Of course, we could not wait for the return of the ticket, so I paid my wife's fare from Traverse City to Toledo. I supposed at the time and under the circumstances I should be out of pocket. I thought, however, I would present the matter to the general passenger agent; and I confess I was a little surprised when my \$8.25 came back promptly. You see I could not tell the agent at Traverse City about my ticket that had not got back, for he would not know any thing about it, and it was no affair of his any way.

At another time we just managed to catch a train. Mrs. Root had a return ticket, reading plainly that it would have to be stamped at the ticket-office before it could be used on the return trip. I knew we had neglected to comply with their regulations, and I supposed I would have to pay the fare; but they managed it so my failure to comply did not cost me any thing, but it made them some trouble.

By the way, perhaps I might remark right here that a friend of mine who is a railroad man said I must not jump to the conclusion that *all* railway companies are as accommodating as the Pere Marquette. He said he honestly believed they gave their passengers more for their money than almost any other railway company. But this is aside from the subject we are considering.

There are a great many iron-clad rules about traveling that seem to us unnecessary; but where railroad companies employ thousands of people, and sometimes almost a thousand miles away from headquarters, they have got to exercise great care to prevent dishonesty, or, perhaps we might say, to avoid leaving things in such shape as to *encourage* dishonesty. And this is why we are told again and again that, where there are differences between yourself and the conductor or the freight agent, as the case may be, the better way is to pay the bill, then put in your claim and have the matter adjusted afterward. And just here comes in the thought that this adjuster of all these differences should be a very wise, sharp, and keen man. People often present claims to the railroad and transportation companies that are preposterous; and several times I have known of claims being paid where I thought the adjuster was almost throwing away the money of his company. Let us now go back to the potato deal, if you please.

As soon as I learned of the overcharge on my potatoes, I put in a claim for my \$20. After some weeks had passed, I became a little uneasy about it; but Mr. Calvert and Mr. Boyden, who have these matters in charge, jokingly told me if the transportation companies got around to it in a year they would do well. Of course, you know that I have in years past had quite a large experience in collecting claims myself, and I said if they were followed up properly it need not take a year, nor any thing like it.

So I commenced sending claim after claim for the overcharge on the potatoes. I told them that, if our claim was not just and right, they should let us know wherein we were not entitled to it. I shall have to confess that it was about six months after the transaction that I got any reply. Then the general freight agent at Baltimore wrote us he had just been informed by the general freight agent of the Cleveland and Detroit Transportation Co. that my shipment did not originate at Traverse City but at Bingham, and therefore my demand for overcharge was declined.

May be you think that, since A. I. Root has been largely relieved from the cares of business, and left by himself out in the woods to cultivate a Christian character, he is always genial and kind, and does not get stirred up. Well, you are a little mistaken. When I found these people had waited six months while I had been telling my story over and over again, and then declared they would not pay me a cent because my potatoes were not hauled to Traverse City to put them on the steamer, I felt like fighting. May be you have had some such experience. I did not care particularly for the \$20; but when I had the figures in plain black and white, to be turned off in this shape I could not rest. It was the principle of the thing more than the amount of money at stake. I stated the case to a good many people who had had experience in such matters. I talked with the railway men about it, and said, "What are these general freight agents of the large railroad companies employed for? Is it to see that justice and fairness are done in every transaction? or is it to get out of paying any and every claim against their respective companies by some hook or crook or technicality?"

Most of the business men to whom I presented the matter laughed at the way I presented it; but pretty much all of them declared that the general freight agent earned his salary by saving the money of the company that employed him. I remonstrated again and said:

"But these transportation men are working hard to get trade. Almost all of them have strong competition. They are trying to turn trade into the hands of their companies. They are especially anxious to get carload orders like my two carloads of potatoes. Such transactions as the one I have mentioned would not advertise their business. Do not railroad companies try to treat their customers in such a way that they will come to them again?"

One man, who ought to know about these things, replied:

"Why, Mr. Root, if you have some more potatoes to ship, that fact may have some weight in getting them to return the overcharge."

Now, friends, as I have said before, most of you have had some experience in this kind of business. I am afraid the greater part of you have fallen into the fashion of

saying that "railroad corporations have no souls, and it will cost more to collect the overcharge than it is worth. If you go to law about it, they have their own lawyers who work on a salary. It would not cost them any more to have these lawyers at work at something than to have them sitting idle; better drop it and lose it the way we do."

To all of this I want to say, God forbid. I have met a few men in high positions who were overbearing, and lacking in conscience; but may God be praised it is only a few.

When I went back to Traverse City after the transaction just mentioned, I decided to call on the agent of the Northern Michigan Transportation Co., Mr. Elwyn H. Pope. He is the man who gave me the rates, and the one who directed the steamer to call at Bingham dock, and who also gave me a letter to hand to the clerk on the steamer, mentioning the rate they had agreed to give me. I had in my possession the agreement to move the potatoes from Traverse City to Cleveland, but, unfortunately, I did not have a scrap of any thing to prove that the potatoes were to be taken off Bingham dock *at the same price*. I gave the only piece of paper, mentioning this, to the purser on the boat. He kept it as his authority for stopping at the dock for my potatoes.

I was so busy in planting potatoes in June that it was two or three weeks before I got up to Traverse City to see the agent. During these two or three weeks I kept asking myself the question, "Will Mr. Pope make his verbal agreement as good as the written one I hold?" Quite a few assured me that, when he knew just how I was fixed, he would stand in first for his company, and let me lose my \$20. The agent seemed such a bright, fair, honest man when I talked with him a year ago that I could not believe it for a moment. Yes, friends, the matter not only weighed on my mind, but I prayed over it. I prayed that God would help me to hold fast, not only to my faith in him, but in humanity. I prayed for that great and wonderful gift of charity—the charity that seeketh not her own, is not easily provoked, and thinketh no evil. You know I am naturally hopeful. I have faith and hope in poor imperfect humanity. I prayed for that charity that "hoped all things" as well as "endureth all things."

When Mrs. Root and I got ready to go back, our train was late and we had only about fifteen minutes to get from one depot to another. If I did not catch that train I would have to stay in Traverse City all that afternoon, with nothing to do. I put Mrs. Root in a bus with the baggage, and then I ran over to the wharf where the steamers stop. Mr. Pope was busy superintending the unloading of a steamer. He put his finger on the paper where he was writing, looked up, and I was keenly trying to read the man meanwhile to see if I had been mistaken in him. He did not remember me

at first, but finally he gave me a pleasant smile, and said, "Oh, yes! this is Mr. Root, the man who gave us some potatoes to ship."

Then I told him I had only twelve minutes to spare, and that if he could spare about three minutes he could help me catch the train. I had my letter in my hand, where they declined rebating the \$20 because the potatoes were not taken on at Traverse City. His reply was something like this:

"Why, this is ridiculous. I told you the potatoes would be taken from the Bingham dock at the same price. I told the clerk on the boat what the agreement was, and I gave you a note to hand to him to that effect."

Oh what a weight was lifted at once from my heart!—a weight that had rested there long weeks, because I feared—do you know what I feared? I feared to have another evidence of the weakness and frailty and *corruption* of humanity. May be you know something about how it hurts to have somebody you have relied on—somebody you have felt glad to know—turn traitor. My convictions of the previous year in regard to Mr. Pope were right. He may not be a Christian, although I hope he is; but he is a true man—one of God's noblemen. I told him my anxiety to catch that train, and he replied that, if I would leave the letters with him, he would make the matter all straight. He said he could not believe the matter had ever been presented to his company at all; that the agent of the Cleveland and Detroit Transportation Co. had simply got far enough to discover the potatoes were taken on at Bingham dock, and had refused the claim without any further investigation. He furthermore said if I had any more potatoes to ship they would take them at the price given last year, and he would stand by me, and see that they did not get in any overcharge.

