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# AMERICAN BEE JOURNAL

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 THE AMERICAN  
BEE  
JOURNAL

PUBLISHED MONTHLY BY  
**GEORGE W. YORK & COMPANY**  
146 W. Superior Street, Chicago, Ill.

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2. To protect and defend its members in their lawful rights as to keeping bees.
3. To enforce laws against the adulteration of honey.

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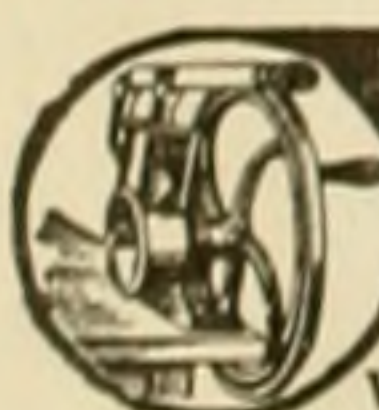
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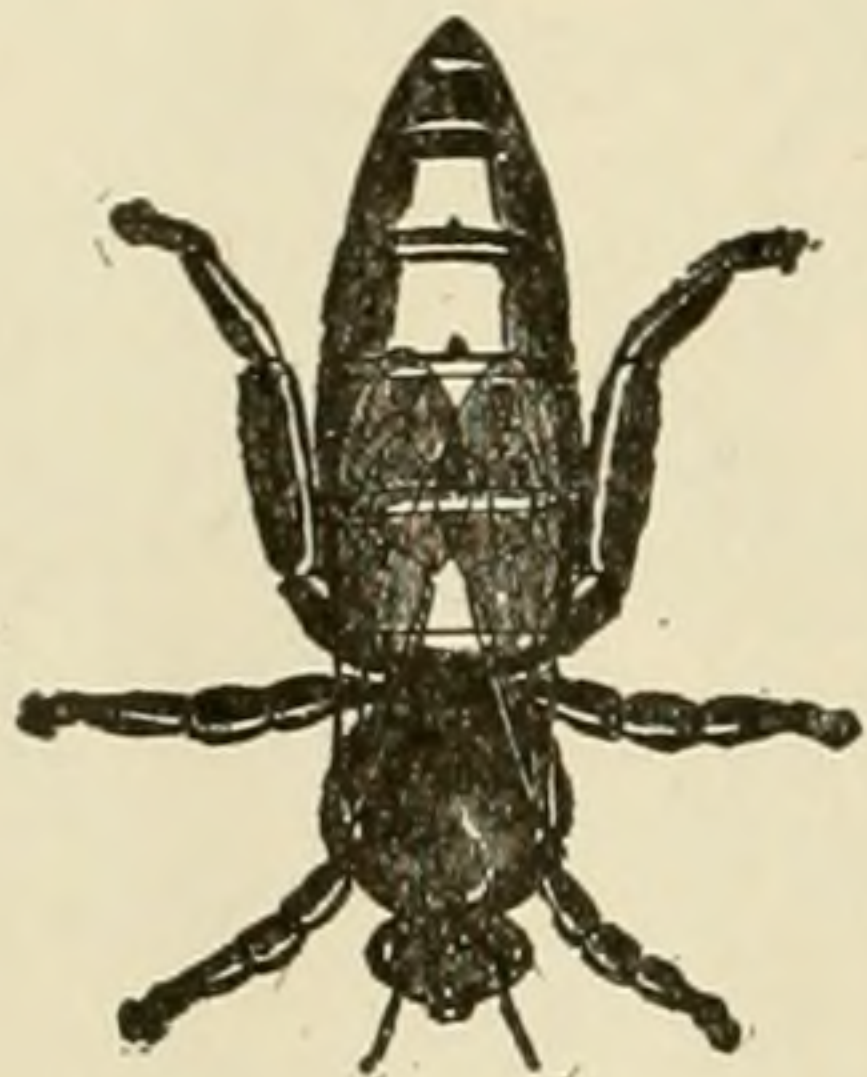
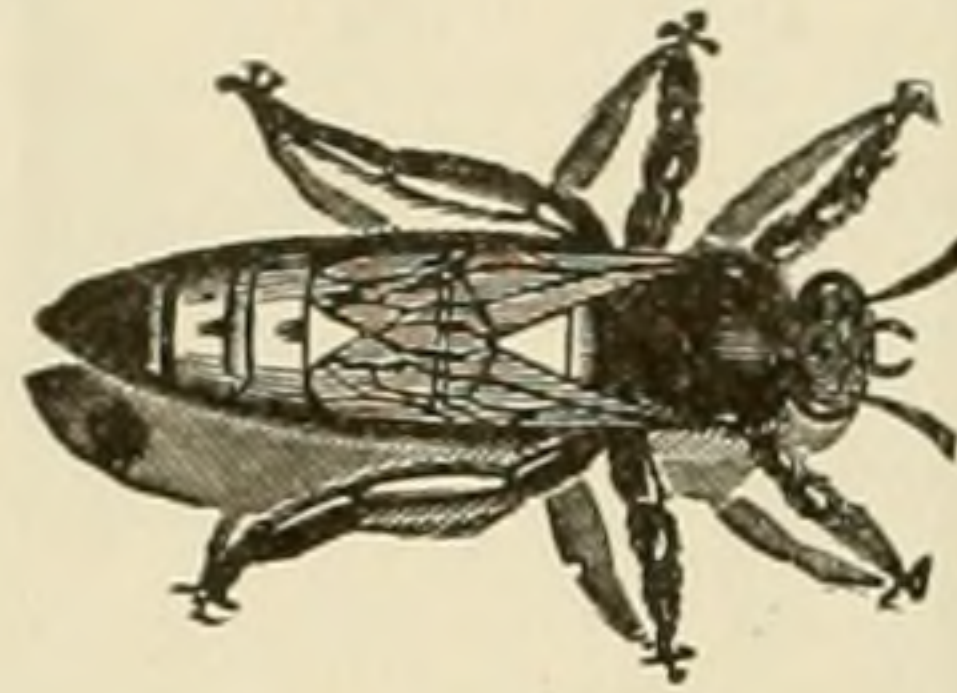


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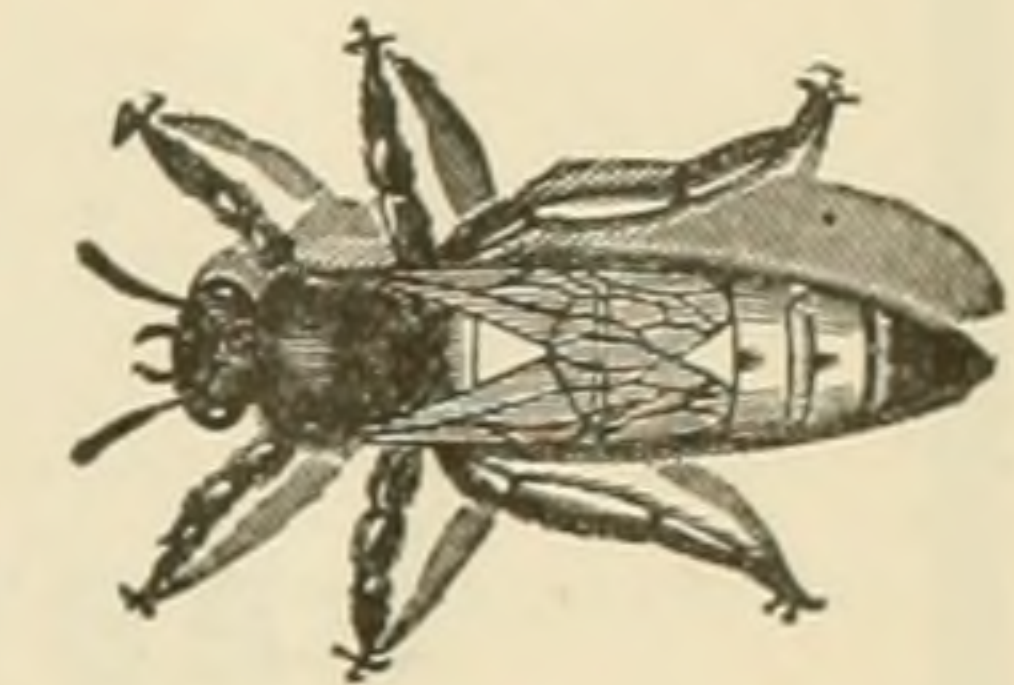
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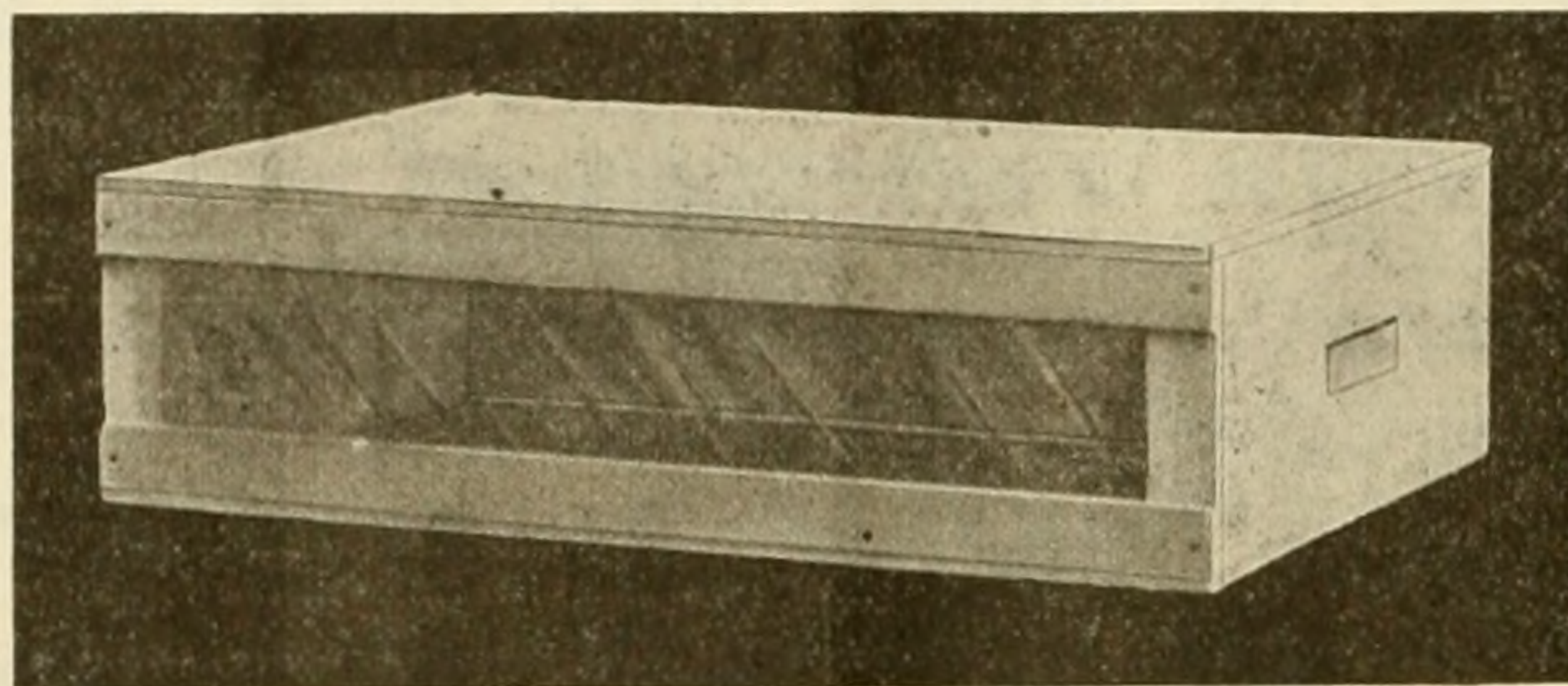
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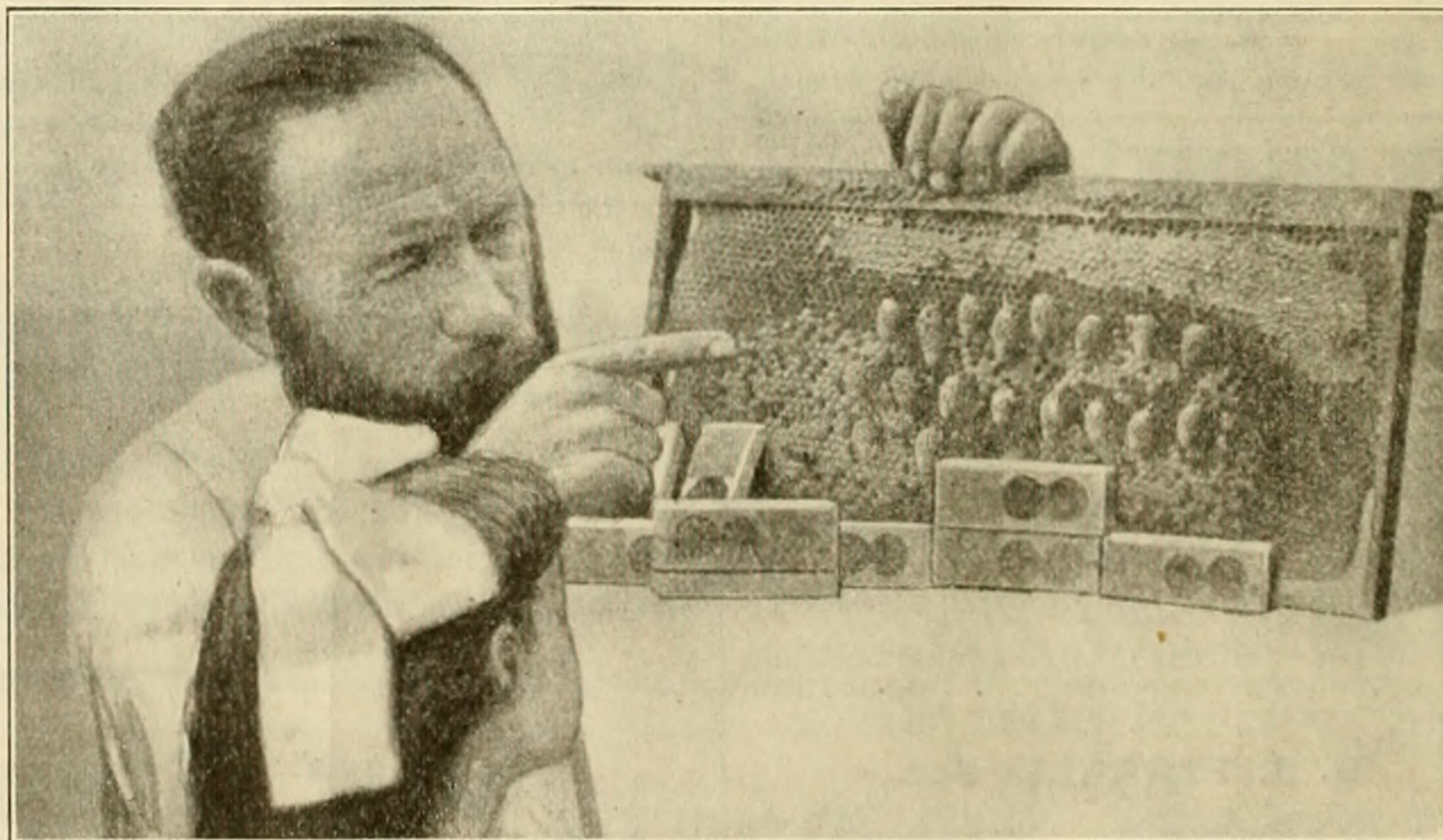
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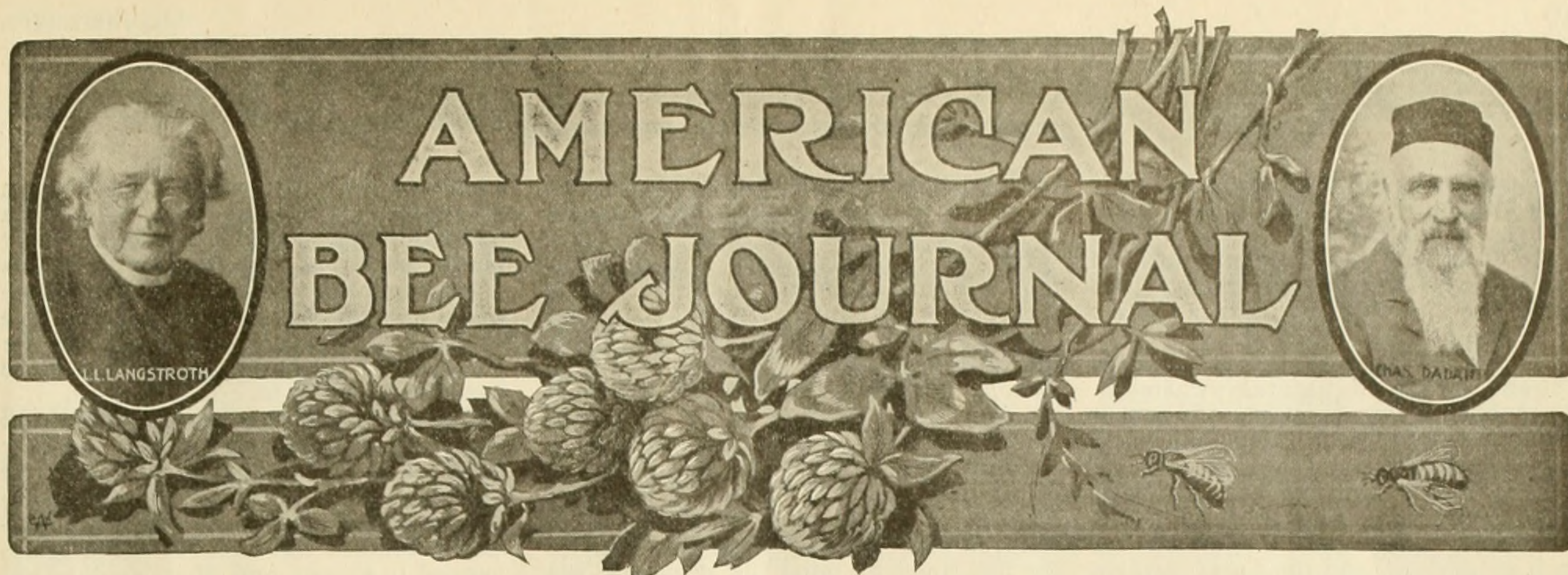
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GEORGE W. YORK, Editor.  
DR. C. C. MILLER, Associate Editor.