Some of you may suggest that I have not yet got my money, and that may be I shall not get it after all. But I think I shall. I believe if this whole matter could be presented to the heads of our great transportation companies they would say at once that they employ agents at good salaries to be fair and just to every customer of theirs, whether he be high or low, rich or poor, black or white; and that the insinuation that they employ men to "wiggle out" of a just claim is untrue. God grant that it may be so. There are men in public office who have no conscience and no scruple; but such men will not only steal *for* their employers, but they will very soon, if they do not already, steal *from* them. They will be found out and dismissed, just as our great nation now while I write is ferreting out and dismissing and sending to prison those who make a bad use of the positions that have been given to them. God forbid that corruption, especially in high places, should be the rule; and may God grant that we as individuals may each and every one

of us try not only to be honest and fair toward all, but that we may be cultivating that little virtue embodied in our text, that bids us not only have faith in God but faith in our fellow-men, and be striving to hold constantly before us that grand virtue that "thinketh no evil."



THE NEWER STRAWBERRIES.

On p. 555, June 15th issue, I spoke of the newer strawberries we are testing. When Mrs. Root and I reached our "cabin," June 18th, they were just beginning to ripen. As there had been no rain for fully three weeks, the plants with their great loads of fruit were suffering, and some of them were considerably wilted, both berries and foliage. Mrs. R. thought it was too bad; but I said:

"No! it is just right. I can now tell which of the twelve kinds will stand up best under drouth."

Among the twelve there is one for which great claims are made in regard to standing dry weather. See the following from the originator:

We are having the hottest and driest weather here ever known. No rain yet, and the thermometer registering from 110 to 114 for the past week. All varieties of strawberries on my place have to be watered and shaded except Challenge. It is the most wonderful drouth-resister I have ever seen.

We were hardly out of the buggy when I asked Mrs. R. to take a look at the twelve kinds, and tell me which one was standing the drouth best. Without knowing their names she pointed out the Challenge at once. The leaves, as well as the fruit, were immense in size—not a spot of rust, and not a wilted leaf. It may be, however, that this is partly because it does not make many plants, hence each plant has more room than in many of the other rows; besides, the fruit does not lie in heaps as it often does with such varieties as Warfield and Haverland, and those of that type.

The next to it, as a drouth-resister, is "Uncle Jim," introduced by Flansburg & Peirson, Leslie, Michigan. This, too, is a strong vigorous grower, and bears immense berries; but while the shape and color are not as good as Challenge, the berries are as sweet as the Sharpless. Even when they are mottled with white they are sweet enough for me without any sugar. Like the Gandy, however, while some of the plants have great loads of berries others have few or none. Uncle Jim, like Challenge, makes only a few plants; and if one wants extra large berries, even if there are not so many, this may be a good fault.

August Luther is much like Michel's Early—sends out lots of runners, makes lots of plants, and gives a great lot of ber-

ries very early; good shape and color, but not very large.

Lyon much resembles the Warfield, but the berries are longer, rather sweeter and larger, especially if the plants are thinned out and not allowed to stand as thickly in the row as they grew. Both of these last two make so many plants that the matted row must be thinned out; and if they are to ripen the great mass of berries they set, they must have rich soil, and water during a drouth.

Senator Dunlap is the greatest plant to send out runners and make plants, I think, that I ever saw. It was the outside row nearest the top of the hill; and this was lucky, as it climbed the hill like a squash-vine, starting vigorous plants all along the way; and even in this thickly matted bed (it isn't a "row") it is giving us beautiful berries, some of them of good size, and, best of all, when fully ripe, of exquisite sweetness and flavor, something like the best specimens of wild strawberries.

As I write, we have just had a gentle rain for 24 hours, and strawberries and every thing else are just looking glorious this 24th day of June. Our peach-trees among the crimson clover, and, in fact, all over the hill where the woods were cleared off, are making such a growth I have to stake them or the wind will break the tops off, they are so heavy with new foliage.

About the handsomest tree on our place is an Acme apricot. Its perfect glossy-green leaves, contrasting with the glossy blood-red twigs and leaf-stems, make it about as handsome a tree as I ever saw anywhere; and when we consider the handsome fruit, ripening before early peaches, I do not see why it is not more grown.

My neighbor Hilbert said they grew some years ago; but when they took them to town the merchants said folks wouldn't buy them, because they "didn't know what they were." We had a few last year, and shall have more this season; and I call them, as grown here, about the finest fruit I ever tasted. So far no insect or disease has harmed either the trees or the fruit.



RENDER UNTO CÆSAR THE THINGS THAT ARE CÆSAR'S, AND UNTO GOD THE THINGS THAT ARE GOD'S, ETC.

Several years ago a friend of mine, Mr. Geo. A. Root, spoke to me about a low-priced outfit so that people, especially those in rural districts, away from a shoemaker, could repair their own shoes. We had quite a little talk about it. In 1892 he had a booklet printed at our place, describing this repair outfit for footwear. On the cover of the book there was the print of a

shoe that looked as if somebody with wet feet had stepped on the book and left an imprint. Right under it were the words, "Somebody has been stepping on my book." I remember there was a good deal of merriment about it, and people picked it up and looked it through just because of this joke on the cover. He started in a small way to make this shoe-repairing outfit. Friend Root is a sort of eccentric inventor—perhaps something like myself. I think he never got out a patent; but the thing seemed to fill a public want, and quite a business was soon started. You may remember seeing the advertisements in the papers of "Root's repairing outfit." Well, I am not writing up the work of the Root Brothers just now; I am simply calling attention to a piece of injustice that the great wide world should condemn. It is this matter of borrowing (or *stealing*, rather) other people's ideas without so much as saying "thank you." Just as soon as friend Root got his business well going, different persons started out with the same thing. They even copied the wording and the pictures on his advertisements; and, so far as I know, not one of these land pirates ever said so much as "by your leave." Very soon the agricultural papers began to offer these things as premiums. I remonstrated with one or two editors about encouraging a steal by patronizing somebody besides the original inventor; and I felt a good deal disheartened when they would reply, at least in substance, "Mr. Root, all you say may be true; but John Smith offers his outfit a little cheaper than we can get them of the original inventors and pioneers." Of course, a large part of my readers will say Mr. Root should have *patented* his invention. But there are a good many things that can not well be patented; and, more than that (thank God), there are quite a few persons nowadays who do not feel like going to the Patent Office and then carrying on patent litigation. Right here I am glad to be able to say that at the present time there is only one man who manufactures and advertises these outfits besides the Root Brothers at Plymouth, Ohio; and this man is not doing enough to be considered as a formidable competitor. The fellows who were so lacking in fairness as to steal another man's ideas kept on stealing, and in due time ran themselves *out of business*, especially while the Root Brothers adhered to honest fair principles in all their undertakings. I have seen this same thing happen a good many times in my life. But sometimes it is disheartening to see "the wicked flourish" for quite a spell, "like a green bay-tree."

What brought this up just now was suggested by looking over a beautiful little pamphlet from the Battle Creek Sanitarium. Many of our readers know about how these people started; and they will remember the time when they began to manufacture health foods and healthful substitutes for

tea and coffee, nut products to take the place of meat, and other things of that kind. We are in position to know something about the growth and magnitude of their business, for we have been for years furnishing them carload after carload of boxes in which to ship their health foods. Well, just as soon as this company began to build up a trade in things of their own invention and suggestion, other people, being jealous of their success, started in to make similar products. Now, this is not so very bad, because it is going on all over the world; and there is a good deal of truth in the remark that competition is the life of business. The thing that looks to me not only unfair but *shameful* is that these rival companies went and planted themselves in *Battle Creek*. You see Battle Creek has become a sort of household word for wholesome health foods; it is something like the firm in St. Louis that put up glucosed honey and represented it as coming from *Medina, Ohio*. Our place had gained a world-wide reputation for fairness and honesty because of the wonderful growth and good character of The A. I. Root Co. I do not say this to boast, but because it gives a fair illustration. These new companies, it seems, under the stimulus of their "Battle Creek" trademark, soon likewise did a thriving business. Then others came in; and, if I am correct, there are now between *thirty and forty* different institutions all around the old original sanitarium, scattering broadcast circulars by the ton concerning their Battle Creek health foods. If they keep on doing business with that sort of principle back of them I believe they will in time come to grief like the repair-outfit fellows. But meanwhile I wish this great nation of ours would frown down every attempt of this kind to steal some other man's thunder. In the first place, it indicates a shameful *lack* of brains where one starts out in this way to try to steal the ideas of some other person. He is exhibiting to the world the fact that he has not brains enough to get up something of his own; and if we were all a little more ready to talk up to him, and give him the go-by, I think there would be less of such copying.

The Battle Creek folks will send to anybody, on receipt of a postal card, some beautiful pamphlets and illustrations of their new "temple of health," perhaps the largest institution of the kind on the face of the earth. The chief reason why I like to give these folks an encouraging notice now and then is that, with all their great army of helpers, they have decided against the use of tobacco, alcoholic stimulants, and every thing of that kind, just as your old friend A. I. Root has.

I have just been very much pleased to see the picture on page 8 of their "outdoor gymnasium." This gymnasium is a big yard with a high fence around it. The "apparatus" consists of bucksaws and good sharp axes. Here the students and

patients of the institution go in their gymnasium suits, bareheaded, barefooted, and barelegged, and chop wood. It makes me think of where I worked last summer up in my home in Michigan. I was barefooted and bareheaded, and my clothing was so scant that I came pretty *near* being barelegged. I notice the farmers in the Traverse region, when out in the field with light work to do, have a fashion of rolling up their sleeves almost to the elbow. Now, I honestly believe that, if we were in the habit of arranging our attire during the hot months of the year so the sun and air could strike our limbs and muscles, and make them tanned and brown, it would add largely to our health. I went barefooted because I had troublesome corns; and if my feet became soiled there was that running stream of water where I took my daily baths. One can do ever so much more work, at least in many occupations, by dispensing with coatsleeves and shirtsleeves, underwearsleeves, and every thing else. Of course, you are liable to be smiled at if company comes around; but which is worth more—robust health and the bright exuberance of spirits that comes with it, or to be fixed up for "company" every hour in the day? I suppose the two may be combined to a considerable degree; but I am sure that one of the great aids to better health is not only pure water to drink and pure air to breathe, but to dress in such a way that the air, water, and sunshine can strike you *all over* as much as possible. The Battle Creek folks are on the right track.



THAT AUTOMOBILE TRIP THROUGH MICHIGAN.

This trip is going to take place about a month later than I expected at first, for reasons I will proceed to give. When I bought the machine, an Olds-Mobile, I told the agent, Mr. Andy Auble, that, if he could teach me so I could run the 30 miles from Cleveland to Medina that day, I would take the machine. You see I wanted it put to the severest test; and just then our clay roads had been badly cut up by repeated rains, and the mud had dried so part of the way that the machine would have to climb over great chunks of dried mud and clay, and at other places the wheels would sink. I told Mr. Auble if the machine would go over such roads as that without injury, I would be satisfied with it. I had had a little experience in running over good roads around the parks in Cleveland. We started off about 6 o'clock. The first ten miles over the brick pavement was all right. For the first time in my life I enjoyed having unlim-

ited power and speed under my control. When I say "unlimited" I mean the machine would go faster than I dared to ride. And this speed was ready at any minute by simply pressing my toe on a lever. Faster, *faster*, FASTER—until I was afraid to go faster—still. It was an easy matter to keep up with the street-cars that ran along by my side. And this machine, too, was a special "hill-climber."*

It is really worth something in a lifetime to be able to rush things, and with the power that shows no fatigue. One can hardly comprehend that there is no danger of overtasking the horse, or that the hot weather does not make any difference. This was all very nice until we came to the end of the brick pavement. My companion, Mr. Auble, sat by my side, telling me which lever to push or pull, constantly repeating the command to keep my eyes on the road ahead. Said he, "Commence at the very outset to make your fingers find the levers, without a glance from your eyes, especially when you are on high speed."

Well, when I came in sight of the clay roads, with holes full of muddy water, and great chunks of dry mud almost as large as a cook-stove, I said, "Mr. Auble, it certainly is impossible to run this machine over that road. We shall just smash it to pieces, and never get there."

I wish I could give you a picture of the twinkle in his eye as he said, "You just do my bidding; have faith in me and the machine, and we shall get to Medina all right before very late bedtime."

I confess to a great inclination to tell him to take my seat and manage; but that was not according to the contract. I wish you could have heard his quick crisp directions, perhaps something like this:

"Now pick out your road; put on your power; pull up the spark-lever; now off with your power; put on the brake; ease down at that mudhole; straddle the one ahead of you; put on the slow gear, and the minute she climbs over that obstruction let her down easy with the brake; now get up a little speed for that next bad place—here we go."

Thus we hobbled along, having hard work sometimes to keep our seats, until *chug* we went down into the mud. The thing was stuck, and would not move.

"There, I told you. Now we shall have to get some horses to pull us out."

"No, we won't have to have any horses. I never yet had a horse to pull me out, and I don't expect to very soon. Put on your slow motion; back up; swing off to the left with your other power—that's right, here we go."

Well, I kept on in this way until I had made a mile. I began to get a glimpse of what is possible with such a machine in the hands of an expert. The work was not very hard, but some way it got me into a

perspiration. The mental strain was ahead of any thing I had ever had on my bicycle, and I was tired enough to be glad to acquiesce when he said, "There, Mr. Root, you could run us home all right, without any doubt; but I think you will learn as much now to watch me, perhaps, as to try it yourself; and I can make quite a little better time and not boil the water quite so furiously."

It was not the water alone that was boiling, but it was the blood in my veins from the excitement and enthusiasm. Oh how I did admire the skill with which he made that machine get over that bad road! Just after dark, sure enough the machine began to get feeble, and it got tired and would not go at all. I think a full half-hour was spent in darkness trying to locate the difficulty, and I felt a little proud to think that I myself got hold of it. There was a defect in the make of the spark-plug. The porcelain insulator was loose. Just as we had concluded we would have to stay over night at the hotel we got at the trouble. A new spark-plug was put in, and we went on our way merrily.

A few minutes later we struck a piece of better road. It went down hill, winding about through a piece of woods; and it seemed to my inexperienced vision just frightful the way that thing rushed on in the darkness, and turned the corners. The exhilaration was such that I shouted and swung my cap. Some optical illusion seemed to say we were going down the side of a great mountain. In fact, I could not comprehend how any thing should go at that terrific speed unless it was down hill.

We arrived home all right a little after ten. Mr. Auble was going to the hotel; but I insisted he should take his sleep in our home. I will tell you why. I knew I should be up by daylight, or a little after. The whole neighborhood would be still and quiet, and I just hungered for the privilege of getting that machine out on a good road and having fun with it without any one to bother or hinder, or give advice. I had a notion I could master the mechanism after a little study, equal to anybody else. Yes, I will tell you confidentially that I had a sort of notion that I might be able to make it go a little *better* than any other live man or woman. I told Mr. Auble what I proposed to do, and he said all right. Shall I tell you how I did it? I was up, sure enough. In fact, my fingers just tingled all night long to get hold of those levers and test that new revelation (what I really want to say is that new wonderful and gracious gift from the great Father above). I just ached to make that wonderful piece of mechanism respond to my will. I remembered the directions. It backed out of its stable all right. It ran the length of our stone road, and behaved itself beautifully. Of course, I went slowly, because I was a little afraid of it. As there was no living being in sight—of course the road was clear—I thought on the way home I would just

*One like this designed for sand or heavy grades must necessarily make a slower speed on the level than the regular machine.

see how fast it *could* go. Well, just about as the speed began to frighten me I remember thinking it was a little too near the edge of the road. There was a rather deep ditch at the side, full of muddy water. I undertook to bring it a little nearer the center of the road. I have a dim recollection that it seemed to have "the bits in its teeth," for it just shot over into that ditch like a flash. I remember something about trying to make it get back in the road; but when it came so near being turned over I was afraid it would fall on me, I sprang out into the grass on the opposite side of the ditch. I suppose my hair was almost standing on end from fright. I got up on the sidewalk, and legged it for home. I burst up into Mr. Auble's sleeping-room; and, even though I found him snoring away, sleeping the sleep of the just, I did not hesitate to rouse him up.

"Mr. Auble! get up quick, and get my machine out of the ditch."