CHICAGO, ILL., OCTOBER, 1910

Vol. L---No. 10

## Editorial Notes and Comments

### Prevention of Honey Granulation

Some producers and dealers have so educated their clientele that granulated honey is preferred to the liquid. But in most cases there is a very decided preference for the liquid, and in lack of any way to prevent granulation many bee-keepers take back from the grocers bottles of honey that have become granulated, and liquefy by heating. And to do that satisfactorily is something of a trick, to say nothing of the time and trouble. Now comes the Canadian Bee Journal, and says:

"A tablespoonful of glycerine to one gallon of honey will prevent it from granulating! Stir it a little and it will be found perfectly soluble..... We have this on the authority of a first-class chemist, who has sold honey in his drug-store, and has by this means kept it in liquid form for ready sale."

Looks as if it might be all right. No doubt the question will be raised whether there is danger of conflict with the pure-food law. None whatever so long as there is no deception on the label, which should tell exactly what is under the label.

### Foul-Brood Legislation

It has sometimes been argued that the work of foul-brood inspectors has been a failure, since foul brood still continues where they have operated. Well, suppose it does. Suppose in the district covered by a certain inspector the disease is not only unconquered, but that it is twice as bad as it was when he began fighting it. That by no means proves that his efforts have been fruitless. For if it had been allowed to run unhindered it might by now have been four times as bad.

To this it might be replied, "If, in spite of the inspector's work the disease is twice as bad each year as it was the previous year, how many years, at that rate, will it take to clean it out?" Of course, there is only one answer to

that: The disease will never be overcome.

But why not increase the effort? With a double force on the same ground, or a greater force, if necessary, there is every reason to believe that the scourge may be held at bay, if not entirely wiped out.

Some better argument against foul-brood legislation must be advanced, if it is to appeal to intelligent bee-keepers.

### Clipping the Queen's Wing

Each year there seem to be more bee-keepers who advocate and practice clipping queens. The great argument in its favor is that a clipped queen can not go off with a swarm. For most bee-keepers that alone is a sufficient advantage to pay for clipping, ten times over. There is another advantage that some might not think worth considering, while others lay great stress upon it. It is that clipping shows at a glance whether there has been a change of queens. In a certain hive is a queen—at least was a queen—known to have been clipped in a certain year. If, upon looking into the hive, the owner finds a queen with whole wings, he knows at a glance that there has been a change, and that a young queen has taken the place of the old one.

### Honey-Dew—Secretion or Excretion

D. M. Macdonald said honey-dew, instead of being excreted by the plant-lice, is a secretion. Then some of the scientists said he was mistaken. But, Scotchman that he is, Mr. Macdonald does not easily yield his ground. In the British Bee Journal he quotes no less authorities than T. W. Cowan and M. Gaston-Bonnier. Mr. Cowan says:

"Although perfectly aware that opinions are divided on the subject, we believe with those who think it generally to be an exudation from the pores of leaves under certain

atmospheric conditions, although it may sometimes be produced by aphides. At Howald, in Alsace, we watched bees collecting honey-dew, but found hardly any insects. This year we have seen lime-trees from which the sweet liquid was falling in drops, and yet very few insects were found. We have specimens of excellent flavor quite free from any admixture of faecal matter."

M. Gaston-Bonnier says this on the subject:

"The presence of plant-lice on trees has no connection with this nectar [miellee]. The excremental liquid of aphides is not equally sweet in all the species, and the bees harvest only that which is very sweet. They generally prefer the true honey-dew which exudes from the leaves at certain times, and contains mannite and saccharine matter.

"The true miellee of trees may fall in small drops, and some observers conclude from this fact that it is produced by aphides. I have, however, often seen some trees, and even all the trees of a wood, covered with an abundant miellee falling in small drops, although there was not a single louse on the higher limbs. We must not confound the true miellee produced on the surface of leaves without the action of aphides, and the excretion, more or less sweet, containing very little sugar, produced by plant-lice."

### Bee-House Wagons


In Germany considerable use is made of wagons for migratory bee-keeping; not merely wagons to haul the bees from one place to another, but wagons constructed so as to have the hives remain in them permanently. One would suppose this a rather expensive way of doing, but the Germans are not a people to lose sight of the matter of economy. S. Husser says in *Praktischer Wegweiser* that he has made 30 of these wagons, and has 4 of them in use for himself. As he makes them, each wagon has 28 hives built in the wagon, with opportunity for 6 more when the wagon is in place, making 34 in all.

If such a thing is profitable in Germany, is there no place in this country where it might be equally profitable?

### Natural or Artificial Increase

Whether it is better for a beginner to depend upon natural swarming for increase or resort to artificial increase is not a matter so easily settled. There is something to be said on both sides. On the whole, perhaps natural swarming gives less trouble. One can get along with it with no other trouble than to hive each swarm when it is-





# American Bee Journal

sues, leaving to the bees to decide how much swarming they shall do. Then as to the young queens reared. With all the effort at improvement that has been made in rearing queens by other means, no one claims that a better queen can be reared than the same colony with the same materials will rear in connection with natural swarming. The most that can be claimed is that it is "just as good," and it *may* be a good deal poorer.

But natural swarming has its drawbacks. Bees may swarm at inconvenient times. They may not swarm as much as desired, and they may swarm more than desired. A very serious objection is that the best colonies are generally least inclined to swarm, and most of the increase will be from the poorer colonies, thus tending constantly to deterioration, commonly expressed by saying, "The bees have run out."

All things considered, the bee-keeper who is too negligent to give his bees proper attention may do well to allow natural swarming; if he means to be an up-to-date bee-keeper, he will take the matter of increase into his own hands.

## Extracted vs. Comb-Honey Production

"There is plenty of evidence," says Gleanings, "going to show a tendency on the part of comb-honey producers to go into the business of producing extracted." It reasons that the effect of the pure-food laws has been to give the public more confidence in extracted honey, thereby increasing the demand for it and increasing its price, while the price of comb honey has remained stationary. The greater difficulty in contending with swarming in the production of comb honey is also credited with its influence in helping to give the production of extracted honey the preference.

Taking the broad view of "the greatest good to the greatest number," one can but rejoice at this tendency. At the present time, according to Government reports, the average annual consumption of sugar in the United States is 82 pounds for every man, woman and child. Physicians tell us this is more than is good for the digestive organs. But if this average is bad, what is to be said of those who go beyond the average? It is reasonable to believe that some consume twice as much sugar as others, and if the consumption of 82 pounds is bad, the consumption of more than 82 pounds must be very bad. As honey does not make the same demand upon the digestive organs as sugar, but is directly assimilated without change, every pound of sugar that is displaced by a pound of honey means just so much toward the health and strength of the nation.

Anything, then, that increases the consumption of honey is a public benefit. If the public be convinced that extracted honey is just as really honey as that in the comb, there can be little question that much more extracted than comb will be consumed, so long as there is a difference of several cents a pound between the two. In the homes of the wealthy few, the price makes little difference. In the homes of the few very poor it may make little

difference; there either is barred out as an unattainable luxury. But leaving out these two classes, in the great majority of homes we may find at least some honey eaten in the course of the year, either as something for occasional indulgence or as a profitable article for daily consumption. Many a man who would consider a section of honey at 25 cents as something to be indulged in as an occasional luxury, would snap it up as a bargain if he should see it offered at 15 cents. Indeed, it is a very safe guess to say that if honey were offered only in the comb, there would be five times as much of it used in the average home at 15 cents as there would be if it could be had only at 25 cents. Now suppose it comes to be the general belief that extracted honey is just as genuine as the comb, why should not as much extracted be used at 15 cents as would be used of comb at the same price?

Let us rejoice, therefore, in the turning from the production of comb honey to that of extracted, because that means on the whole the production of just so much more honey, and that means its greater consumption, and that means a gain in the health and strength of the nation.

## Why Bees Fear Smoke

P. Neumann quotes in *Leipz. Bztg.* an editorial upon this subject, and suggests that the effect of the smoke on the breathing organs of the bees is enough to make them want to get out of the way. A good suggestion.

## Foul Brood in New Zealand

Largely by the efforts of I. Hopkins, late Chief Government Apiarist of New Zealand, a foul-brood law was passed in that land, one provision of which made it obligatory to have all bees in movable-frame hives. As to the effect of the law, Mr. Hopkins reports in the *British Bee Journal*:

Some districts that were absolutely rotten with foul brood less than 3 years ago are now clean; box-hives, together with the careless bee-keepers, are fast disappearing; the industry is expanding at an enormous rate, and satisfaction is expressed generally. We have practically had no bother or trouble in carrying out the provisions of the Act, although in some districts we have been compelled to burn 25 percent of the bees and hives. No compensation is allowed, and rightly so, I think; for why should a person be compensated for being compelled to give up being a nuisance and a danger to his neighbor? It is estimated that the output of honey and beeswax has more than doubled in 4 years.

## When the Basswood Fails

Not when it fails to bloom, but when it fails to be sufficiently plenty to be used as lumber from which to make sections. Now and again something is said about the great danger that basswood will become so scarce that it will no longer be possible to use it for making sections. It is used for so many different purposes for which it is especially adapted that we are told that there is danger that in the not very distant future basswood honey may become a thing of the past. For honey-producers in the basswood regions that will be a calamity. But that does not apply to all producers of honey, nor

even to all producers of comb honey. Thousands of bee-keepers have not a basswood tree within range of their bees. So far as the yield of honey is concerned, they will not suffer if basswood be suddenly cut off from the face of the earth. Indeed, they will be the gainers, for they will no longer have basswood honey to compete with.

But when it comes to the matter of using basswood lumber for making sections, that touches all producers of section honey. No, not all, but probably nearly all. We are told that basswood lumber has already greatly advanced in price; and that we may expect that it will not be long until the price again doubles, and doubling the present price of sections will make them so expensive that it will be prohibitory, and that sooner or later—perhaps very soon—producers of section honey must consider what they will do when they will no longer have any sections; whether they shall turn their attention to producing bulk-comb honey or extracted.

In all this talk there is a good bit of foolishness, notwithstanding the indisputable fact that there is a growing scarcity of basswood lumber. It may be worth while to look matters over, and see if the fears of the producer of section honey may not be so far allayed that he need not feel that he will be compelled to turn to some other line of production than section honey.

First, does doubling the price of basswood lumber double the cost of sections? How much lumber is used in a section? Take the section most in use, the  $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{8}$  bee-way, which takes more lumber than the plain section of the same capacity. In the flat it measures about  $17 \times 1\frac{1}{8} \times \frac{1}{8}$ , which amounts to nearly 4 cubic inches of lumber. Allow abundant amount for waste, and take 8 cubic inches for each section, and we find that for 1000 sections it will take 55.5 feet of lumber, board measure. That means an advance of \$18 a thousand on basswood lumber for every dollar advance on 1000 sections. If sections are now rated at \$5 a thousand, before they double in price lumber must be \$90 per thousand feet higher than it now is. That will be a good deal more than double the present price of lumber, for it must be remembered that the price of \$5 a thousand for sections includes not only the cost of the lumber, but also the cost of manufacturing, and the cost of manufacturing does not double with the doubling of the price of lumber, but remains about the same without regard to cost of lumber.

We hardly need worry about basswood lumber advancing \$90 a thousand right away. Even if it should, that would mean an advance of only  $\frac{1}{2}$  cent a pound on honey, and an increase to that extent is not likely to throw section honey out of business.

Even if all the basswood lumber in the world should be wiped out of existence, that does not by any means mean that no more section honey would be produced. It only means that we should go back to the same kind of sections we first used—the 4-piece. Even at present there are those who think 4-piece sections are preferable. For one-piece sections there is



probably no timber to compare with basswood; but for 4-piece there is plenty of timber just as good as basswood, or better, and at a less price. So the talk about giving up section honey because of the advance in basswood lumber is all idle talk.

### McEvoy's Artificial-Increase Plan

In the Canadian Bee Journal is given a plan of increase practiced by Wm. McEvoy, that may be used by any one who produces extracted honey. Here is the plan:

In making artificial swarms I collect 8 of the best combs of brood from the supers and a comb that has been 3 days in my best colony, and after I put the comb of *hatching eggs* in the center of these 8 combs of *hatching brood*, I go to my strongest colony and lift it off its stand and then place the hive of super brood and comb of hatching eggs on the stand where the strong colony of bees stood. I then shake about a quart of bees in front of this hive of brood, being careful not to shake the queen off. I then move the hive of bees and queen to a new stand. The *field-bees* will return to the old stand where the 8 combs full of hatching brood and one comb of hatching eggs are.

This makes one of the most powerful nuclei ever made, and the bees having only one comb of larvæ to be fed, will feed it the best that it has ever been fed; and thus with hundreds of bees hatching every hour, puts this colony in the very best condition to put abundance of royal jelly in every queen-cell, thus producing the best queens. I put frames of *hatching brood* taken from supers on this one rearing the queens, and also frames of brood on the old colony that I moved away.

### Clipping One or Two Wings of Queen

A queen having all 4 wings cut close can, of course, make no headway at flying. Without thinking, one might suppose that if both wings were left whole on one side, the queen could make more progress at getting away from the hive (in case of swarming) than she could with all 4 clipped. In either case she can not fly. She can run and jump, and the wings on one side will only hinder her at this, for they will throw her over to one side, thus hindering her progress. If half or more of the two wings on one side are taken off, a queen will never fly again.

Clipping one of the 4 wings is really all that is necessary to prevent flight, but there is reason why it is better to clip both wings on one side, namely, that when the bee-keeper is looking to see whether the queen in a hive is clipped, he may get just a glimpse of her as she passes quickly under a comb, and if both wings are clipped it is easy to recognize it, whereas if only one wing is clipped it is not easy with such a fleeting glance to say whether she is clipped at all.