He sprang up, rubbed his eyes, stared at me a minute, then ejaculated:

"Out of the ditch! What in the world is your machine doing in the ditch at this time of day?"

"Well, that is just what I can not understand. And the worst of all, it is just now time for the milk-wagons to come along, and I want you to get it out before everybody sees it and tells the story all over town."

"Yes, yes! I see."

In a very brief time he followed me to the scene of the disaster. One of the front wheels was down in the muddy water, and one of the rear wheels was away up in the air. It was in such a predicament that we said we could turn it either side up with one hand.

"Shall I go and get our team?"

"No, no! I never had a team yet, and I do not think we want one now."

In my fright I had not even pulled off the power, nor put my foot on the brake. Here is one good thing about the gasoline-machines. They will almost always stop themselves as soon as the driver is out of the seat. He started it up right where it stood. For a little time the wheels "pawed the air," if I may so express it. But we managed to get that front wheel up on the bank, then he straddled the ditch, and ran to a place where the roadway goes into a private house. This was so very steep, and the mud in the ditch so soft, I thought the machine would not get up. But he commenced backing up, and running toward the bank. Pretty soon he had worn a track so the machine had a tolerable path to get up momentum; and then it popped over the bank into the road, and went off apparently uninjured and unconcerned. Half an hour with the hose made it look almost as new, after its experience, as when it came out of the salesroom 12 hours before.

You see I had been planning to start my trip through Michigan after one day's experience in running it from Cleveland to

Medina. All the children had protested; but I thought I knew what I was at. After running into the ditch I lost my confidence. I was glad to have Mr. Auble by my side while I ran it one more day; and even then I thought best, as the rest advised, to wait for Huber to come home from school, to let him go with me. On this 9th day of July, Huber and I are ready to start out. He has had two weeks' experience with the machine, and I suppose I can say, without exaggeration, that he is a tolerably expert electrician; in fact, his education for several years has been in that direction. He has had the machine pretty nearly all to pieces, and knows every part of it. How we get on I will let you know in Notes by the Way.

The National Bee-Keepers' Association.

Objects of The Association:

To promote and protect the interests of its members.
To prevent the adulteration of honey.

Annual Membership, \$1.00.

Send dues to the Treasurer.

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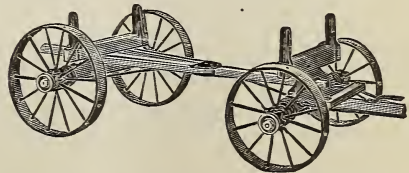
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In order to introduce their Low Metal Wheels with wide Tires, the Empire Manufacturing Company, Quincy, Ill., have placed upon the market a Farmer's Handy Wagon, that is only 25 inches high, fitted with 24 and 30 inch wheels with 4-inch tire, and sold for only \$21.95.



This wagon is made of the best material throughout, and really costs but a trifle more than a set of new wheels, and fully guaranteed for one year. Catalog giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who will also furnish metal wheels at low prices made any size and width of tire to fit any axle.

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There ^{and} Back **\$50** From Chicago

Tickets on sale Aug. 1st to 14th inclusive.

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Travel via the **Santa Fe**—the "Grand Canyon Line."

Most picturesque and pleasant route.

You can also have privilege of going one way and back another. (Round trip via Portland one way is \$11.00 higher.)

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Golden Italian & Leather Colored

Warranted to give satisfaction, those are the kind reared by **Quirin-the-Queen-Breeder**. We guarantee every queen sent out to please you, or it may be returned inside of 60 days and another will be sent "gratis." Our business was established in 1888, our stock originated from the best and highest-priced **Long-tongued Red-clover Breeders in the U. S.** We send out fine queens, and send them promptly. We guarantee safe delivery to any State, continental island, or European Country.

The A. I. Root Co. tells us that our stock is extra fine, while the editor of the *American Bee Journal* says that he has good reports from our stock, from time to time. Dr. J. L. Gandy, of Humboldt, Nebr., says that he secured over 400 pounds of honey (mostly comb), from single colonies containing our queens.

A FEW TESTIMONIALS.

P. F. Meritt, of No. 13 Breckenridge St., Lexington, Ky., writes: The bees sent me last July did splendidly. Each colony has at least 75 lbs. of honey—pretty good for two-frame nuclei.

Mr. J. Roorda, of Demotte, Ind., writes: Send me six more queens, the 48 sent me last spring are hustlers.

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A. Norton, Monterey, Calif., writes: Your stock excels the strain of Mr. —, which is said to outstrip all others. Your stock excels in profitable results as well as in beauty.

Price of Queens After July First.

	1	6	12
Selected	\$ 75	\$4 00	\$7 00
Tested	1 00	5 00	9 00
Select Tested.....	1 50	8 00	
Extra Selected Tested—the best that money can buy.....	3 00		
Two-frame Nuclei, no Queen.....	2 00		

Add the price of whatever queen is wanted to that of nuclei. Our nuclei build up fast, and if not purchased too late will make some surplus.

Queen-rearing is our specialty; we give it our undivided attention, and rear as many queens (perhaps more) as any breeder in the North. No order is too large for us, as we keep 300 to 500 on hand ready to mail. Send all orders to

Quirin-the-Queen-Breeder, Parkertown, OHIO.

Strong Testimony in Favor of

Moore's Strain of Italians

Prof. Frank Benton, of Washington, D. C., whose name is familiar to all progressive apiarists, says:

"I have several times, in the course of correspondence, and in conversing with bee keepers, had occasion to answer the question: 'Where can the best Italians be got?' It is, perhaps, not an easy thing to say, with certainty, but at least I have felt I might be able to tell where GOOD ones could be obtained. A number have been referred to you, for, although I have not tested your stock personally, I thought I knew pretty well, from general reputation, its character. A bee-keeper near here—Geo. A. Lanphear, of Vienna, Va.—who got some queens of you on my recommendation is so well pleased with them—in fact gives your bees such a good recommendation to me for gentleness and working qualities, particularly their working on red clover, that I thought I would like to try some myself."

I was not aware that Prof. Benton was recommending my stock until I received the above letter. Such testimony as this certainly has great weight, and shows why my business has grown so fast.

Prices for daughters of my 23-100 breeder, the prize-winner, and other choice breeders: Untested, 75c each; six, \$4.00; dozen, \$7.50. Select untested, \$1.00 each; six, \$5.00; dozen, \$9.00. Safe arrival and satisfaction guaranteed. Send for descriptive circular.

My 23-100 breeder was awarded a \$25.00 prize by The A. I. Root Co. for producing bees showing the longest tongue-reach on record. Competition was open to the whole world.

I am now filling orders by return mail, and shall probably be able to do so till the close of the season.

J. P. Moore, L. Box 1, Morgan, Kentucky.
Pendleton County.

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These are to be had of Will Atchley. He is now prepared to fill all orders promptly, and breeds six different races in their purity. You must remember that all of the PURE Holylands that now exist in the U. S. originated from the Atchley apiaries, and they have the only imported mothers known to the United States. Untested queens from these races, 3 and 5 banded Italians, Cyprians, Albinos, Holylands, and Carniolans, bred in their purity, from 5 to 35 miles apart, February and March, \$1.00 each, or \$9.00 per dozen. All other months, 75c each, \$4.25 for six, or \$3.00 per dozen. Tested queens of either race, from \$1.50 to \$3.00 each. Breeders from \$3.50 to \$10.00 each. 1, 2, and 3 frame nuclei and bees by the pound a specialty. Prices quoted on application. Safe arrival and perfect satisfaction guaranteed. A trial order will convince you. Price list free. **WILL ATCHLEY,**
P. O. Box 79, Beeville, Bee County, Texas.

Laws' Leather-colored Queens. Laws' Improved Golden Queens. Laws' Holy Land Queens.

W. H. Laws.—Your queens have proved to be excellent. My apiary stocked with your *Leather* queens are a sight to behold during a honey-flow, and the *Golden* are beyond description in the line of beauty. Yours are the *best for comb honey* I ever saw. I want more this spring—*E. A. Ribble, Roxton, Tex., Feb. 19, 1903.*

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W. H. Laws, Beeville, Texas.

Ho! Bee-keepers! Attention!

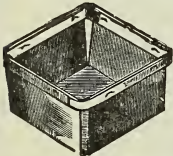
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(Successors to O. P. Hyde & Son.)

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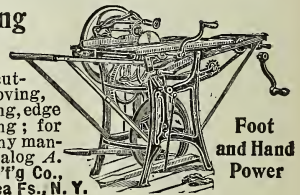
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For ripping, cross-cutting, mitering, grooving, boring, scroll-sawing, edge moulding, mortising; for working wood in any manner. Send for catalog A. The Seneca Falls M'g Co., 44 Water St., Seneca Fs., N. Y.



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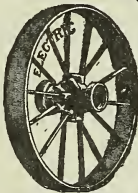
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Heavy, white, high-cut, size 6 3/4. A neat little coupon on each envelope will earn you dollars. Other stationery cheap. For particulars and sample, address at once Howard Co., 516 Masonic Temple, Chicago, Ills.

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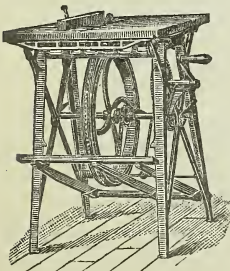
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For a few dollars you turn your old running gears or one you can buy for a song, into a new wagon. Straight on staggered oval steel spokes. The stoutest wheel you can buy. Any height, fit any wagon. No repairs, no rutting, light draft, long service. Let us send you free catalog to show you how it saves you money.

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This cut represents our combined circular saw, which is made for bee-keeper's use in the construction of their hives, sections, boxes, etc., etc.

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queens, \$1.50; \$8.00 for 6; \$15.00 per dozen. Untested,
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per year. Send for sample copy and our 1903 catalog;
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DURING SEPTEMBER, 1901,

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a lot of queens from the Province of Bergamo, Italy,
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icness and industry she and her offspring are second
to none, and I am now prepared to fill orders prompt-
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my bees have stood the test for 30 years. Italian queen mo-
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Bred for Work Terrace queens have given
the best of satisfaction: bred from selected stock;
best of workers; very gentle, and fine color. Untested,
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that money can buy, we can serve you and guarantee
satisfaction. We have a fine strain of Italians that can
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Choice tested, \$1.00 each. Untested, 75c; \$8.00 per doz.

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Old enough to show what they will do but not aged.
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Untested, 65 cts.; 2 for \$1.00.
Fine tested queens, \$1.00 each.
Remember we guarantee our
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well as white clover. Get my
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Send for circular. **Berclair, Goliad Co., Texas.**

We have bought out C. B. Bankston's interest in the
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Ready for delivery May 10. Send for price list.

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Beautiful results obtained last year. OUR MOTTO—
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First Public Announcement

Of interest to Everybody, and Worthy of Your Closest Attention to the End Because it Contains a New Idea Which Will Appear to You as Unique, Striking, and Certain of National Success.

THIS is an advertisement. We desire to set forth to the readers of this paper the true merits of a splendid, safe investment—opportunities which challenge the searching scrutiny of the most conservative banker, lawyer, or business man. Let us prefer to announce a plan of organization matured by years of experience and careful study, and a well-weighted, carefully planned organization matured by years of experience and careful study, and based upon practical, successful operation. We have laid our entire plan and proposition before some of the leading bankers, lawyers, and business men of Chicago and other cities, also before many of the leading manufacturers throughout the United States, all of whom have pronounced it correct in principle, practical, and certain of success. All these people have been approached in a business world-wide manner. Here is the proposition plainly stated: We have organized the "Cash Buyers' Union, First National Co-Operative Society," Buyers' Union, a concern which has been in successful operation for the past eighteen months. The Cash Buyers' Union, a concern which has been in successful operation for the past eighteen months. The name is a household word in every farm and village home. It has already several hundred the best and who's tomers scattered throughout the land from Maine to California, and from British Columbia to the Gulf. We have reorganized this institution with a capital of Five Million Dollars.

This is our Plan.

We want every reader of this paper to become a stockholder of the Cash Buyers' Union, First National Co-Operative Society, of Chicago, Ill.,—one of the largest mail-order houses and the greatest co-operative store in the world. We want small stockholders, but thousands of them, and everywhere. We will not sell more than 100 shares (\$1,000.00) to one individual, and reserve the right to return your subscription and money after the amount of stock allotted to your county has been placed, or for any other good reason. This means that you must act at once or your letter of application may be returned to you, thus depriving you of participation in a great national movement toward co-operative dealing, depriving you also of this most exceptional opportunity for a strictly high-grade and immediate, profitable investment—far better than a government bond, and as safe; better than your savings-bank deposits, better than real estate, mortgages, stocks, bonds, or any other flattering investment you may mention.

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offered by one single Chicago capitalist, who like ourselves, is so strong a believer in the co-operative mail-order business, so forcibly attracted by its wonderful earning power as demonstrated by famous National successes that he would be thankful to be permitted to invest his money in our shares. We have refused him because he could only give us his money.

We don't want money, we want stockholders—Co-Operative Stockholders—men, women, even children, all over this great country, one at least in every town or hamlet, who will, impelled by their sense of interested ownership and personal profit, make it their business to become walking, talking advertisements for this great establishment; who, no matter if they hold but one ten-dollar share, will feel proud ownership in their institution and do as owners do, Talk the Business, Push the Business, Boom the Business.

In other words—we want our stockholders to be active in and for the business—be Owners, Customers, and Salesmen—all in one. AS OWNERS: You will receive 7 per cent. on your investment (that is guaranteed) and in addition a proportionate share of the profits, which are from 15 per cent. on the investment from the very start and may reach 50, 75, or 100 per cent. annually according to the amount of business secured. AS CUSTOMERS: You have special privileges in purchasing and can buy (if you desire) to patronize your own store, which is optional at a special stockholder's discount from the retail catalogue price, which alone will save you more than your entire investment in stock time. AS CO-OPERATORS: If you influence orders for us you will receive a vast amount of money which would otherwise have to be spent in selling expense—newspaper advertising and catalogues.

CATALOGUES Now in Preparation

- Artists' Materials
 - Bakers' Supplies
 - Barbers' Supplies
 - Blacksmith Tools
 - Builders' Hardware
 - Butchers' Supplies
 - Carpets and Curtains
 - Cutlery
 - Dairy Supplies
 - Drugs
 - Dry Goods
 - Electric Goods
 - Fishing Tackle
 - Furnaces
 - Hardware
 - Ladies' Wearing Apparel
 - Miners' and Prospectors' Outfits
 - Notions
 - Paints
 - Plumbers' Supplies
 - Surgical Instruments
 - Stationery
 - Tailors' Trimmings
 - Toiletry
 - Tomstones
 - Tools of Every Description
 - Wagon Paper
 - Woodenware
- In fact, a Complete Line of
- ## General Merchandise.
- Write for any of these FREE Catalogues.

This is Co-Operation at Last

in the truest sense of the word—the people owning their own store—with a purchasing power greater, more stupendous than that of all the great department stores of New York City and Chicago combined—a purchasing and distributing power which will drive price points lower than ever before, reduce the cost of living, and enable the people in any part of the country to supply their needs—**either direct, by mail, or perhaps through local branch stores**—at nearly half the price they are ordinarily obliged to pay.

Detailed Plan of Capitalization

We have decided to re-charter the "Cash Buyers' Union" under the name of **Cash Buyers' Union, First National Co-Operative Society**, and increase its capital stock to **Five Million Dollars** consisting of 500,000 shares of \$10 each and divided as follows: **Preferred stock, \$2,500,000, common stock \$2,500,000**, and offered for sale at par, for cash, **preferred stock only**. The preferred stock is fully paid, non assessable, seven (7) per cent. Guaranteed cumulative and fully participating.