### Some Remarks About the Drone

Not long ago a member of the Journal family wrote that much had been said about the queen and workers, and he thought it was time that a little attention should be paid to the drone. It can hardly be said that no attention is paid to the drone, even though the attention he gets is mostly of a destructive kind. Constantly the advice is given and repeated, to suppress the drones as much as possible, so as not to have on hand a lot of useless consumers. Trapping, slicing off the heads

of the sealed brood, and cutting out all drone-comb are advised.

But in perhaps the majority of cases no attention is paid to the advice, so in that respect it may be said that the drone is neglected. In some apiaries, especially where full sheets of foundation are not used in brood-frames, it would be nothing strange to find as much as a full frame of drone-comb in each hive. The owners of these colonies probably do not realize what a loss this means. In the first place there is the cost of rearing. In place of the frame of drone-brood, there might be a frame of honey or a frame of worker-brood. Then there is the cost of maintenance. It would be a different matter if the drone would go out into the field and rustle for his living. But he doesn't do that. When he leaves the hive it is only for exercise that he may increase his appetite to eat more when he returns. Neither is he satisfied to help himself after the table is set. His overworked sisters must chew, swallow, and digest his food for him before it is ready for his dainty palate. All this is very expensive business; so expensive that if it were fully realized there are hundreds or thousands of bee-keepers that would at once put in some time that might easily pay them a dollar an hour in cutting out drone-comb and fitting in its place worker-comb.

On the other hand, what can be said in defense of supporting a horde of these "lazy fathers of the hive?" One defense has been offered: they are of use in keeping up the heat of the hive. When a swarm issues, and the mother colony is left so weak that there are hardly enough bees to keep the brood warm, if the drones that are present were to be taken away nearly all the brood would perish. Again, when nectar is so plentiful that, as the Germans say, "every fence-post yields honey," the drones remain at home to keep the brood warm, releasing the same number, or a greater number, of workers to go afield to add to the harvest. This defense has been seriously set forth and ardently defended, although perhaps not in this country. It hardly needs to be mentioned that a pound of workers can do as much at keeping the hive warm as a pound of drones, and be doing some other useful work the while.

After all this is said, there remains the fact that the drone is a very important personage in the bee-community, and that if *all* drones were suppressed bee-keeping would cease to be. And while it is true that effort should constantly be made to avoid the support of a needless number, it is also true that equal effort, perhaps greater effort, should be made to have only the best drones preserved. While too few bee-keepers pay any attention to the stock from which their young queens are reared, still few pay the least attention to the drones. Of those who are faithful in trying to keep down an over-supply of drones, the strong probability is that no distinction is made, and that the drones of the best colonies are suppressed just as much as the drones of the poorest.

Possibly some may say that only color and temperament, or some other

particular traits are inherited from the father, and the most desirable traits for good storers are inherited from the mother. Stop and think a minute whether in the human family certain traits are always inherited from the father and others exclusively from the mother. If the father has very dark hair and the mother very light, will the hair of all the children resemble that of one parent alone? May not industry be inherited from the drone as well as the queen?

It may be thought that so long as the bee-keeper has no control over the mating of the queen, and that she may meet a drone from some other apiary, it is hardly worth while to pay any attention to the drones beyond keeping down their number. But in any apiary of 100 colonies, if drones are encouraged in the best colonies and suppressed in others, so that the majority of the drones are of best stock, certainly the chances for meeting the best drones is greater than if no such discrimination were made. And even if some of the young queens meet drones from other apiaries, it is worth while to give the other young queens the best chance. Then, too, the surrounding bees will in time be affected, making their drones better.

On the whole our correspondent does well to think that something is needed to be said about the drone. Much more is there a need that something be *done* where now nothing is done, both as to suppressing undesirable drones, and also as to encouraging those that are desirable.

### "The Honey-Money Stories"

This is a 64-page and cover booklet, 5¾ by 8½ inches in size, and printed on enameled paper. It contains a variety of short, bright stories, mixed with facts and interesting items about honey and its use. It has 31 half-tone pictures, mostly of apiaries or apiarian scenes; also 3 bee-songs, namely: "The Hum of the Bees in the Apple-Tree Bloom," and "Buckwheat Cakes and Honey," and "The Bee-Keeper's Lullaby." It ought to be in the hands of every one not familiar with the food-value of honey. Its object is to create a larger demand for honey. It is sent postpaid for 25 cents, but we will mail a single copy as a sample for 15 cents, 5 copies for 60 cents, or 10 copies by express for \$1.00. A copy with the American Bee Journal one year—both for \$1.10. Send all orders to the American Bee Journal, 146 W. Superior St., Chicago, Ill.

### "The Amateur Bee-Keeper"

This is a booklet of 86 pages, written by Mr. J. W. Rouse, of Missouri. It is mainly for beginners—amateur bee-keepers—as its name indicates. It is a valuable little work, revised this year, and contains the methods of a practical, up-to-date bee-keeper of many years' experience. It is fully illustrated. Price, postpaid, 25 cents; or with the American Bee Journal one year—both for \$1.10. Send all orders to the office of the American Bee Journal, 146 West Superior St., Chicago, Ill.



## Miscellaneous News-Items

### That Special Car for Albany

While at this writing (Sept. 15) it is a little too early to announce a full carload of bee-keepers to start from Chicago at 10:30 a.m., Oct. 11th, for the Albany convention, Oct. 12th and 13th, yet there have been enough already, who have said they intended to go in the special car, to insure the car. We hope that all who can possibly join it will let us know not later than Oct. 8th, so that we can reserve berths for them, and make all necessary arrangements.

We very much regret to state that through a misunderstanding and misinformation the rates quoted in the last issues will not apply, being discontinued after Sept. 30th. The rate, therefore, will be that authorized by the Trunk Line and Central Passenger Associations, namely, *one fare and three-fifths* on the certificate plan from Chicago (do not fail to ask for certificate when purchasing ticket for going journey), which means \$18.15 going, and \$10.90 returning; selling dates Oct. 8 to 11, inclusive, and final limit Oct. 17.

When buying your ticket, be sure to see that it reads over the Lake Shore and Michigan Southern and New York Central Railways from Chicago to Albany. (See page 326, on rates.)

It has been wisely suggested that we give the time of arrival of the special car at some of the important cities along the way, as follows:

Leave Chicago 10:30 a.m., Oct. 11th. In Indiana—La Porte, 12:06 p.m.; South Bend, 12:47 p.m.; Elkhart, 1:20 p.m. In Ohio—Toledo, 4:37 p.m.; Cleveland, 7:30 p.m.; Erie, Pa., 10:05 p.m. In New York—Buffalo, 12:25 a.m.; Rochester, 3:30 a.m.; Syracuse, 5:30 a.m.; Utica, 6:55 a.m. Arrive at Albany, 9:20 a.m., Oct. 12.

The sleeping-car berth from Chicago to Albany will be \$4.50, or \$2.25 each when two occupy the same berth.

The convention will be held in the City Hall at Albany, beginning at 10:30 a.m., Oct. 12th, and concluding with the afternoon session of the following day. This will make 5 sessions in all, one session being at night.

The indications are that the attendance will be very good, and the meeting one well worth attending. Of course, the railroad trip and meeting of old and new friends will be a very enjoyable feature of the convention.

The Hotel Kenmore, one block from the Union Depot, has been selected as headquarters. The rate is \$1.50 per day and upward, but when four bee-keepers occupy one room the rate will be \$1.25 each. The Kenmore is one of the best hotels in Albany, and it would be very nice if as many as possible who attend the convention will stop there, so that the time between the sessions of the convention may be spent most enjoyably in meeting and conversing with others attending the convention.

As we have announced before, we are ready to make reservations in the special car for all who will notify us that they can go. You can address this office,

or G. K. Thompson, General Agent of the Lake Shore and Michigan Southern Railway, 180 S. Clark St., Chicago, Ill., for any additional information you may wish to have about the special car.

### Switzerland's Wealth in Honey

Switzerland is a land of flowers, and its thrifty inhabitants have made the blossoms very largely contributory to the food supply. According to statistics gathered by the Swiss Society of Agriculturists, "There are 250,000 colonies of bees in the country, each of which produces 40 pounds of honey during the season, a total of 10,000,000 pounds a year. The average price of Swiss honey for the year 1909 was 25 cents a pound, giving the year's product a total value of \$2,500,000." As the flowers grow without cultivation, and the bees work without other wage than caretaking, producing their own food-supply, the honey crop is in great part clear profit. The Swiss honey is of very delicate flavor and fine quality.—*Philadelphia Record*.

The foregoing item is clipped from a leading Chicago daily, which, as it appears, had copied it from another paper, and just where it started it may not be easy to know. It shows that besides being the foremost bee-keepers in the world, the Swiss brethren know something about the fine art of advertising. Here is an item that seems to be going the rounds of the papers in a strange land as something of general interest, and a very little change in it would make it apply to this country, said change making it all the more interesting. This is a land of flowers as well as Switzerland, and the value of its honey is a good deal more than \$2,500,000. Why is it that bee-keepers of this land can not unitedly enter upon a campaign of advertising that would make hundred-fold returns?

### A Rough-and-Ready Hive Level

When the suitable tool is not at hand a most efficient substitute will be found in a common soup-plate. Lay it on the floor-board and fill up with water. If inclined to one side, prise up the stand until you judge the water stands level with the rim all around, and there you are!—D. M. MACDONALD, in the *British Bee Journal*.

### A California Visitor

September 14th there dropped in to see us one of the big (225 pounds) specimens of California bee-keepers. Just now, however, he has no bees, but is manager of the Madary's Supply House at Los Angeles. This concern manufactures doors, windows, and bee-keepers' supplies, and has built up a large trade in California and the surrounding territory.

Mr. C. reports that Southern California has practically no honey crop this year, and many bee-keepers are feeding their bees, which surely is very discouraging for all concerned. So California honey will not compete very much with the honey produced in other parts of the country this year.

Mr. Clayton is a great lover of Southern California. He has been in that State since 1874, and, although

having been in the East only about two weeks, he said he would be mighty glad to get his feet back on Los Angeles County soil once more! It is strange what a fascination California people seem to have for that State. And they all want everybody else to come out there and help them enjoy both climate and country.

Mr. C. is one of the substantial business men of Los Angeles, being prominent not only in the line of his own business, but is public spirited in many ways. While only 60 years of age, he does not look over 50, and enjoys the distinction of having children and grand-children galore. ("Galore" means in that place 6 children and 8 or 9 grand-children, all living in Los Angeles. No race suicide in his family!)

Mr. Clayton was spending a few weeks in the Central East, and expected to return to his home the last of the month.

### The Excessive Use of Sugar

The following clipping from the San Diego (Cal.) Sun, of Aug. 11, 1910, has been received:

Now comes a high medical authority who declares that through the use of sugar the human race is degenerating. This assertion was made by Dr. Robt. Roessler, of Hoboken, who, in speaking before the New Jersey State Dental convention, claimed that sugar commonly used in all families is nothing else but concentrated and crystallized acid, which is exceedingly dangerous to the human system. In former years sugar was a luxury, and only the wealthy could afford it. Today everybody uses it, and many of the new diseases, says Dr. Roessler, are caused by the modern method of manufacturing sugar.

The loss of energy, Dr. Roessler declared, through the consumption of sugar in the last century, can never be made good. Alcohol has been consumed for thousands of years, but has not caused the degeneration of the human race that sugar is causing.

Without raising the question as to whether the picture has been at all overdrawn by Dr. Roessler, there can be no question that it is well that a note of warning should be sounded. A few years ago the consumption of sugar in this country was 60 pounds annually for every man, woman and child. Now it is 82 pounds!

That is no doubt more than the digestive organs can safely care for, and it is well the public should know it. But what a fine thing it would be if medical authorities, while calling attention to the harm done, would add that the harm would mostly disappear if honey were substituted for sugar. People will have sweets, and why not have the most wholesome of all sweets?

### A B C and X Y Z of Bee Culture

A copy of the 1910 edition of this wonderful bee-book is on our desk. It completes the 131st thousand copies. Just think of it—131,000 copies of a single bee-book printed and circulated within only about 30 years! This last edition of "A B C and X Y Z of Bee Culture" is the most complete of all. The whole book is kept standing in type so that each succeeding edition may be more easily revised and brought up to date. Where it is possible to use a picture to make the text more clear, a picture has been used. The whole has been gotten up in cyclopedic form, so that every topic is readily re-



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ferred to. Every subject on which there has been new light discovered since the preceding edition, has been re-written, and the new information incorporated in the proper place.

This new copy contains an appendix on the "Anatomy of the Honey-Bee," by R. E. Snodgrass, of the Bureau of Entomology, Washington, D. C. Mr. Snodgrass is the author of a Government Bulletin on the same subject, covering about 150 pages, which also is profusely illustrated with many new and original engravings illustrating the anatomy of the honey-bee. This pamphlet can be secured from the Department of Agriculture for 20 cents. But Mr. Snodgrass has given sufficient on the subject in 11 pages of "A B C and X Y Z of Bee Culture" to satisfy almost any bee-keeper who is not a scientist or specially interested in the anatomy of the bee.

What more can we say of this standard bee-book? It's nearly 600 pages, 6½x9 inches in size, contain practically everything on successful bee-keeping that can be put on the printed page. And all this is furnished bound in cloth for \$1.50, postpaid, or we mail the book with the American Bee Journal one year—both for \$2.25.

It is almost needless to say here that every bee-keeper in the world who desires to have the latest book-information concerning bees and bee-keeping should have a copy of this great work. Send in your order to the office of the American Bee Journal, when it will have our prompt attention.

## Sweet Clover in Pennsylvania

The following is taken from the Rural New-Yorker, one of the oldest as well as one of the very best farm papers published. Some of these days



YELLOW SWEET CLOVER.

all farmers, as well as bee-keepers, will come to appreciate the truly great value of sweet clover for many purposes besides that of being a honey-plant. Here is the item:

During the month of June, 1906, I purchased 10 pounds of white sweet clover (*Melilotus alba*) seed and sowed a patch of about an acre, which was infested with Canada this-



WHITE SWEET CLOVER.

bles; however, it happened a drouth followed the sowing, hence there was a very thin stand. The seed was simply sprinkled over the sod and thistles, and no cultivating previously. The next year it was mown for hay just before it was in bloom, and the few years following, it was allowed to stand and re-seed itself until now, 1910, it is a thick mass, almost impenetrable, and the average height is 5 feet 6 inches to 7 feet. And the marvelous thing about it is, the clover grew so fast and so thickly that the Canada thistles were choked, and at present there are very few to be seen except along the edges of the patch. As sweet clover belongs to the legume family, it has gathered nitrogen from the air and stored it in the numerous nodules, borne on the roots, to be used as an enricher of the soil.

To sum up, I have killed two birds with one stone, viz., choked out the thistles and at the same time enriched the land, and last, but not least, it has furnished pasture for the bees while in bloom. In raising sweet clover as a forage crop and for hay, prepare the ground as for alfalfa and sow in August quite thickly, possibly about 25 pounds to the acre. If a good stand is secured the next spring the plants will stool, and if it stands thick as it should for hay the stems will not be coarse, and the cattle and horses will eat it up clean. However, at first the horses and cows refuse it, but soon get used to it, and afterwards eat it greedily. It should be mowed for hay just before it blooms, as the stalk gets too woody and cattle will not eat it. It is a great plant for green manuring, and when turned under produces great crops of potatoes and corn. As a weed I do not think it is any worse than the other clovers, for it can easily be got rid of by plowing under or cutting the stalk while in bloom.

Sweet clover compared with alfalfa or other clover, I think, stands second to alfalfa and above the other clovers entirely. If mown for hay before the blossoms open, it will sprout, and stock can be pastured until fall. As a weed eradicator, soil enricher, honey-plant, and forage-plant, I think it has very few equals when rightly handled. Almost any soil will grow sweet clover, the hardest clay and the most barren looking soil may grow it, and drouth will seldom affect it. I think if the farmers learn to know the value of sweet clover they will no

longer regard it as a weed; and another thing, sweet clover might just as well be grown in waste places and along fence rows as weeds, as it is very valuable for the bees for the honey it yields, so bee-keepers take notice.

In this article I have given my experience with sweet clover; it came to me as a new plant, and I have tried to find the bad qualities as well as the good, but they are all good, in my estimation. E. S. HACKER.  
Lancaster Co., Pa.

## Program for the Albany Convention

While we published the program for the 41st annual convention of the National Bee-Keepers' Association to be held in Albany, N. Y., Oct. 12, and 13, 1910, we give it again herewith, so that it may be convenient for all who wish to take this number of the Bee Journal with them to the meeting, although we expect to have copies of it there for all who may desire it.

The program has a great variety of topics to be considered, and, of course, the question-box will introduce many other important topics for discussion. If any member has a question he would like to have presented, he can mail it either to the President, Secretary Scholl, or General-Manager France, in care of the Kenmore Hotel, Albany, N. Y., unless there is time for such questions to reach the persons mentioned before they start for Albany.

Also, if any have suggestions to make that they think would be for the improvement of the National Association, it would be a good thing to send them on, so they may be discussed at the meeting. While, no doubt, all suggestions could not be utilized in the interest of the Association, still it might be just the thing to help make the National of more value to its members and to bee-keeping in general throughout the country.

The Michigan Association is planning to do great things these days for its members, and there is no reason why the National Association should not do a similar work for the bee-keepers of the whole country in many ways. These matters need to be considered very carefully, so that the National may be put in a position where it can



do more for its members. There ought to be wisdom enough among the whole membership to devise ways and means that will insure the Association being a greater help in the future than it has been in the past, although its record so far is nothing to be ashamed of.

It may be that some who attend the convention will be able to bring something for exhibition. Vice-President Wright expects to have a small room adjoining the convention hall where everything of an exhibition nature can be placed for inspection by those attending the meeting. Bee-keepers are always looking for something new, so if you have anything that shows progress be sure to take it with you.

The program referred to above, and which we published last month, follows:

PROGRAM OF THE NATIONAL BEE-KEEPERS' CONVENTION AT ALBANY, N. Y.

The National Bee-Keepers' Association will hold its annual convention Oct. 12 and 13, 1910, in the Common Council Chamber in the City Hall of Albany, N. Y.

There will be 5 sessions, beginning with the first on Oct. 12th, at 10:30 a.m., with an afternoon and an evening session the same day, and a morning and an afternoon session on the second day.

The papers selected are to take up not more than 5 minutes each, so that there will be sufficient time for the discussions of the subjects; and also allowing ample time for the "Question-Box," which is to be taken up at the conclusion of the subjects on the regular program at each session.

OCTOBER 12TH—MORNING SESSION, 10:30 A.M.

The first session will open with the reception of members, paying of dues, and such other matters, so these will not interfere after the regular program is taken up.

"Bee-Keeping as a Business"—W. B. Cavanaugh, Hebron, Ind.

"What a Woman Can Do With Bees"—Mrs. S. Wilbur Frey, Sand Lake, Mich.

OCTOBER 12TH—AFTERNOON SESSION, 2 P.M.

"Comb Honey—from Nectar to Market"—S. D. House, Camillus, N. Y.

"Extracted Honey—from Nectar to Market"—J. L. Byer, Mt. Joy, Ont., Can.

"Bulk-Comb Honey and Its Future"—Louis H. Scholl, New Braunfels, Tex.

"Ripening Honey on the Hives"—W. P. Southworth, Salix, Iowa.

OCTOBER 12TH—EVENING SESSION, 8 P.M.

"President's Address"—George W. York, Chicago, Ill.

"Selection in Breeding to Increase the Honey Crop"—Geo. B. Howe, Black River, N. Y.

"Co-operation Among Bee-Keepers—Advantages and Procedure"—Frank Rauchfuss, Denver, Colo.

OCTOBER 13TH—MORNING SESSION, 9 A.M.

"Advertising to Create a Larger Demand for Honey"—F. J. Root, Newark, N. J.

"Methods of Retailing Honey"—Wesley Foster, Boulder, Colo.

"Shipping and Grading Honey"—H. H. Root, Medina, Ohio.

"Methods of Rendering Beeswax"—H. R. Boardman, Collins, Ohio.

OCTOBER 13TH—AFTERNOON SESSION, 2 P.M.

"When and How to Requeen with a Fall Honey-Flow"—F. A. Cyrenius, Oswego, N. Y.

"Southern Honey-Production—Present Conditions and Future Possibilities"—J. J. Wilder, Cordele, Ga.

"Bee-Keeping in Maryland as I See It"—N. W. Saunders, State Entomologist, Rockville, Md.

"Question-Box" after each session.  
LOUIS H. SCHOLL, Sec.  
New Braunfels, Tex.

## "Nucleus" and "Nuclei"

Perhaps no words give more trouble to inexperienced apicultural writers than the two words *nucleus* and *nuclei*. It takes some time for the beginner to learn that when he has only one it is a

*nucleus*, and not a *nuclei*. And after he has learned that *nucleus* is the singular and *nuclei* the plural, he is still inclined to make the mistakes of using the plural form instead of the singular when using the word as an adjective; as, "nuclei plan of increase," instead of "nucleus plan." Even so scholarly a writer as D. M. Macdonald lately wrote, "At present I will deal with nuclei-forming," and the error escaped the eagle eye of the proof-reader of that correct publication, the *British Bee Journal*.

Possibly the beginner thinks, "If I use the plan for making several nuclei it must be a 'nuclei' plan, while a nucleus plan would be for only one nucleus." But if he will think of parallel cases, he will view the matter differently. If a man is engaged in building houses, he is engaged in house-building, not in houses-building; if two cows are in a pasture, it is a cow-pasture, not a cows-pasture.

So let it be remembered that when we use the word as a noun, *nucleus* is the singular and *nuclei* the plural; but when used with the significance of an adjective the singular form, *nucleus* is always used.

## Bees Capture a Ship

A swarm of bees recently settled on the steamship "Alleghany," at Port de Paix, Hayti, and at the expense of the Hamburg-American line rode to St. Marc, a distance of about 190 miles by sea. According to the chief officer, the "Alleghany" was lying off Port de Paix, on the northwest coast of Hayti, June 23d. As the liner was about to weigh anchor, the swarm settled on the port of davits. A watch was kept on them throughout the day and night, and the next morning when the "Alleghany" was off St. Marc in Gonaive Bay, the swarm buzzed around the proffered hives, but soon made a bee-line for St. Marc. Captain Meissner was furious. No bees, no passage money, and empty hives!

The foregoing is according to the *Baltimore News* of July 12, 1910.

## Our Front-Page Brood-Comb Picture

We are not quite sure how the engraving on the first page this month is going to print, but if it looks anywhere near as beautiful as the original photograph it will be very attractive to beekeepers. Mr. Walter C. Lyman, now and for many years past a bee-keeper at Downers' Grove, Ill., furnished the picture for the special purpose it is used this month.

In the original photograph even the tiny bee-eggs show in the empty cells in the center of the picture. This is the first time, we believe, that we have ever seen the eggs of a queen photographed where they had been laid in the comb.

It also will be noticed that many of the cells contain the curled up larvæ, whose pearly whiteness, of course, does not show so well in the picture, although some of them are very distinct. Just below the sealed cells of honey near the top of the picture, and also in the lower left-hand corner, will be

seen cells filled with pollen. The lower part of the comb that is sealed over is worker-brood; while, of course, the top of the comb is sealed honey.

It seems to us that all this picture lacks is a lot of bees on the comb. That would make it about perfect. However, the eggs in the bottom of the cells could not be seen if the bees were present as in the natural condition in the hive.

We are hoping that this picture will appear very distinct when printed on the front page this month. The engraving is a very good one, as is also the original photograph. Of course, it would look better if printed on enameled paper, but such paper would not do at all in a publication like the *American Bee Journal*. It would also be too expensive.

We dare say that this number of the *American Bee Journal* will be preserved for the originality and beauty of its front-cover page, if for no other reason; although its contents, like its predecessors, should be well worth reading and preserving.

If you have any bee-keeper neighbors or friends who would like to have this number of the *American Bee Journal*, just show it to them, and ask them to send in their subscription at once, and we will begin it with this October number, and thus they, too, will have the unusual picture shown on the front page.

## Honey-and-Mummy Medicine

Honey is now and has always been an important item in the list of medicines, but in medieval times, according to an article in the *London Hospital*, it was used in a grewsome combination. The article says:

Here is a somewhat disquieting recipe according to the manuscript of the Persian poet Nizami:

"Take a man with red skin and hair; feed him with fruits up to the age of 30. Then plunge him into a stone vat filled with honey and divers other drugs; close up the vat and seal it hermetically. One hundred and twenty years later the honey and body will be mummified. Open the vat and serve up the contents."

The mummy extract, says the German savant, was in common use in the 18th century, and as late as 1853 it figured in Austrian pharmacy.

## "The Practical Bee-Guide"

Six years ago the first edition of the *Irish Bee Guide* was published. A second edition has now appeared, and the title has been changed to "The Practical Bee-Guide." Concerning this change the author says:

"The alteration in the title of the *Guide* has been made partly in acknowledgement of the fact that the sale of the book hitherto has not been chiefly in this country, and partly in deference to the wishes of the booksellers and of a large number of practical bee-keepers, who have assured me that the former title led to the erroneous impression that the *Guide* was suited only to bee-keeping in Ireland."

Certainly the character of the work warrants the change of name.

It is a work of something more than 230 pages, measuring 7x4¼ inches each, written by Rev. J. G. Digges, M. A., the genial editor of that sprightly monthly, the *Irish Bee Journal*. The style is clear, and of such character as to make the book pleasant reading, in spite of



# American Bee Journal

the fact that it is so compactly written that it would be hard to get more facts into the same number of pages. Each paragraph is consecutively numbered in bold-faced type, making the constant reference to these different paragraphs a matter of great convenience.

Notwithstanding the very practical character of the work, the author is a man with poetry in his soul; and in the first 14 pages, which are of a somewhat general character, there is beauty to be found equal to that of Maeterlink at his best, with this difference, that the Maeterlink flights are not always in strict accord with the truth, while every Digges sentence rings true. The heart of the genuine bee-keeper will be warmed as he reads the author's account of the awakening of the bees in spring:

"The sun, in genial humor peeping through the open door, gives to the long-imprisoned inmates assurance of kindlier conditions without; and the bee-man, watching for signs of survival, delights to see first one, and then another, and presently many of his little pets appear upon the alighting-board. Discreet in their new-found joy, they risk no long excursion, nor venture overmuch. Scenting the freshness of the air, they seem to revel in it, and in the heat and light which stir the life in them. They move about the entrance; examine the doors and porch; meet and salute each other; and rising, fly for a moment in front of the hive. A glad-some hour this for the bee-man also; an infectious happiness."

The bee-keeper who desires to increase the size of his library may do worse than to add to it a volume of "The Practical Bee Guide." We can order it for you, bound in art linen, for \$1.10; or with a year's subscription to the American Bee Journal—both for \$1.90.

## N. E. Wisconsin Convention

The Northeastern Wisconsin Bee-Keepers' Association will hold its annual meeting Oct. 19, 1910, in Mishicot, Wis., beginning at 10 a.m. All interested in bee-keeping are cordially invited to be present.

CHAS. W. VOIGT, Sec.

Tisch Mills, Wis.

## The Chicago-Northwestern Convention

Arrangements have been made for the 31st annual meeting of the Chicago-Northwestern Bee-Keepers' Association in the Club Room of the Saratoga Hotel, 159 Dearborn St., Chicago, Ill., Wednesday and Thursday, Nov. 30 and Dec. 1, 1910, beginning at 10:30 a.m., Nov. 30. This is during the week of the International Live Stock Exposition, which will be held in Chicago this year between the dates of Nov. 26 and Dec. 3.

The Saratoga Hotel is opposite the First National Bank Building. It makes a rate of \$1.00 a day and up for a room with two or more in it. It also runs a restaurant, although bee-keepers can take their meals and also find their lodging elsewhere, if they prefer to do so. Heretofore the meetings have been held in the Briggs' House, but it was thought that the Saratoga Hotel would be a little more convenient, as it is right where so many of the street-cars pass in the heart of the city. Also, being only one block from State St., it is

very convenient from all parts of the city.

A fuller announcement will be given next month. Be sure to hold open the dates above mentioned, and attend the meeting if you possibly can do so.

## Says Bees Have "Jag" Habit

WASHINGTON, June 8.—"The whole vegetable world is in a conspiracy against the prohibitionist. The bees become intoxicated with the distillation of the honeysuckle; the wasps grow dizzy in the drowsy clover patch, and even the ants wobble in their walk after they have feasted upon the over-ripe fruit fallen from the tree, which has started a natural fermentation."

The above passage, intended to show that the poor prohibitionist is up against a hopeless fight on the natural law of fermentation, is from the report of the executive committee of the United States Brewers' Association made today to the annual convention in session here.—*Chicago Record-Herald.*

This is not a prohibition journal, and there is no desire to enter into a controversy with the brewers as to the hopelessness of the fight for prohibition; but it may at least be permitted to enter a protest against trying to make our busy little gatherers an argument to uphold the vile business of the brewers. It shows they must be hard up for argument. Even if it were true that every bee that touches the honeysuckle becomes a confirmed inebriate, it is hard to see what that has to do with stopping the beer-guzzler's booze. But is not this brewers' committee the first to discover bees staggering on the honeysuckle? The brains of the members of that committee must have been unusually "dizzy" with the fumes of their own brew to furnish them the sight of a clover-patch all covered over with dizzy wasps. The usual thing seen by men in their condition is not wasps, but "snakes."

## The Michigan State Convention

The annual convention of the Michigan State Bee-Keepers' Association will be held at Grand Rapids, Mich., Nov. 9 and 10, 1910, in the Board of Trade Rooms, 97 Pearl St., beginning at 1 p.m., Nov. 9. The headquarters will be at the Eagle Hotel, corner of Market and Lewis Sts., where the evening session will be held.

Besides the usual routine business of the convention, the following topics, and in this order, will be considered:

The Aspinwall Hive a Commercial Success; The Foul Brood Problem; The Pearce Method of Bee-Keeping (illustrated); A Mail Order Honey-Trade; Uncapping Machines; Developing a Home Market; The Uncapping-Knife; Freight-Rates; Uniform Sections and Shipping-Cases; and What Smoker Do You Use? Why?

It is hoped that everybody who attends will come prepared to take some part in the discussions. A live convention is where each one has something to say. The topics will not be assigned to members not present, for if the one who is expected to open the discussion is not present the topics will be assigned to some one present. For this reason the names of those who are to take up given topics are not published. Here are a few of those who will be asked to contribute to the above program, but remember it is

really expected that every member shall contribute something. Editors E. R. Root, George W. York, W. Z. Hutchinson; Hon. R. L. Taylor, Foul Brood Inspector for Michigan; Hon. C. C. Lillie, State Dairy and Food Commissioner; Hon. Geo. E. Hilton, Pres. L. A. Aspinwall, Vice-Pres. E. D. Townsend, N. E. France, Manager of the National Bee-Keepers' Association; H. C. Ahlers, Jenner E. Morse, and Prof. Frank Benton. And these are not all.

Every member should bring his wife, sister, or sweetheart. The ladies add life to the convention. You know you never had any fun going to a convention where there were no ladies.

The following prizes for exhibits will be offered:

### Prizes and Exhibits.

BEST 10 SECTIONS COMB HONEY.—1st. 1500 No. 1 sections, donated by G. B. Lewis Co. 2d. 1000 No. 1 sections, donated by A. G. Woodman Co. 3d. American Bee Journal one year, donated by George W. York & Co.

BEST 10 JARS OF EXTRACTED HONEY.—1st. \$3.50 in supplies. 2d. \$2.50 in supplies. 3d. One copy of A B C and X Y Z of Bee Culture, 1910 edition, donated by The A. I. Root Co.