This Means: 1st—The preferred stock is called preferred because it constitutes an absolute first claim, in effect a first mortgage on the entire assets, property, pry-privileges, trade-marks, trade-rights, etc., and the net profits of the business. The common stock can not draw one cent of dividend until the preferred stock has first been paid its guaranteed 7 per cent each and every year. 2nd—It is fully paid and non assessable. Your first payment of \$10 pays in full for one share, and you can not be assessed for further payment under any consideration. 3rd—An annual dividend of 7 per cent must first be paid each and every year on all the preferred stock before the common stock receives one cent and this dividend is also first claim on all the property of the society. 4th—Fully participating means that, in addition to the 7 per cent guaranteed dividend the preferred stock fully participates—share and share alike in all the profits of the society. For example: If the net profits of the society amount to 25 per cent on the investment the preferred stock will receive, in addition to the guaranteed 7 per cent dividend, another 18 per cent dividend. 5th—Every dollar received from the sale of preferred stock goes right into the business for active use and is represented by actual assets—dollar for dollar.

Limitation of Subscription: We should prefer to place this stock to 250,000 individual shareholders, each owning but \$10.00, because the widest possible distribution of the shares is the chief object of this organization; therefore not to exceed 100 shares (\$1,000) will be sold to any one individual. Again, to distribute our representation equally throughout the country, we reserve the right to decline your subscription if the amount of shares allotted to your county on the basis of population has been reached. We will not accept total subscriptions to exceed \$50,000 a month, and reserve, until further notice, the right to return all money received in excess or apply it on the next month's allotment, if you prefer.

Net Profits: 15 per cent on the investment right from the start is the most conservative estimate it is possible to make for a successful business established 18 years, which is *not a new, untried enterprise*, but a business which already has several hundred thousand satisfied customers with whom it is now doing business every day, and which *sells everything from a needle to a thrashing machine*, reaching every part and point of the civilized world. During its 18 years of successful existence the *Cash Buyers' Union*—the very business you buy into—has earned as high as 40 per cent on the capital invested on a comparatively small business, consisting of but few departments. With the much larger business assured through the interested and profit-sharing co operation of thousands of customers, the tremendous earning power of mail-order business is history. One of the pioneers in the business, as history: *A return of more than thirty times the investment in six years*. The tremendous earning power of mail-order business is history. One of the pioneers in the business, as long as 25 years ago, started with a small office, and having little or no money, offered a half interest in his plant for \$2,000, which money he desired for the expansion of the business. He was refused. Today this same \$2,000 half-interest is worth \$5,000,000 and not for sale at any price. And all this vast capital has been piled up by profits of the business. For another example: Eight years ago a Chicago capitalist entered a newly started mail-order business. He contributed the capital of the firm less than \$40,000. During the six years in the mail-order business he netted him *more than 30 times* his original investment. All this was done under close individual partnership, with limited capital and without the tremendous co-operation and selling force of an army of thousands of co-operative stockholders. The business made close individual partnership, with limited capital and without \$35,000,000 annually, and yields a profit of \$1,400,000, on a total capitalization of less than \$1,000,000. With such achievements by private individuals *shareholders* will, without question, achieve still greater results both in point of sales and in point of profits produced. *In Conclusion:* It is evident from these facts and figures, which can be verified by any commercial agency, any bank in the city of Chicago, or the publishers of this paper, that our proposition will meet with immediate national acceptance, as this advertisement appears in every paper of value from the Atlantic to the Pacific and from Winnipeg to the Gulf. It is evident, also, that *this stock will be largely over-subscribed, go to a premium at once*, and that the principle "first come first served" will have to be applied from the very start. While we shall be glad to send our elaborate "Book of Information" to all those who desire more complete details, we advise you, in your own interest, to *subscribe today, NOW, before you lay aside this paper*; and we and our bank agree to return your money if within 30 days after subscribing you change your mind or are dissatisfied with your investment for any reason.

Cash Buyers' Union, First National Co-Operative Society, 158 to 168 W. Van Buren St. Chicago, Ill.

REFERENCES: First National Bank, Chicago, Depository; Metropolitan Trust & Savings Bank, Chicago, Registrars; Messrs. Lord & Thomas, Advertising Agency; Dan's or Bradstreet's Mercantile Agencies, any railroad or express company. The publishers of this or any newspaper or magazine. Any bank or reputable business house in Chicago.

Request for Prospectus.

Gentlemen:—Please send your complete "Book of Information" and all literature pertaining to the profit-sharing stock of our company to

**Cash Buyers' Union, First National Co-Operative Society, Department A66,
158 to 168 W. Van Buren St., Chicago.**

Gentlemen:—I hereby subscribe for.....shares of the full paid, non-assessable, 7 per cent Preferred and fully participating stock of the **Cash Buyers' Union, First National Co-Operative Society** at \$10.00 per share Enclosed find \$..... in payment of same. This stock is to be registered by you in my name,.....the stock certificate sent to me, and when so registered and sent to me you are authorized to turn over my money to the company. If my subscription is received too late, the money is to be returned to me.

Name..... Street.....
P. O. State.....

It is understood that above will be sent to me free of all charges and that I understand no obligation whatsoever to subscribe.

Gleanings in Bee Culture

[Established in 1873.]

Devoted to Bees, Honey, and Home Interests.

Published Semi-monthly by

The A. I. Root Co., - - Medina, Ohio.

A. I. ROOT, Editor of Home and Gardening Dep'ts.
E. R. ROOT, Editor of Apicultural Dept.
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TERMS. \$1.00 per annum; two years, \$1.50; three years, \$2.00; five years, \$3.00, *in advance*; or two copies to one address, \$1.50; three copies, \$2.00; five copies, \$3.75. The terms apply to the United States, Canada, and Mexico. To all other countries 48 cents per year extra for postage.

DISCONTINUANCES. The journal is sent until orders are received for its discontinuance. We give notice just before the subscription expires, and further notice if the first is not heeded. Any subscriber whose subscription has expired, wishing his journal discontinued, will please drop us a card at once; otherwise we shall assume that he wishes his journal continued, and will pay for it soon. Any one who does not like this plan may have his journal stopped after the time paid for by making his request when ordering.



BEE SWAX.

Until further notice we will pay 28 cts. cash, or 30 in trade, for average wax delivered here. From one to two cents extra for choice yellow wax.

GOODS DAMAGED IN THE FLOOD.

The flood in Kansas City, Mo., the last of May, caught a carload of our goods in transit to Carl F. Buck, Augusta, Kan. The damage to the goods in the car will amount to \$500, besides the disappointment of customers who were waiting for these goods to arrive in Augusta. Some goods are a total loss, while others are damaged, but good enough to be used at a reduced price. Mr. Buck is planning to build a larger warehouse, and fill it during the fall and winter so as to be prepared for an increased spring trade. Judging from the experience of many dealers during the last few weeks, and their failure to get goods in sufficient quantity to fill orders promptly, they will do well to adopt a similar plan.

BUSINESS BOOMING.

Favorable weather over a large area has brought on such a spurt of honey that the demand for sections and shipping-cases is something phenomenal. It is impossible for manufacturers to keep pace with it. We have been running our section machinery up till 9 p. m. for the past three weeks or more, making from 600,000 to 700,000 a week; but we can not supply the demand. Several of our agencies have been greatly crippled in filling orders for lack of sections. Our stock of 1½ and 2 inch, 4-beeway we have worked over and disposed of in 1½ plain and 1¾ openings, the latter in some cases being substituted for the regular 2 openings. This is better than not to get any thing. Let dealers and bee-keepers alike take warning, and provide themselves *early* with goods in great abundance, and thereby avoid such a famine as they are now having.

..Very Satisfactory..

The four dozen queens I got of you last year are very satisfactory, being good honey-gatherers, and gentle, and finely marked.

CHAS. STEWART,
Sammonsville, N. Y.

June 19, 1903.

State Bee Inspector, 3rd Div.

To induce a trial we offer **WARRANTED** queens at 75c, six for \$3.50; fine select \$1.00, six for \$4.50. Queens sent promptly; satisfaction guaranteed. Hybrids or poor queens replaced free.

J. B. CASE, Port Orange, Fla.

....Honey Queens, Golden Italian....

are hustlers, and they are beauties, and are gentle, and can not be excelled gathering honey. Untested, 75c; tested, \$1.00; breeders, extra fine, \$3.00; full colonies, \$6.00, with tested queen—none better.

H. C. Triesch, Jr., Dyer, Ark.

When you want Queens that please, and want them

By Return Mail,

join the crowd and send here where the spring rush is now over. I can guarantee them to leave promptly from now on, and arrive safe. **Best Honey Strains** only are bred from Goldens, Carniolans, leather-colored Italians. 75c each, or \$7.50 per dozen; tested, \$1.00 each, or \$10.00 per dozen.

George J. Vande Vord, Dayton, Fla.

BEEES FOR SALE 100 3-frame nuclei with queen at \$2.00, in lots of 10 or more. Less than 10, at \$2.25. F. W. DEAN, NEW MILFORD, PA.

FINE QUEENS FROM THE BLACK HILL APIARIES Golden and Long-tongue. Write for price list. Reference G. F. Davidson & Son. Carver & Mathis, Props., Verdi, Texas.

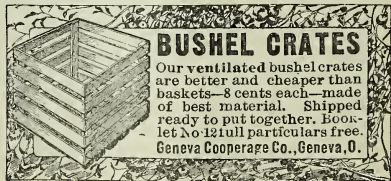
TEXAS QUEENS FROM LONE STAR APIARIES. We are now ready to furnish you queens from the best stock of any race. These queens are equal by few and inferior to none. Write for price list. G. F. Davidson & Son, Props., Fairview, Texas.

4,000,000 PEACH TREES

TENNESSEE WHOLESALE NURSERIES.

June Buds a Specialty.

No agents traveled, but sell direct to planters at wholesale prices. Absolutely free from diseases and true to name. Write us for catalog and prices before placing your order elsewhere. We guarantee our stock to be true to name. Largest peach nursery in the world. Address J. C. HALE, Winchester, Tenn.



BUY POULTRY SUPPLIES.

Where you are assured of high quality. We carry only the best. Everything the poultryman uses, as Incubators, Foods, Remedies, Appliances, etc. Also High Strain Poultry and Hatching Eggs.

Our Poultry Specialists

will answer all inquiries free of charge. Write us freely and ask for free catalog D.

W. J. GIBSON & CO., (Inc.) Union Stock Yards, CHICAGO.

Dept. Mgr., H. M. Horton, Director Nat'l Fanciers' Association.



\$30
Colorado

And Return.

First class to Denver, Colorado Springs, and Pueblo from Chicago, daily, throughout the summer, good returning October 31. The

Colorado Special

fast daily train, one night to Denver from Chicago and the central States (only two nights enroute from the Atlantic seaboard), leaves Chicago daily 6:30 P. M.

A second daily train leaves Chicago 11:30 P. M. Personally conducted excursions in tourist sleeping-cars.

For sleeping-car reservations, descriptive pamphlet, "Colorado Illustrated," and full particulars, address

A. F. CLEVELAND, 234 Superior St., Cleveland, O.



PAGE 12-BAR, 58-INCH FENCE

comes pretty near being the perfect farm fence.
Page Woven Wire Fence Co., Box S, Adrian, Michigan.

POULTRY JOURNAL How to Make Poultry Pay. A paper worth a dollar, but will send it to you one year on trial, including book, Plans for Poultry Houses, for 25c. Sample copy FREE. Inland Poultry Journal, Indianapolis, Ind.

FOR SALE—Fine, carefully reared queens, from a hardy, prolific, honey-gathering strain of 8-banded Italians; can also furnish queens from Doolittle Golden strain, if preferred: untested, 65 cents; tested, \$1.00; selected breeders, \$2.50 EARL Y. SAFFORD, Salem, N. Y.

FOR SALE—100 colonies Leather colored Italian bees. A tested queen in each colony. In 8 frame Dovetail hives. Price after July 15 and during Aug., \$4.00 each. In lots of 10, \$3.50 each. F. A. GRAY, Redwood Falls, Minn.

Wants and Exchange.

Notices will be inserted under this head at 10 cts. per line. You must say you want your advt. in this department, or we will not be responsible for any error. You can have the notice as many lines as you please; but all over ten lines will cost you according to our regular rates. We can not be responsible for dissatisfaction arising from these "swaps."

WANTED.—To sell bees and queens.
O. H. HYATT, Shenandoah, Iowa.

WANTED.—To sell, a Barnes foot-power saw.
H. H. JEPSON, Medford, Mass.

WANTED.—Comb and extracted honey. See honey column. GLEASON & LANSING, Buffalo, N. Y.

WANTED.—To sell for cash, 5 gal. square tin cans, used for honey, at about half price of new cans. For prices, etc., address OREL L. BERSHNER, 301 Huntington Ave., Buffalo, N. Y.

WANTED—To sell 69 colonies of bees, cheap; in tall hives, nearly square, frames 12½x14, outside measure; hives to contain supers and separators. Also 400 lbs. of fine clover honey, just extracted, at 7c on cars here. H. C. LANE, Twineburg, O.

WANTED.—A car of mixed tile, 3, 4, and 6 in., also names of manufacturers of tile and hay-loaders.
W. E. CARPENTER, Freemansburg, W. Va.

WANTED.—Your address on a postal for a little book on Queen-Rearing. Sent free.
Address HENRY ALLEY, Wenham, Mass.

WANTED.—An experienced bee-keeper in Georgia wants position in Cuba the coming season.
"GEORGIA," care The A. I. Root Co.

WANTED—To exchange copy of *New York Herald*, April 15, 1865, in good condition, containing detailed particulars of President Lincoln's assassination. Best offer gets it. ELIAS FOX, Hillsboro, Wis.

WANTED.—To sell during July, about 20 three-frame nuclei, with queens bred from Hutchinson's Superior stock, and Root's red-clover queens, at \$2.25 each. Frames are 11½x9½, top-bar 13½ inch.
H. L. FISHER, New Paris, Ind. R. F. D. No. 2.

WANTED.—To sell, for 65 cents each, choice ntest-ed queens, reared from selected mothers, the Carniolan-Italian cross—the coming bee for comb honey? A trial order will convince you. Satisfaction guaranteed.
L. H. PERRY, Clay, N. Y.

WANTED.—Agents to sell and attach automatic cut-offs to grinding-mills, which automatically stop them when hopper becomes empty. Especially adapted to Aermotor windmills. Write for particulars.
B. STRITTMATTEK, Bradley Junction, Pa.

WANTED.—To sell my Sable and White Scotch Collie dog, one year old, eligible to register, good farm dog, easily taught, good with children, very affectionate; thoroughly house-broken, and very handsome. Price, cash, \$20.00, or will take \$25.00 in honey.
F. N. CHAMBERLAIN, Tyngs-boro, Mass.

WANTED.—At once.—Young man of staunch Christian character to work large apiaries and light ranch work out of honey season. Steady job with chance to work up. Pleasant home, good climate; 25 miles from railroad. Wages \$80 per month. References A. I. Root, Medina, Ohio.
L. B. BELL, Camp Verde, Arizona.

WANTED.—A buyer for one of the best bee-ranges in California, 80 acres of land, 25 in cultivation. Small orchard, house, farm, 3 chicken-houses, 175 colonies of bees, honey-house, and up-to-date equipment for comb and extracted honey; land \$800.00, bees \$4.00 per colony; see material at catalog prices. Address J. M. MACK, Bonsall, San Diego Co., Cal.

WANTED—To sell, 500 Hoffman brood-frames, 10 lbs. light brood foundation, 10 lbs. light brood section foundation, 1000 sections, 4½ plain; 50 honey-boards, 8-frame wood-bound zinc; 300 section-holders 100 separators; cleated nails for frames, etc., included. All new. One Cowan two-frame extractor, second-hand. Will sell cheap for cash. G. F. TUBBS, Annincreek, Pa.

WANTED.—To furnish you select long tongued Italian queens at the following prices: Untested \$1.00 each, \$10.00 per dozen. Tested, \$1.25 each, \$12.00 per dozen. Four years' experience in rearing queens for the trade. Safe arrival and reasonable satisfaction guaranteed.
CHAS. M. DARROW,
Route No. 3, Nevada, Mo.

Reference, by special permission, the Nevada Baking Co., of this city.