THREE BEST SECTIONS OF WHITE COMB HONEY.—1st. \$2.50 in supplies. 2d. \$1.50 in supplies. 3d. Gleanings in Bee Culture one year, donated by M. H. Hunt & Son.

CLEANEST SAMPLE OF 10 LBS. OF BEESWAX.—1st. One Aspinwall non-swarming hive. 2d. One A. G. Woodman Co. protection hive. 3d. American Bee Journal one year.

SWEEPSTAKES.—Best collection containing 10 sections of comb honey; 10 bottles of extracted honey and 10 pounds of beeswax; honey and beeswax shown in other classes, eligible in this. 2000 No. 1 sections, donated by A. G. Woodman Co., and G. B. Lewis Co.

A suitable space will be provided for display of honey, wax and appliances. Every member is urged to bring something for display. Be sure to bring your uncapping-knife, as there will be a comparison, and we want to know just what kind each member uses.

A. G. Woodman & Co. will have on display a power-driven extractor with gasoline engine. Also Hershiser wax-press, steam-heated honey-knife, and also the latest equipment.

M. H. Hunt & Son will have a 4-frame power novice extractor; steam uncapping-knife; Root's new uncapping machine, Root's new 1911 chaff hive, and other new up-to-date appliances.

E. D. Townsend & Sons will have a successful uncapping machine on exhibition. Also a steam-heated uncapping-knife.

L. A. Aspinwall will have his latest non-swarming hive on exhibition. This will have the latest equipments shown.

Every bee-keeper in Michigan is cordially invited to be present. Only \$1.00 will pay for a membership for one year, or from now to the end of 1911. If a membership is also desired in the National Bee-Keepers' Association, add 50 cents, making \$1.50 for the two associations.

Don't forget the place and date—Grand Rapids, and Nov. 9th and 10th—next month. E. B. TYRRELL, Sec.

230 Woodland Ave., Detroit, Mich.

(Continued on page 325.)

## "Scientific Queen-Rearing"

No other book compares with this one written by Mr. G. M. Doolittle. He is an expert in the business. It tells just how the very best queens can be reared. Bound in cloth. By mail, \$1.00; or with the American Bee Journal, one year—both for \$1.60. In leatherette binding, 75 cents, postpaid; or with the American Bee Journal one year—both for \$1.25. Send to the American Bee Journal, 146 W. Superior St., Chicago, Ill.



## Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

### Worker-Combs for Extracting-Supers

DEAR MISS WILSON:—For the benefit of those who have asked, and of those who wish to know, what size cells our extracting frames consist of, I will give the information, with your consent, through our beloved Journal.

They are worker-cells, mostly. The reasons are many. The drone-combs have only two virtues, to my way of thinking, *i. e.*, they are so easy to sling the honey from, and the cells are then clearer of honey than the worker-combs. On the other hand, the worker-combs have much in their favor to off-set the drone-combs.

REASON NO. 1.—By having all worker-combs they can be interchanged when extracted, whether they are taken from the top, middle, or bottom super, or brood-chamber.

REASON NO. 2.—Supposing, for instance, we have a frame of drone-comb which has a little brood-comb in it, and among it we have a very fine, sealed queen-cell which we wish to give to a queenless colony; all that drone-comb would be in the way. We would have either to cut the drone-comb out or place it just as it is in the hive, or graft the queen-cell onto one of their frames, which takes time, and is accompanied with danger, unless managed by experienced hands.

As to the first method, it would just ruin the comb and be a set-back to the already weak colony, which, on rebuilding, would most probably build drone-comb there again. The empty space would be a "draft" in their home. So we would have to remove the frame anyway, unless, of course, we were short on drone-comb, which I must admit has never been the case with us, so far.

As to the second method, the frame would have to be removed after the queen had hatched, and more likely than not the manipulation would be neglected during the press of other work, and the queen would deposit drone-eggs there, whereas, had the frame been of solid worker-comb, she would have layed worker-eggs, and so have strengthened the colony so much, instead of setting it back by producing "bums."

If it was not neglected, and the frame was removed before the queen had mated, ten chances to one on opening the hive, or removing the frame, the young queen might leave and never return, or find her way back. I have noticed that a young unmated queen is generally "skittish," and is more easily alarmed than an older one, and being light of body she can and will fly, when a laying queen can not, even if she has the impulse.

Then, again, we might go to the colony to remove the frame while the queen was on her wedding-trip. On her return from her honey-moon she would most likely not recognize her domicile with the roof removed and a giant or two standing dangerously near.

REASON NO. 3 is because on the approach of, or during the first part of the swarming season, what would we do with so many drone-comb frames in our method of keeping down swarming, as I explained in March, on page 73?

REASON NO. 4 is when we want to reinforce a weak colony, we don't have to go through half of the apiary hunting for a suitable frame of all-worker comb. Any one will do provided it has enough sealed brood to meet the requirements of the colony we wish to strengthen.

REASON NO. 5.—If we wish to feed honey to a starving colony, any frame we pick out will answer.

REASON NO. 6.—If we wish to select a pollen-laden frame to stimulate breeding, any one will do.

In the three last-mentioned reasons the frames can be left in the colonies they are placed in, as there is no fear of the queen occupying drone-cells. Then the frames removed from the weak or hungry colonies (being all-worker frames) can be placed where the ones given to them were taken from without having to place them elsewhere, and again hunting worker-combs to

put in place of those given to the needy ones.

In this matter of having worker-combs for the extracting-supers, I am, probably, not following the orthodox methods, but time and again I have stumbled up against many an annoying circumstance. In one instance we had the brood-chamber full of beautiful worker-combs, and a super of drone-comb above. Well, the bees refused to store honey in the super for some reason or other, and put honey in cells of the brood-chamber as fast as the brood emerged, and by so doing forced the queen above. We then beheaded all the drones and gave them a set of worker-combs, and extracted the honey from below. The drone-combs we placed in other colonies not so "set" in their notions about storing honey in them. There was a decided change in their behavior.

When cutting out comb honey for our bulk-comb honey trade, I am glad indeed when we come to drone-comb frames. That many less incumbrances!

If I had my way about it I wouldn't have any drone-comb in the apiary, except, of course, in two or three of my very best colonies to produce the very best drones to mate with young queens.

(MRS.) M. E. PRUITT.

Drone-comb is bad enough in extracting-supers, but it is still worse in section-supers. Where drone-comb is limited in the brood-chamber the bees are quite insistent on having it in the super, and are pretty sure to build it there if there is any chance for it; and then the queen goes up and makes trouble, unless one goes to the trouble and expense of using excluders. The wise thing is to have sections entirely filled with worker foundation, and then the queen so seldom goes up that excluders are not needed.

### The Honey-Stealer

[From Theocritus.]

Dear little Cupid, thievish boy,  
Rifling a honey-bee's hive,  
Suffered the price of a sting, alas!  
Pricked on his finger-tips, five.  
Leaping and dancing in keenest pain,  
Swiftly he scampered away,  
Hasting to Venus, his dear mamma,  
Crying, "Oh, mother, I pray  
Tell me, O, tell me why the bee,  
Charmingly tiny fay,  
Dealeth a wound so deep and sore,  
Tell me, O, mother, I pray!"  
Venus then laughingly answered, "Ah,  
Cupid, you thievish elf,  
You are a match for the wicked bee  
Your own little, naughty self.  
You are a tiny, tiny boy,  
Charmingly tiny, although,  
Deep and great are the wounds you deal,  
As gods and mortals well know.

EFFIE HAINES,  
in *Chicago Record-Herald*.

### Bee-Hive Like a Rotten Potato

This ought to appeal to women—it's a sample of man's boasted logic. It comes from Philadelphia, where everything is done in a logical manner:

A number of men who were assembled in the offices of a brokerage company watching the ticker were discussing non-business matters between ticks. The conversation turned to logic. Up spoke one of the brokers:

"I can prove logically," he said, "that a bee-hive is the same as a rotten potato." His associates laughed. Per-

haps they recalled certain occasions in the past when this same broker had convinced them that a hole in the ground was a gold-mine—but that was ancient history.

"Fire away," said one of the brokers who desired to avoid committing himself one way or the other.

"But I can really do it," the first broker insisted.

"It's absurd," replied a serious-minded listener.

"Perhaps," said the broker, "but it's logical just the same. Here's the proof: A bee-hive is a bee-holder, and a bee-holder is a spectator (specked tater). See?"—*Woman's National Daily*.

### Not Honey Letters

Three bees that give no honey—Brag, Boast and Bluster.—*New York Life*.

### Fastening Brood-Combs

When a frame of brood-comb happens to get broken out of the frame which is not wired, I use wooden toothpicks to fasten it in, pushing them through the holes in the frames made for the wires. I read to use nails, but the toothpicks are much better, I think. You can also fasten chunks of brood-comb together, then fasten in frames.

IMA.

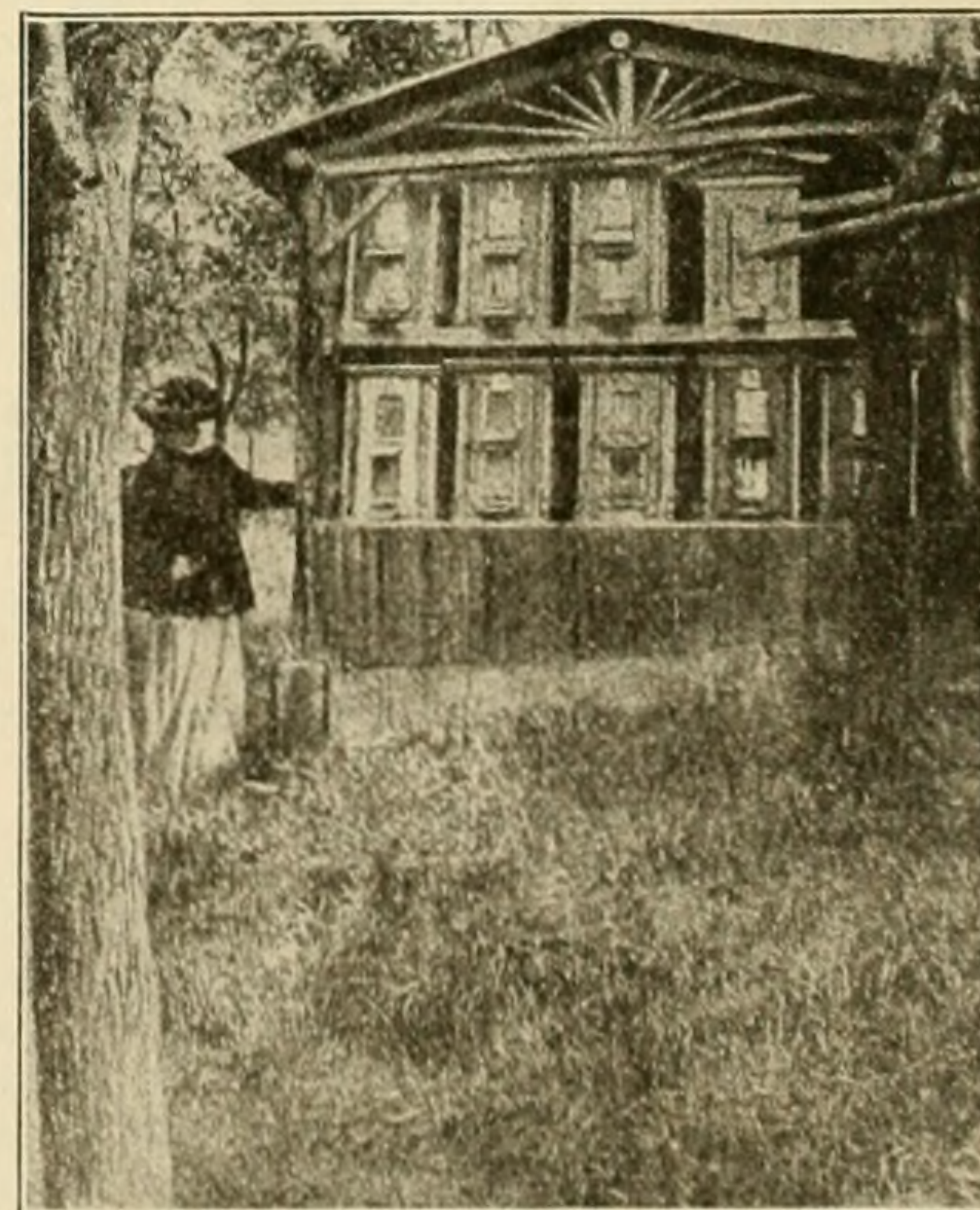
### Bees Don't Like "John"

I noticed one day a guinea-hen picking at a stalk of grass blossoms within 6 inches of the hive-entrance. The bees did not seem to notice her, but let "John" come within 3 rods of the hive, and they soon take notice of him. As for me, I often take off the top of the hive without gloves, veil or smoke. It seems they like me, also the old guinea-hen, but not "John."

OHIO BEE-WOMAN.

### House-Apiary of Princess Matilda

The Deutsche Illustrierte Bienenzeitung takes pride in giving a picture of her Royal Highness, Princess Matilda,



PRINCESS MATILDA'S HOUSE-APIARY.



duchess of Saxony. Her interest in bees began over 12 years ago when, seeing a stray weak afterswarm hanging upon a currant bush, she took pity upon the poor waif, and gave it a home. Her apiary of 10 colonies occupies a very artistic house or shed, arranged German fashion, 5 in the lower tier and 5 above.

## Honey-Frosting

Here is a good plan to make honey more suitable for those who can not eat it ordinarily:

Boil some comb honey, or better, extracted, until it is crisp when cooled. Dip in and well cover any plain or fancy crackers, and when cool they are fit to serve.—HERBERT S. HALE, in *Gleanings*.

## No King-Bee Now

An Amishman was telling me how he hived a swarm of bees, but did not get the "king," so the bees all died. With wide-open mouth, and eyes as big as saucers, he listened very patiently while I explained that there is no king-bee, only the lady queen that lays the eggs. The large drones are the lazy gentlemen—summer boarders—and the small bees that sting are the ones that gather the honey.

Thinking he was doubting my word, I said I had found this all out by reading the American Bee Journal.

The last I saw of him he was going up the road wagging his head and talking to himself. I suppose he was wondering, Can that be so, or is she daffy?  
I.M.A.

## Keeping Lard Fresh

To keep lard fresh for several months, stir in about a tablespoonful of honey to 6 or 8 gallons of lard after removing cracklings.—*The Practical Farmer*.

## Beets and Honey

MISS WILSON:—I am sending you a description of the way I cook beets for table use. I hope you will try and get it into the next edition of "Honey as a Health-Food."

Cook the beets tender in salted water; take off the skin as soon as you can handle them; slice them into an earthen dish, and while still hot put a liberal amount of extracted honey on them and set them away until next day.

Now put on good cider vinegar and set away for 2 days more. Do not be stingy with the honey and vinegar.

This is from an "old batch" bee-keeper. I have had a good season with the bees.  
Arden, Nebr. W. H. MILLS.

We have tried these at our house, and pronounce them good. Some of the family like them better before the vinegar is added. Thanks.

taken into account. Most of the crop was late sown, and it was not until about Aug. 7th that the honey began to come in very fast. Then for a few days the flow was very heavy, but, alas, when that big gale with cool weather with it struck us on Aug. 26th, the buckwheat honey was done for the season. From then right up to date (Sept. 15) quite a quantity of buckwheat has been blooming, but hardly a bit of nectar has been gathered since the cool wave struck us. However, "it might have been worse," as in addition to the colonies storing about 30 pounds each in the supers, the majority have the brood-chambers very heavy, and the feeding bill will, as a matter of course, be reduced to quite a small item, comparatively speaking, as to what things would have been like with no buckwheat honey at all.

As to the buckwheat crop from the farmer's standpoint this season, it is, or will be, a source of many disagreeable thoughts when the harvesting commences. Sown late, and just when the heavy rains with warm weather came in July, and for the most part in rich summer fallows—the growth was phenomenal, and in some cases the plants were higher than the roadside fences. When the heavy wind and rain storms came during the latter part of August, the rank, tender stalks went down flat all over the fields, and now many of the fields are as flat as though a land-roller had been run over them. How will the crop be harvested? is the question that is engrossing the minds of quite a few farmers in our neighborhood at present, and probably few of them will not take chances of another "picnic" of the same kind another year.

However, this is an exceptional year, and we are not likely to have many repetitions in many things experienced this season, for many years to come.

## Canadian Beedom

Conducted by J. L. BYER, Mount Joy, Ontario, Canada.

## Honey Prices in Ontario

Mention has been made in these columns from time to time of the work being done by the Honey Crop Committee of the Ontario Bee-Keepers' Association. Only a few days ago the Committee issued their recommendations on the prices for buckwheat honey, and a statement is made relative to the way the clover honey has been moving that is very gratifying to every friend of the Committee—indeed, should be so to every bee-keeper in the Province, and it should act as an incentive to a more systematic selling of the crop in years to come.

In sending out the question blanks about the buckwheat honey crop, the bee-keepers were also asked to report what prices they have been receiving for the clover honey this season. Of the very large number replying, 95 percent stated that the prices recommended by the Committee in their August report had been received. Only 3 percent had sold at figures ranging from a fraction of a cent to one cent per pound less than recommended prices, while the remaining 2 percent had sold at from one to 2 cents less than said prices. As the prices recommended were slightly in advance of last year, quite a number thought they would not be uniformly obtained, but results would go to show once more that the Committee have, as in the past, exercised first-class judgment in

performing the rather difficult task assigned to them.

## The Buckwheat Honey Crop

The results of the buckwheat honey crop have been rather disappointing in



so far as surplus is concerned, when the large acreage that was grown is

## Moisture and Nectar-Secretion

In another item I state that alfalfa for some reason had started to yield some nectar in our Province during the past two seasons—formerly it was, in our immediate locality, at least, a rare thing to see a bee on an alfalfa bloom. Mr. Holtermann, in *Gleanings*, says that the reason the plant yielded nectar was on account of the unusual amount of rainfall for the time of the year that we had this summer when the second crop of alfalfa was being left for seed. Not a correct diagnosis for our county, as with the extra moisture in the land this year, not half as much nectar was secreted in fields near us as was the case last year when the clover was blooming during a prolonged drouth. Just what conditions are necessary for nectar-secretion not only in alfalfa, but other sources as well, is an interesting problem that little is known about as yet.

During the past clover season we had some ideal weather, so far as a bee-keeper could judge, and yet the many fields of beautiful, sweet-scented alsike yielded so sparingly that on some of these days the bees would rob if honey was exposed. On the other hand, only a few years ago we had a



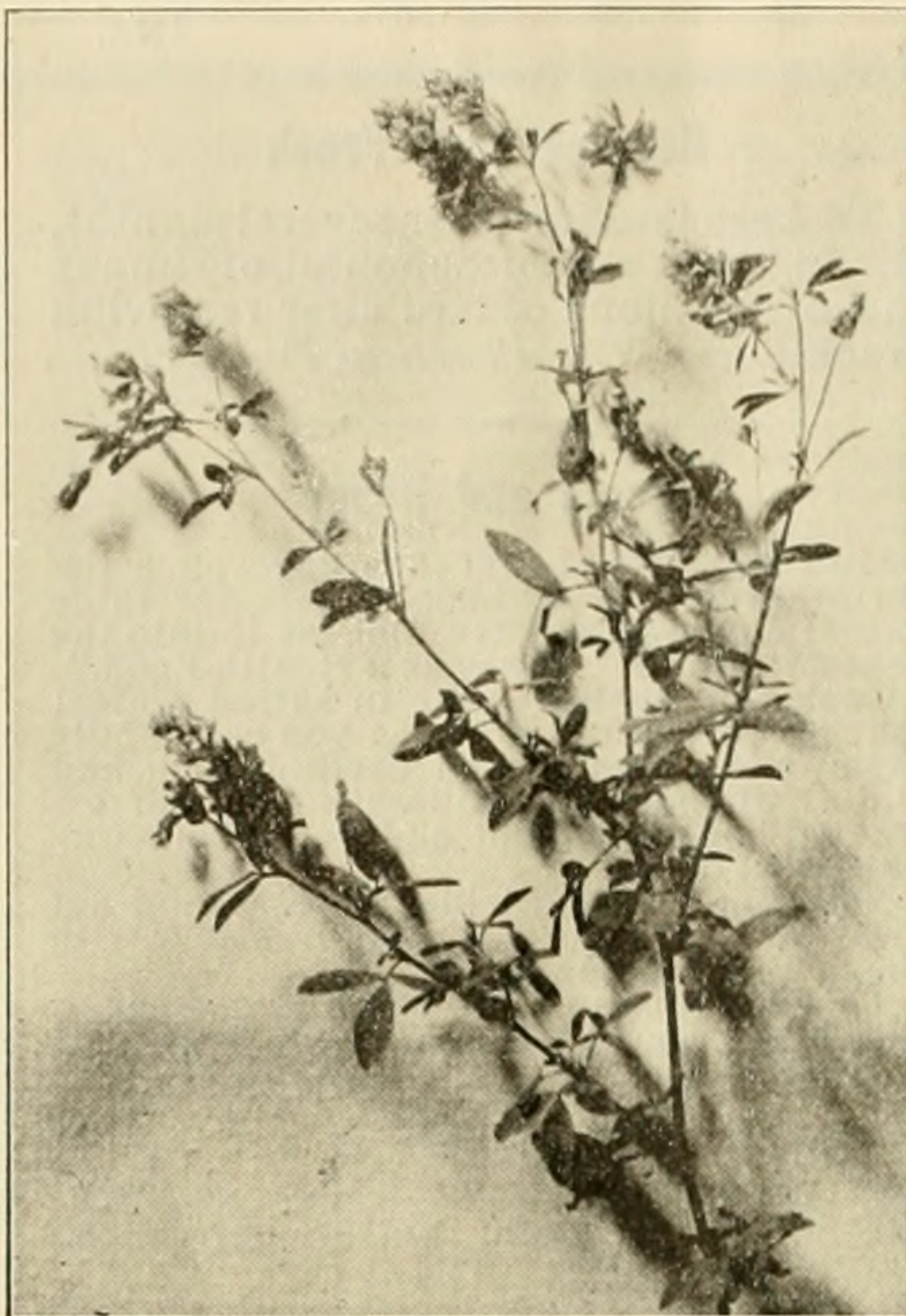
long spell of cool weather right in the clover bloom, and more than once my records show that the bees were rushing in the nectar with the thermometer in the 60's—a very unusual condition of affairs as all in the clover belt are aware.

### Alfalfa for Honey in Ontario

Alfalfa has been grown in a small way for a number of years all around us, yet previous to the summer of 1909, it was a rare thing to find a bee on the blossoms of this plant. Last summer, however, the bees worked freely on some that was left for seed after having first had a crop taken off for hay. This summer the same thing is true to a greater extent, and at this date (Aug. 17) the bees are swarming in the afternoons on a field that is being left for seed near us. Mr. Adams, of Brantford, reports that one of his bee-yards is storing a surplus from the same source, as in that locality a lot of the clover is being left for a seed crop. It certainly begins to look as if alfalfa might figure as a honey-plant here in Ontario in the near future, although why it is just starting to yield nectar seems a bit strange.

Perhaps the plant is getting acclimatized better. Certain it is that in "our locality" there formerly was no nectar in the blossoms. If we could only get the farmers not to cut the hay so early, when it is just starting to bloom, we might get a lot of honey from the first crop. It is now up to us as bee-keepers to get a law passed compelling the farmers to leave the alfalfa until the bee-keepers say that they may "now go ahead and cut it." But before such ideal legislation as that will

be possible, legal control of bee-territory will have to be an established fact. When all these little points of law are working nicely, won't the bee-keepers have a happy time? Really, it makes



ALFALFA.

one think that he is living a century too soon when we meditate on the good things in store for our grandchildren who will be keeping bees in our stead.

## Southern Beedom

Conducted by LOUIS H. SCHOLL, New Braunfels, Tex.

### How Bulk-Comb Honey Is Put Up for the Market

To produce a crop of honey is one thing; to put it up for the market is another thing; and to market it after the crop is produced and put up is still another. It is fun for us to produce a fine crop of bulk-comb honey; it is simply fine to have tons and tons of nice white and delicious combs of honey as fancy as any fancy section honey, but produced so much cheaper, and with so much less work.

Then it is fun for us to pack it in the various size containers ready for the market. It means just that much clean cash for every case of bulk-comb honey that we are able to put up in the honey season. I say bulk-comb honey, for with section honey, and also extracted honey, this has never been the case with us. Section honey has a limited demand as compared with our bulk-comb honey, and the same relation exists between extracted and bulk-comb honey. In proof of the latter I need only say that a host of extracted-honey producers write and ask me where

they might find a market for their extracted honey quite a while after we have sold out our bulk-comb honey entirely. A number of such enquiries are on my desk now. Another proof of this fact is that out of every 50 or more orders for honey, amounting to several hundred cases of honey, all is for bulk-comb honey, with only a few cases for extracted honey scattered far and wide through the season.

In the last issue the readers were shown the way the honey comes from the hives, and how bulk-comb honey looks in the frames just as taken from the supers. Unfortunately this does not show up as it should, due to much of the details being lost in the half-tones when printed. But these combs are cut out of the frames as shown in one of the pictures herewith, where the writer is at the "job." The frame removed, the comb is cut in two through the middle, and each half laid side by side in the large-mouthed, 8-inch screw-cap square 5-gallon can, forming a solid layer of comb honey. The next 2 pieces of comb honey are then laid across the first layer, and so on until

10 combs have been placed in the can.

The cans are not removed from the cases in filling them, and after the comb honey is filled in, extracted honey is put in to fill up the cans. This fills the empty spaces, and besides making up the weight it keeps the comb honey buoyant in the cans, and no matter how much they are handled, the comb honey does not become mashed up as some seem to suppose, from the letters and enquiries that have been received.

Bulk-comb honey in these large cans is listed as "Bulk-Comb Honey in two 60-pound cans to a case," and sells as 120 pounds at from 10 to 11 cents per pound f. o. b. the producer's shipping point. The dealer buys this in these large cans to retail again out of the original package. He pays the freight, which he adds to the price of the honey, together with his profit, and it is seen at once that it brings quite a good price by the time it reaches the consumer. Many consumers who can use a 5-gallon size, or 60-pound can, order direct from the producer. If only one can is ordered, we charge half cent extra per pound for the difference of making an extra shipping-case for a single can shipment. Many consumers join in with a neighbor and order two cans in a case, thus getting the benefit of the regular price. The price to the consumer direct is generally always a little higher than that to the large dealer, as far as we can do so to allow him his proper share of profit.

A great quantity of our bulk-comb honey is put up in smaller size packages, however, which are then sold to the consumer in the original package by the retailer. These are 3-pound cans, and 6-pound and 12-pound pails of the friction-top kind. The second picture herewith shows a variety of these. Unfortunately we had no 6-pound size pails on hand when the picture was taken. But the 3-pound cans are shown in the center of the picture. These are standing on top, and a few in front of the shipping-case in which they are sent to market. This case holds 20 of the 3-pound cans, making a 60-pound package. A case of the 60-pound pails is shown at the extreme right in the picture—ten 6-pound pails also making a 60-pound case.

To the left are 12-pound pails and their case, in which 10 of them are shipped, making a 120-pound case. Then there are the familiar large size 60-pound cans and their case, except that these cans have a very large 8-inch opening to allow the packing of the comb honey in them. This is another 120-pound package.

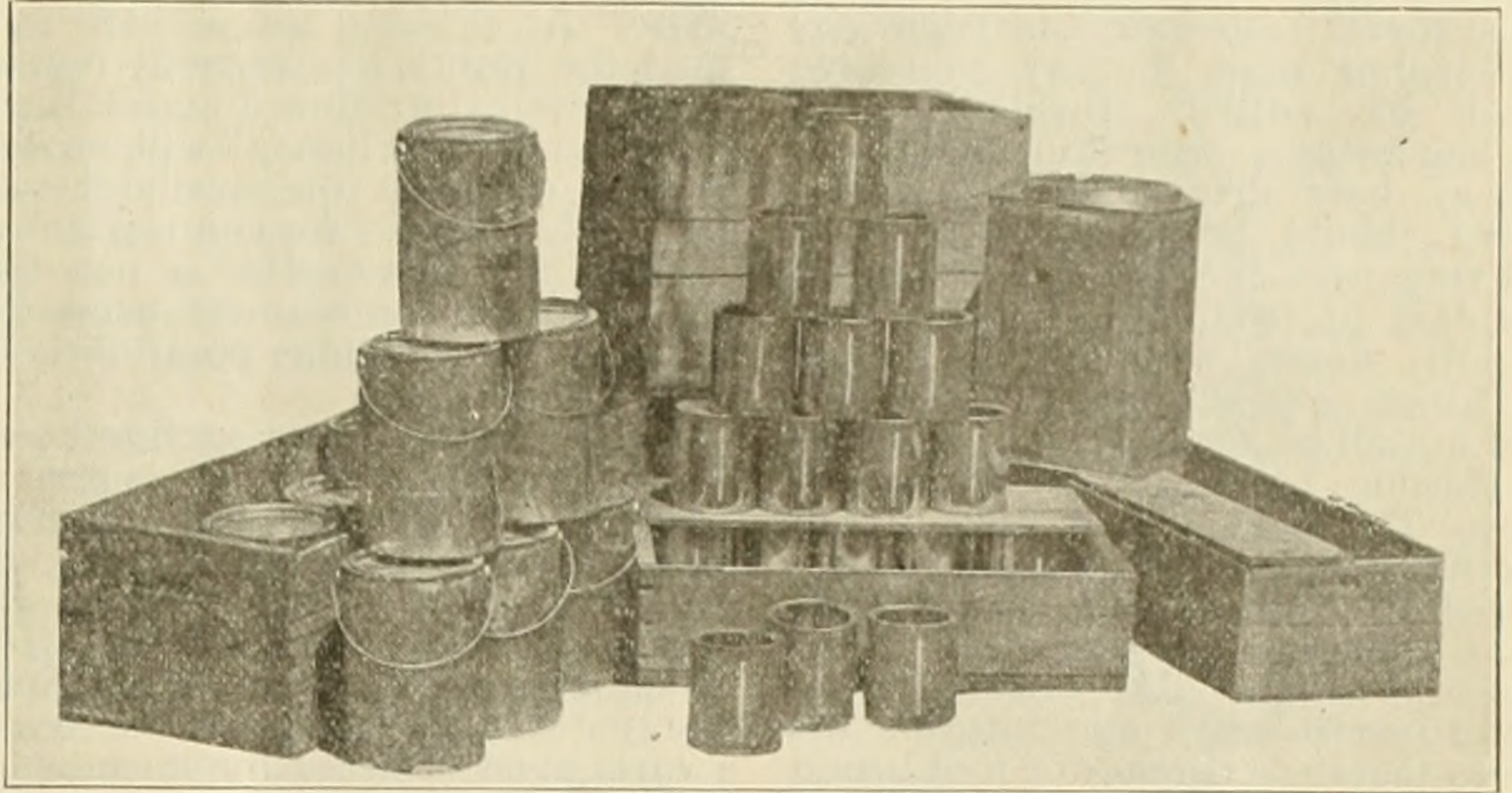
The comb honey for these is cut in various ways, each size of can or pail requiring different cutting of the combs. For the 12-pound pails the comb is first cut in the middle, as for the large 60-pound cans. Then each of the halves is cut again in the middle so as to make 4 squares of comb honey to each comb. These are then laid in the pails flat, one on top of the other 6 layers high. Then the pails are filled with extracted honey. For the 6-pound pails the combs are cut into 5 pieces across the comb, and 4 layers make the pails full enough to be filled with extracted honey. But for the 3-pound cans it is necessary to cut off from one



edge of the entire length of the comb, a one-inch wide strip; then cut across the comb, strip and all, as it lays on the cutting board, 5 times, so there will be 6 square pieces of comb for the wide part left after the strip has been cut off. The strip itself will be cut into 6 narrow pieces about half as wide as the squares. These are now placed 2 side by side at the bottom of the 3-pound cans. The 6 pieces of the strip will thus make a bottom layer in 3 cans. On this are placed the square pieces 2 in each can, and thus filling 3 cans with comb honey with one comb. Filled up with extracted honey these make nice packages, and by having the different sizes we can furnish it in any quantity desired. The price of these smaller packages is correspondingly higher, of course. The 12-pound pails list at  $\frac{1}{2}$  cent more per pound by the case than the two 60-pound cans, or  $10\frac{1}{2}$  to  $11\frac{1}{2}$  cents per pound. So the others, the 3-pound cans selling from 12 to  $12\frac{1}{2}$  cents per pound f. o. b. the producer's shipping point, in case lots.