WANTED.—To sell S. W. ¼ of S. E. ¼ sec. 26 range 26, Crystal Lake Tp., Benzie Co., Mich.; 40 acres just outside corporation of Frankfort; a nearly finished cottage of six rooms, a small stable, 25 bearing apple-trees, a few peach-trees. From front porch can be seen a delightful view of the little city of Frankfort, Lake Michigan, hart, steamers, etc. Unexcelled as a summer home or a fruit-farm. Only a few hours from Toledo, Detroit, Chicago, Minneapolis, and other cities. Write Gen. Pass. Agent of Toledo & Ann Arbor R. R., Toledo, Ohio, for pamphlet describing Frankfort. Cheap at \$2200; if bought soon can be secured at \$1400. Also for sale 160 acres, 15 miles east of Frankfort; only \$2.50 per acre 25 acres ready for the plow. Write C. L. Linkletter, Agent, Frankfort, Mich., or W. A. HOBBS, Owlet, Traer, Iowa.

PAGE & LYON,
New London, Wisconsin.

MANUFACTURERS OF
AND DEALERS IN . . .

**BEE-KEEPERS'
SUPPLIES. . . .**

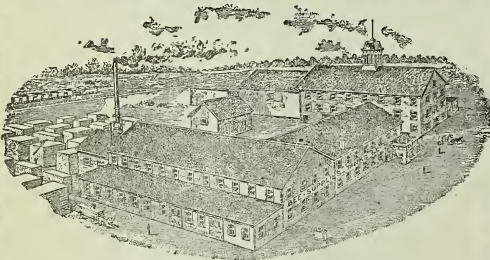
Send for Our Free New Illustrated
Catalog and Price List.

**We Have
Not Moved.**

The government, recognizing the necessity of a great and growing business enterprise, for better mail service has given us a postoffice on our premises, which enables us to change mail's with the passing trains instead of through the Wetumpka, Alabama, postoffice more than a mile distant. This gives us our mails about two hours earlier, and also one hour for making up outgoing mail. This will be particularly helpful in our queen business. We are now booking orders for Italian queens, Long-tongued and Leather-colored; both good.

J. M. Jenkins,
Honeysuckle, Alabama.

Shipping-point and Money-order
Office at Wetumpka, Alabama.



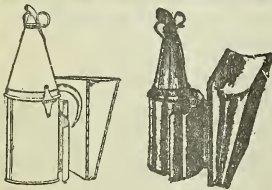
Kretchmer M'fg Company,
Box 60, Red Oak, Iowa.

BEE-  
SUPPLIES!

Best-equipped factory in the West; carry a large stock and greatest variety of every thing needed in the apiaary, assuring BEST goods at the LOWEST prices, and prompt shipment. We want every bee-keeper to have our FREE ILLUSTRATED CATALOG, and read description of Alternating Hives, Ferguson Supers. *Write at once for catalog.*

Agencies.

Trester Supply Company, Lincoln, Neb.
Shugart & Ouren, Council Bluffs, Iowa,
Foster Lumber Company, Lamar, Colo.



BINGHAM SMOKER.

Dear Sir:—Inclosed find \$1.75. Please send one brass smoke-engine. I have one already. It is the best smoker I ever used.
Truly yours,
HENRY SCHMIDT, Hutto, Tex.

MADE TO ORDER

Bingham Brass Smokers.

Made of sheet brass, which does not rust or burn out; should last a lifetime. You need one, but they cost 25 cts. more than tin of the same size. The little open cut shows our brass hinge put on the three larger sizes. No wonder Bingham's four-inch smoke-engine goes without puffing, and does not drop inky drops. The perforated steel fire-grate has 381 holes to air the fuel and support the fire.

Heavy tin smoke-engine, 4-inch stove, per mail, \$1.50; 3½-inch, \$1.10; 3-inch, \$1.00; 2½-inch, 90c; 2-inch, 65c. Bingham smokers are the originals, and have all the improvements, and have been the standard of excellence for 23 years. Only three larger ones brass.

T. F. Bingham, Farwell, Michigan.

ON ACCOUNT OF FLOOD

WE had a number of large shipments lost in transit; this reduced our capacity for filling orders of certain stock promptly.

We will now have a car load of all kinds of different bee supplies on hand by the time this advertisement reaches you.

We hope to receive your continued favors, and will not have to cause you any further delay on the class of goods we ran short of.

Jno. Nebel & Son
HIGH HILL, - - MO.

Headquarters in

CALIFORNIA!

We wish to remind GLEANINGS readers that we are again ready to serve them with whatever they require in Bee-keepers' Supplies. We not only have a good assortment of our own manufacture but we can furnish a

Full Line of Root's Sundries

such as Smokers, Sections, Cowan Extractors, etc. Let us have your name and address at once, and we will send you our catalog.

Union Hive & Box Co.
Los Angeles, Cal.

Oregon Bee-keepers



For years we have supplied you with a portion of your requirements in bee-keepers' Supplies, for which we thank you. We are better prepared than ever to take good care of orders this season. We have acquired the business of Buell Lamberson's Sons, of this place, and have the agency for this State for

The A. I. Root Co., Medina, Ohio.

One carload is already on the way, and others will follow. If you require special goods or anything not usually kept in Western stocks, we can get it for you on our next car.

Seeds, Fertilizers, Trees, Garden Tools, Poultry and Bee Supplies.

Portland Seed Company,
Portland, Oregon.



Montana,
Minnesota,
Dakota, and
West'n Wisconsin
BEE-KEEPERS

Our 33d annual catalog (for 1903, 92d edition) is now ready. Send for a copy at once. We have a full line of goods in stock, and can fill orders promptly. Save freight by ordering of the St. Paul branch. **Bees and Queens.** Orders booked now for spring delivery. **Honey and Wax.** We handle honey and wax. Write for particulars.

The A. I. ROOT COMPANY
Northwestern Branch,
1026 Mississippi St.,
ST. PAUL, MINNESOTA
H. G. Acklin, Manager.

Texas Bee-keepers.

STOCK.—Our warehouse is now stocked with a good assortment of Hives, Sections, Extractors, and other supplies direct from Medina.

PROMPTNESS.—We can therefore fill your orders promptly. Do not suffer long delay by ordering from some distant point but send orders here.

HEADQUARTERS for bee-keepers in San Antonio. Whenever you visit San Antonio you are invited to call at our office and make it your headquarters. See our display of supplies. Leading bee-journals on file for your perusal too.

WANTED.—Beeswax and Honey. Write for particulars.

The A. I. Root Co.,
438 West Houston Street,
San Antonio, Texas.

BEEKEEPERS *Notice*

We sell the Root goods here at Root's factory prices, which means the freight is paid to Des Moines, Iowa.

Immense stock and every variety of the best up-to-date goods now on hand packed for prompt shipment.

Satisfaction is guaranteed on every order sent us. Thousands have been pleased with their goods from us. We can satisfy you.

Write for estimates, sending list of what you will need, and get our discounts for early orders. We will save you money. Send to-day for 1903 catalog.

JOS. NYSEWANDER,
710-12 W. Grand Ave.
DES MOINES, IOWA.

26th Year

Dadant's Foundation.

WHY DOES IT SELL SO WELL?—Because it has always given better satisfaction than any other. Because in 25 YEARS there have been no complaints, but thousands of compliments.

WE GUARANTEE SATISFACTION.—What more can anybody do? Beauty, purity, firmness, no sagging, no loss. **PATENT WEED PROCESS OF SHEETING.**

BEE SWAX WANTED AT ALL TIMES.—Send name for our catalog, samples of foundation, and veil material. We sell the best veils, either cotton or silk.

LANGSTROTH ON THE HONEY-BEE, Revised. The classic in bee-literature \$1.20 by mail.

Bee-keepers Supplies
of All Kinds.

DADANT & SON,
Hamilton, Ill.

Why Not



Place your order now? We will make you special prices for early delivery. We are headquarters in Central California for Root's Cowan Extractors, Sections, Weed Foundation, Smokers, etc., as well as a full line of local-made supplies. We can give you prompt service. We solicit your patronage.

0000

Madary's Planingmill
Fresno, California.