In figuring the price obtained for the *actual comb honey* at the above figures, it must be remembered that at least one-third of the contents in the packages is extracted honey selling at the same price. It must be remembered that we get a better price for our extracted honey in this way; or, if we figure the regular price of extracted honey, and deduct it from the whole we get a *pretty fair* price for our comb honey. To this must be added the fact that it is much less expensive to produce bulk-comb honey in frames than section honey, and that we can obtain a much larger marketable crop of it under any conditions, and we can market it cheaper and easier. These are items that favor the production of bulk-comb honey to such an extent that its production will become more popular as soon as it is better understood.

Be it remembered also that this article does not cover the variety of packages for bulk-comb honey that have been used by ourselves, and neither those that are to be used later. However, the tin receptacles shown herewith are the ones in most common use,



TIN CANS FOR MARKETING BULK-COMB HONEY.

and in which the greater bulk of the Texas honey crop goes to market. In fact, these sizes of cans and pails are Texas' own standard, being adopted as its standard sizes of honey-packages, years ago, by the Texas Bee-Keepers' Association, when the writer was its

secretary; and I remember well when the matter was taken up with representatives of the largest can manufacturing concern of the country, who came all the way to Texas to give us what we wanted to pack our bulk-comb honey in.

## Contributed Articles

### Fight Against Bee-Diseases

BY C. P. DADANT.

In these times of progressive and strenuous bee-keeping, the greatest drawback is caused by the spread of bee-diseases, especially diseases of the brood, for there are luckily no very dangerous diseases of the bees themselves outside of the May disease, which is comparatively rare, and readily disappears.

The buying, selling and shipping of bees, the mailing of queens, are all possible causes of the transmission of brood-diseases, but by far the greatest cause is the shipping of honey. There is but little doubt in my mind that the reason why bee-diseases are so readily spread in the vicinity of large cities is that honey from all directions is brought to these cities, and often kept exposed in groceries where the bees may reach it. Their disposition to loot—when no crop is to be had from the fields—is certainly responsible for a great many mishaps. If we could convince our friends in the cities of the great losses to us by the thieving disposition of our bees, we would have better consideration, and would perhaps also get them to place the honey in more secure quarters. How often have we seen a case of comb honey with a broken glass in front and a dozen or more bees flying in and out! Very few of our grocers are aware of the fact that bees attract each other to the spot where plunder is found, and they do not realize the danger of letting any bees get a taste, until too many have found the prize.

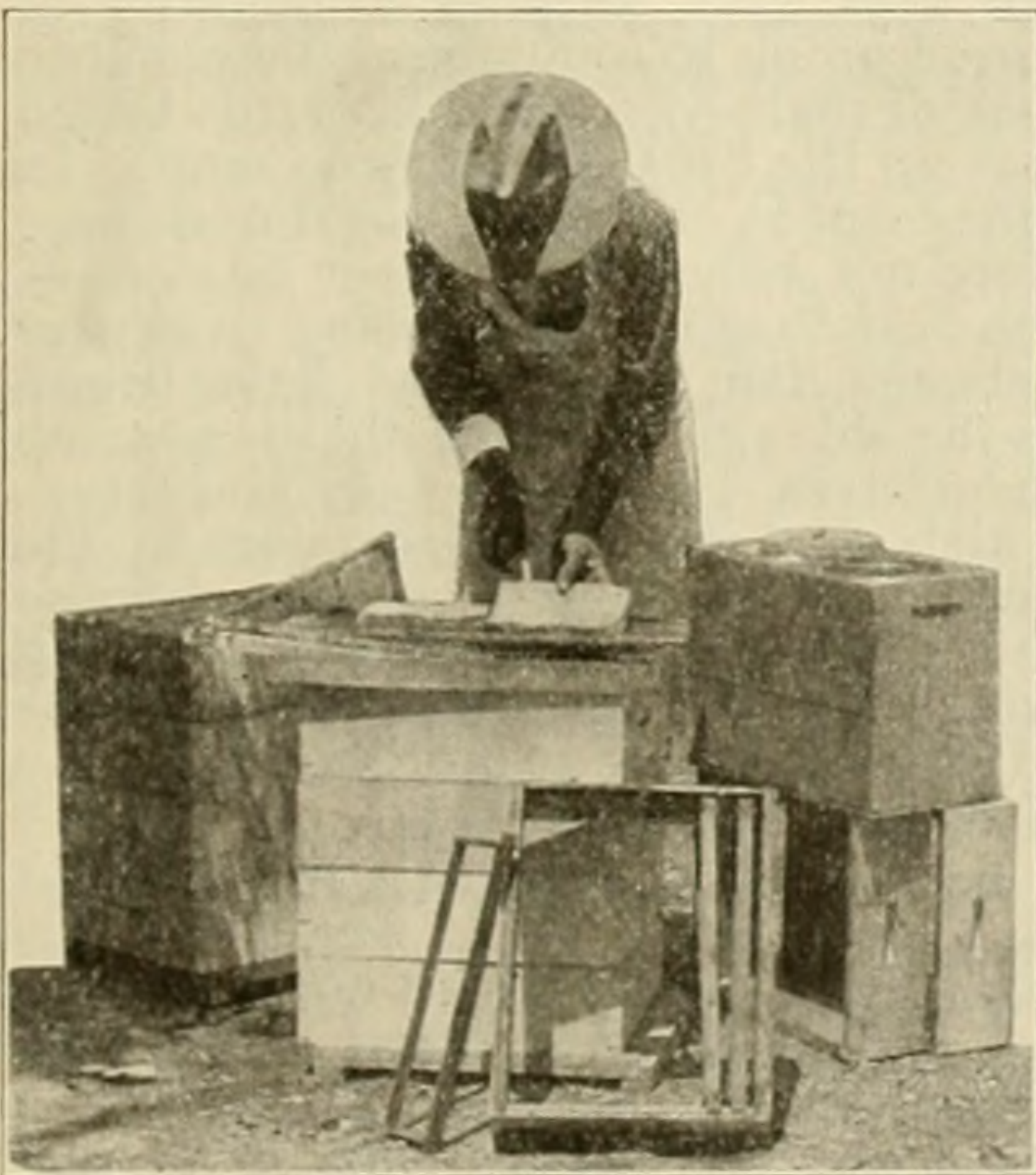
It is now evident (Cheshire to the contrary notwithstanding) that honey

is the best transmitter of the stinking American foul brood; and the worst feature of it is that the honey does not in any way show it, for it contains only invisible germs, that have no odor, that do not mar the honey in any way for human consumption, and that are, perhaps, often in such small numbers that a casual microscopic examination would fail to discover them. Yet these germs, when placed in the larval food, reproduce rapidly by millions. So we are unable, when we see strange honey, to recognize by any method whether that honey is free from taint.

Never, then, should we feed our bees upon honey of which we do not know the source, no matter how fine and white it may be. Such honeys should be kept strictly away from the hives. We should urge our grocers to keep all honey in well-closed vessels or cases during the months when the bees can fly. Luckily, most of the honey handling, selling and consuming is done in cold weather, when the bees are confined to the hive. There should not be much difficulty in keeping it from the bees.

Each apiarist should keep his eyes open, so that in case of contagion he may stop it at its first appearance. A few cells of diseased or dead brood would soon spread to the entire colony. Neighbors should be warned also.

In connection with this, we should remember that slovenly apiculture will always cause trouble. The apiarist who allows his bees to build the combs crooked in movable frames, so that they are in fact immovable, is courting trouble. He relies on luck, which is not always with the reckless. Our deceased friend, J. M. Hambaugh, one



CUTTING BULK-COMB HONEY OUT OF SHALLOW FRAMES.



of the former Directors of the National Bee-Keepers' Association, insisted that the keeping of a box or gum hive should be entirely forbidden, and that bee-keepers who knowingly kept hives of bees that could not be inspected should be fined. This very rigid view was due to his having had a great deal of trouble in California, at different times, with apiaries where foul brood existed, when the combs could not all be readily inspected without causing breakage and leakage of honey. The evidence of difficulty in detecting foul brood in a box-hive apiary is shown in the treatises of former days. Hamet, for instance, in his "Cours Pratique d'Apiculture," published some 60 years ago, informs his readers that the existence of foul brood is detected by the lessened activity of the bees of the colony, and by the deleterious odor which the hive exhales. At the present day, the apiarist who allows the disease to go this far is pretty sure of a tremendous loss.

Having had no experience with foul brood, I had a magnified idea of its danger until I took a trip to the West, several years ago. In one of the irrigated valleys where bees are kept in thousands of colonies, I saw foul brood for the first time. It was there that I learnt that it was possible for a man to have foul brood for years, in a latent condition in his apiary, if he kept fighting it, while his neighbor's bees were immune. It was there, also, that I found that one man could get rid of it promptly because of his energy and thoroughness, while the other would retain it year after year through his neglect or lack of management. One man harvested big crops and had his bees in fine shape, while a neighbor less than 5 miles away discouragingly remarked to me that he who had the disease in his apiary once could never be sure that he was rid of it.

Reader, this is the difference between care and carelessness. Take your choice.

I will not attempt in this short article to give the remedies or methods of cure for the different forms of brood-diseases. The McEvoy method for rosy foul brood, the Alexander method for black brood are, I believe, acknowledged as the most positive. But what is done must be done rightly, for a single germ left may produce millions of bacilli.

That we will sooner or later succeed in entirely exterminating these diseases, or in making them practically harmless, is certain; but it will take time. Meanwhile we must keep a vigilant eye on our apiaries.

Hamilton, Ill.

## Essentials of Section-Honey Production

BY LEO E. GATELEY.

In view of the phenomenal and unprecedented wave of universal popularity with which for the past several years extracted-honey production has swept irresistibly over the field of American apiculture, flooding the markets with a deluge of liquid honey, the question of over-production in its relation to the section variety becomes

more and more inconsequential and remote. At present, and perhaps for far into the future, the recently rediscovered article introduced under the appellation of "bulk honey" will, no doubt, further diminish the available supply of comb honey. In connection with all of which there arises a new factor in profitable comb-honey production, alive with tremendous possibilities and vast significance.

In the production of section honey a large increase of colonies is generally associated with a diminution of surplus in direct proportion to the degree to which division of the working force has extended, in view of which, if satisfactory results are to be anticipated, the natural tendency of the bees to swarm must of necessity be curbed and discouraged to the utmost.

As spring advances and colonies become populous, additional room is with sectional hives given by inserting an extra division between the two parts of the brood-chamber. With the hives sufficiently shaded and ventilated, the addition of this third section, through relieving the crowded and congested condition of the brood-nest, checks and prevents swarming until the supering season. At that time radical and stringent measures are taken to eradicate the reproductive instinct. This is gradually accomplished through certain manipulations of the brood-sections, calculated to rid the hive of all brood, and leave eventually the colony upon new combs and foundation.

When giving supers to such colonies, they are slipped beneath the upper brood-sections, which are by this time usually about half full of new honey. When after a few days the foundation in the boxes has been sufficiently drawn out to receive this honey, the upper section is shifted to the bottom of the hive. The honey it contains will consequently be rushed precipitously into the sections, affording unusual and ideal conditions for extraordinary super work, especially where separators are used.

The shallow sections of the divisible hive are also used in connection with full-depth frames that we have on hand. These shallow chambers should be of inestimable value in any well regulated comb-honey yard, especially if the regular hives be of 8-frame capacity. They can be used to advantage in various ways above the brood-chambers early in the season to discourage swarming and to hold odds and ends of honey previous to the main flow, and particularly to keep it out of the brood-nest. The addition of such shallow chambers affords a gradual enlargement of the hive that seldom affects appreciably the colony temperatures. The addition of full-depth bodies not only provides more room than the bees can warm and utilize readily, but lowers perceptibly the brood temperatures, occasionally giving weak colonies a grievous and unwarrantable setback.

As our section frames and brood frames are of precisely the same outside dimensions, we frequently, when short of baits, use a new brood-comb in the center of the first supers given, and find they work to perfection. Some of these are made with perpendicular crosspieces to correspond with the

edges of sections coming in contact. Occasionally we have used for this purpose combs containing a small patch of unsealed brood with no bad results, though in theory such procedure would invariably lead to the undesirable storing of considerable pollen in adjoining sections.

To produce section honey most profitably, it is primarily and essentially important to secure at all times a fancy article. The cost of production for a cheap and inferior grade is no less than for the more marketable and correspondingly higher-priced product. Although by dint of relentless scraping and much unprofitable labor it is possible to remove from them most of the propolis and stain, the only logical and satisfactory way of insuring good appearance is to have sections enclosed in wide frames. In our surplus arrangements these 4-piece section-holders rest simply on flat tins in the usual fashion, and are keyed up with follower and hive-springs. No separators are used or deemed desirable.

Sebastian Co., Ark.

## Some Very Knotty Problems

BY G. M. DOOLITTLE.

With most of the puzzles coming up in bee-keeping I just take them to the bees for an answer; but here are some that have lately come up which the bees do not seem to answer readily, or do not answer to an extent sufficient for me to understand. During several trials with a self-registering thermometer, I found that the temperature necessary for brood-rearing was from 90 to 98 degrees. In other words, in some 5 or 6 different experiments with full colonies and weaklings, during times of heat as well as during frosty nights, I could not find a single instance where a temperature of less than 90 was registered, nor one of more than 98 degrees F. So I set it down that the right temperature for brood-rearing was between and including the two.

All went along smoothly in this matter, as far as my mind was concerned, till one spring I had a colony that became so reduced in bees that there were scarcely more than 200 in it. On opening the hive I found that these few bees were keeping a quantity of brood going to a number fully equal to that of their own, but all of this brood was on the "inside" of two combs. In other words, this little handful of bees were not sufficient to cover one comb, the best they could do being to cluster between two combs, and have brood in the side of each of these next to themselves. Thus the eggs and larvæ, which need the most heat, were in the bottom of the cells or in the center of the combs, on the opposite sides of which was no warmth, with the base of the cell-partition not thicker than a sheet of writing paper.

Soon after I discovered this (to me) strange state of affairs (for up to this time, except with warm weather and very strong colonies, I had always supposed, from all my observations, that if there was any brood in any comb, that brood was of nearly equal amount in the cells on both sides of the comb),



there came a night so cold that the mercury went down to only 35 degrees above zero, so that a temperature of but 40 appeared between the two combs right opposite the brood in the little cluster. I expected that the brood, especially the one and two days old larvæ, would all be dead, but, to my surprise, when it came warm enough so I could look the next day, all the brood was as prosperous between those two combs as was the case with large colonies. I said to the 200 bees, "You little rascals, tell me how you did it?" But neither the bees nor the queen could give me a satisfactory reply. So I am still puzzling myself over this matter. Have any of the readers of the American Bee Journal a satisfactory answer?

And right here comes another item: Not long ago, in conversation with a bee-keeper, he said "bees seem to possess the power to retard the development of both eggs and larvæ, as also to hasten this process." I felt like saying, "Which may be true or it may not be true."

That the development of young bees is greatly retarded at times, and accelerated at others, no close observer will deny; but the question in doubt is whether the bees have the power of thus hastening or retarding the development, or is it the condition or state of things over which they have no control? I believe that the egg is changed into a larva when the egg is "ripe," only as it is touched by the pabulum from the nurse-bees, and thus far consider that the bees have perfect control over the hatching of the eggs; but further than this, I think that the time of year, temperature, etc., have more to do with the matter than the bees. A term of extreme heat for 10 days to 2 weeks will so hasten development that I have known perfect young bees to emerge in about 19 days, while very cool or cold weather so retards this development that several cases of worker-bees being in the cell for 23 and 24 days have come under my notice. But to be fair, I must state that in all cases of such development it has come in the fall or the year of after Sept. 1st, at which time the bees pass into a less active mood than is the case during May, June, July and August.

How my attention came to be called to this matter was through the time of the queen emerging from queen-cells placed in a queen-nursery, the same being put in place of a frame in an upper story over a strong colony. Such cells would not hatch regularly after Sept. 1st, the time varying from the usual 16 days up to 24, and in one or two instances still longer or not at all. On looking for the trouble, I found by observation that the brood in the combs on either side of this nursery was as tardy of development as were the queens. From this I came to the conclusion that there were times when through the sluggishness of the bees they really did have something to do with the matter; but in all times of activity in the hive I doubt very much about their being able of their own will-power to change matters very much along this line.

I now come to the last puzzle which is, how the bees are able to keep the

inside of the hive as cool as 98 degrees in time of extreme heat; for, as I said near the commencement, with experiments conducted with a self-registering thermometer, and that on some of the hottest days did I ever know of a temperature greater than 98 degrees F. inside of the brood-nest. How the bees can keep down the temperature of the hive is more than I can see. I am told it is done by ventilation through a row of bees standing at the inside of the entrance, and another row on the outside, when, with the fanning of their wings a current of air is driven even to the remotest part of the hive, thus keeping the inside of the hive at the right temperature for the prosperity of the brood. But mind you, in one of my experiments with the thermometer, the temperature in the shade was only 2 degrees lower than that registered in the brood-nest, while this hive, inside of which the thermometer was placed, stood right in the "blazing sun," which gave a temperature of 127 degrees by another thermometer placed on the hive. Then that very same day I had proven that animal life inside a hive with no bees could not exist on account of the heat, as (for the time being) I had thoughtlessly placed a sitting hen, which I wished to break of that trouble, inside such a hive which was in the sun. Much to my astonishment, when I went after the hen an hour or so later, I found her dead and nearly roasted.

Can the bees keep down such a heat by ventilation, when the air outside is apparently as warm as it is inside? May they not have some other means of doing it? I have been told that the bees do this by the evaporation of the nectar brought in from the fields, as the converting of nectar into honey causes a vapor, which carries off the heat very rapidly. But this idea failed to hold good in this case, as the time was between basswood and buckwheat, when nectar was so scarce that I was in trouble from the bees robbing.

Who of the readers of the American Bee Journal are enough interested to help in the solving of these matters?

Borodino, N. Y.

## An Experiment With Hornets

BY G. C. GREINER.

From observation it would seem that hornets, generally called "yellow jackets," have their ups and downs in wintering, the same as bees. At least they are more numerous in some seasons than they are in others, but whether this is caused by the difference in wintering, or some other cause, I can not say. Last summer they were uncommonly numerous during the honey season. Wherever a little honey was left exposed they would appear in regular swarms to take possession, and even when hives were being opened they could be seen circling around among the bees trying to find an entrance.

One morning, while walking through the yard, I noticed at the entrance of one of the hives quite a commotion, caused mainly by these yellow fellows. They were going in and out at one end of the entrance in regular strings, while

at the same time bees were guarding the other part of the opening. My curiosity being aroused, I opened the hive very carefully and found the outside comb on the side next to the hive-wall completely covered with hornets.

To investigate the case a little closer, I began to remove this comb, but before I had it drawn half way out of the hive, the whole set of marauders was in the air. They seemed to be frightened at my interference and took wing at the first stir of the comb. While the inside of the comb was in normal condition, covered with bees like any comb drawn from the center of an average colony, the outside, where these hornets had been feasting, looked very much like a comb that had been robbed by bees.

To explain the case, which otherwise might seem a little unusual, I will state that this colony was not in normal condition. To make room for a number of laying queens, I had made some divisions, placing one-half of a colony in an empty hive and giving the new queen to the queenless half. To help fill out the hives, I had also given each half one comb of honey, which was placed on the outside of the other combs next to the hive-wall. The hive in question had been moved to a new stand and many of the flying bees had returned to the old home. This left the inserted comb of honey somewhat unprotected, and our friends, the snooping hornets, had found the treasure.

Now comes the amusing part of the story: Examining the other half of the divided colony, I found their comb of honey well covered with bees, and to try the experiment, although I had no idea what the outcome would be, I quietly exchanged these two combs. As long as I was moving about the hornets kept at proper distance, but the air was full of them, and as soon as I had restored everything to its former condition and had retreated to a safe place of observation, the fun began in earnest.

In less than a minute the yellow crowd began to circle closer and closer around the entrance until some of the most daring made the dash for the supposed feast. But their surprise was complete; the first one had hardly entered when it came tumbling out with 3 or 4 bees dangling from its extremities. The second one received the same treatment, and the next fared no better, and in less time than it takes to tell it, half a dozen fierce wrestling matches were in progress on the alighting-board.

Being very busy at that time, I did not remain until the end of the contest, but I staid there long enough to satisfy myself that no more hornets were admitted into that hive. Later, when passing the place, I found everything quiet and in normal condition.

In connection with the foregoing incident a few more interesting points might be mentioned.

First, no hornets were killed or in any noticeable way disabled by the bees. After tumbling around for a few minutes, they always freed themselves from the grasp of the bees and disappeared in the air, none the worse, seemingly, for the combat.

Second, no particular harm is done



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to a normal colony of bees by the invasion of hornets. Even moderately strong colonies seem to be sufficiently able to resist all attacks of these pests.

Third, hornets have no faculties to gather nectar from flowers, as have honey-bees. During the honey-flow not a single bee would notice exposed honey while the hornets gathered in large number to help themselves to the free lunch. They were either physically unable or else they have not the disposition to put themselves to the trouble of gathering Nature's product themselves.

La Salle, N. Y.

## 2.—Pointers on Selling Honey

BY WESLEY FOSTER.

In the September number I told about the value and necessity of making a favorable impression. This is nothing more nor less than getting the confidence of the prospective customer—at least enough of it so that by an honest, straightforward interview one can interest him in the goods and then lead him forward to a desire for the goods, and hold him in this state of desire till he resolves to buy, and gives you the order.

There are as many different kinds of people in the world as there are people, and one way of approach might be effective, with one and repel another, so it is best in starting out to sell honey, or any other article, to cultivate a uniformly gracious manner, quiet dress, and unobtrusive approach. There are those who are won by bluster, and others by "loud" clothes, but these also may be handled by the calm, self-confident man who at all times is at his best.

A point that has helped in meeting people and adjusting myself to their temperament is to notice the characteristics of each, whether quick in thought and grasp of ideas, or slow and deliberate. One will unconsciously speak more rapidly and concisely to a man who displays a nervous energy and shows that he wishes to get at some other work. With the more deliberate and the ones who wish to settle some weighty question of state with you before proceeding to business, you will do well to catch their desire for a visit, and forget that you have honey to sell. If we can but develop every faculty of perception and discrimination we will be able to judge correctly of the proper and most effective manner of greeting people. The unconscious manner we assume with different people is generally the correct one, but this can be greatly improved by close observation and study.

When I go into a man's store and meeting him he says that he has no time to look at my honey, he may be making the statement from one of a number of motives. The skill of the salesman is here taxed to determine whether he is telling the truth or does not have confidence in the salesman, or merely does not want to buy any goods. The man who believes everything that store-keepers tell him will not make the success in selling that the man will who knows human nature better, and realizes that men are very

prone to give the wrong reason. They will say that they have a good stock on hand when they have none, and really mean that their profits are not satisfactory, and so have to limit their buying. I have been told by the prospective customer that he was not in the market for honey, when what he wanted was a treat at the saloon across the street. The great point in meeting objections is to have a chance to give a good, clear talk on the goods before the grocer has a chance to get an objection in at all. Objections then can be more effectively met since the mutual interchange of ideas has already taken place, and any objections offered are open to clear and positive treatment by the salesman.

One need not have any lower opinion of the men he deals with, to recognize that they do not always say exactly what they mean. One quite often finds men who talk as if they were doing a great business when the evidences about the store do not warrant it. One should not make any statements that will cross the ideas of the customer, but at the same time if he is canvassed according to the amount of business your judgment says is about right, the chances of getting an order will be much better than if you take the man's word for it, and try to sell him a bill according to the size of business he represents that he does.

The study of men and their ways of thinking is worth a college education if entered upon and followed up in the right way. The true salesman makes his trips but a round of pleasant calls among friends who are glad to see him, and from whom they can get the newest ideas in business and life.

The silent objections—the ones that the customer does not mention—are the very ones that are most in need of being met. These spring from a lack of confidence in the salesman, or a natural reluctance in giving the real conditions of the business. Only close observation and some intuitive sight will aid one to know these silent objections, and to answer them in a gracious manner. If the salesman does hit the right objections and answer them before spoken, the chances of making a sale are very much greater than where they are allowed to go unanswered, and in most cases spoil the sale unless some other points in the talk so overshadow the importance of these silent objections as to destroy their influence. Salesmanship is the manner of getting the customer to think of the goods as the salesman himself thinks of them, so it is very essential for the salesman to have the utmost faith in his line and be enthusiastic about it. Whatever we are intensely interested in we can enthuse others about, for enthusiasm is catching. Enthusiasm will, by its very force, bear down many an objection that otherwise might spoil a sale.

It must, however, be tempered by wisdom, for there are conditions to be recognized, such as the fact that many people do not care for honey, and a grocer cannot be expected to do a lot of educational work among his customers, for it is just as profitable for him to sell corn syrup as honey, and the chances are that it is more so. In selling honey one should build a *quality*

*talk*. Honey is to corn syrups the same as wool is to shoddy in clothing, and the most of this point should be made. It is Nature's only sweet, just as she makes it, and has been the sweet of man for ages.

Every grocer and dealer likes to talk business conditions with every salesman, and most of them are in the habit of pumping salesmen for all they are worth in order to get the most reliable news about trade and prices. This makes the work easy for the salesman, because if he can supply valuable and interesting points on these subjects that are vital to the store-keeper, he will have a much better chance of making a sale. The alert salesman will easily gather the knowledge as he goes along, and so will always have the valuable points at his tongue's end.

Perhaps the reason so many who sell honey do not have a continuous success is that they get into a rut and forget to develop and perfect the manner and material of their selling talk. I never favored a set speech, because it is too artificial, but one should always be sure to have the strongest points well presented in every interview, and then to bring in as many points as will make the talk spontaneous and original, with no stereotyped phrases.

For we bee-keepers nothing is more telling than a talk on bees, honey and honey-flora. There is scarcely a man who has not at some time lived on a farm, and bees are always a source of interest to those who have had anything at all to do with them. Many who know nothing about bees are anxious to know something about them, and confidence can be developed quicker by this method than in any other way. A straight-forward bee-talk will dispel the fear of adulteration quicker than any method I know that a bee-keeper can use.

In all these points on interesting the prospective customer in our honey it really comes down to inspiring confidence, and convincing the grocer that he can make a good profit by handling our goods. A positive, affirmative attitude, and an alertness in using points that come up at the spur of the moment, will keep one out of the ruts that so many would-be salesmen fall into.

Salesmanship is a science of making friends, and the personal development one receives makes one feel that it is time well spent.

Boulder, Colo.

## An Incubator Bee-Hive

BY LEON C. WHEELER.

That is what my wife calls it; I call it my "baby hive." It's the hive where I hatch out my baby queens, so perhaps either name would be appropriate. Many would consider it anything but a baby, however, were they to see it.

It was built, originally, as an experiment, carrying out the idea of many bees together storing more honey in proportion than a smaller number. I am not sure yet that it couldn't be made to pay in that capacity, if properly arranged for wintering. The hive is built as follows:

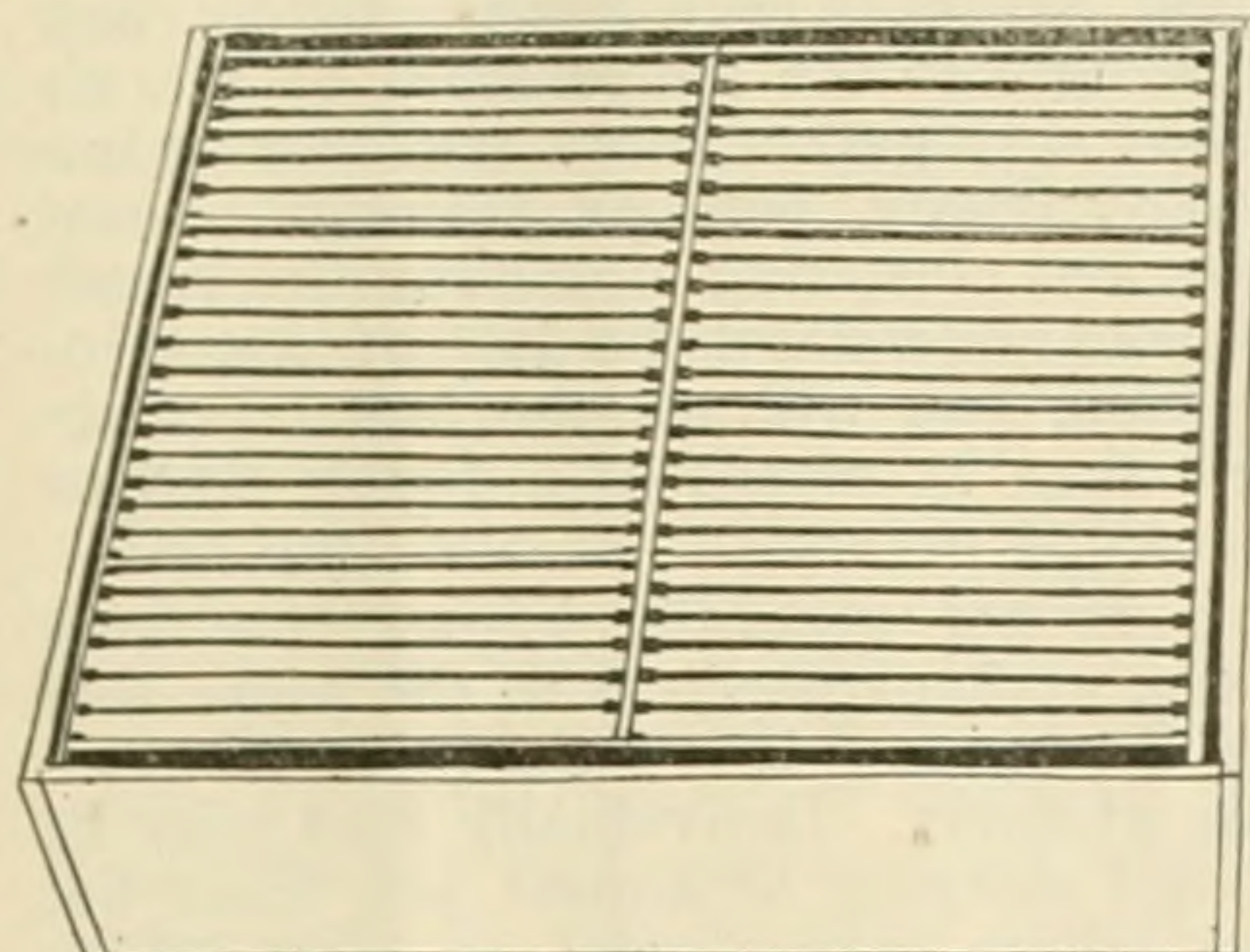
There are two rows of standard frames with a 2-inch partition between,



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the frames hanging on rabbets on this partition and corresponding ones on the outside walls of the hive.

Each side contains 20 six-frames or 50 two-frames, in all, or, as I use it, 24 frames on a side, with 3 division-boards,



HIVE-BODY OR BROOD-CHAMBER.

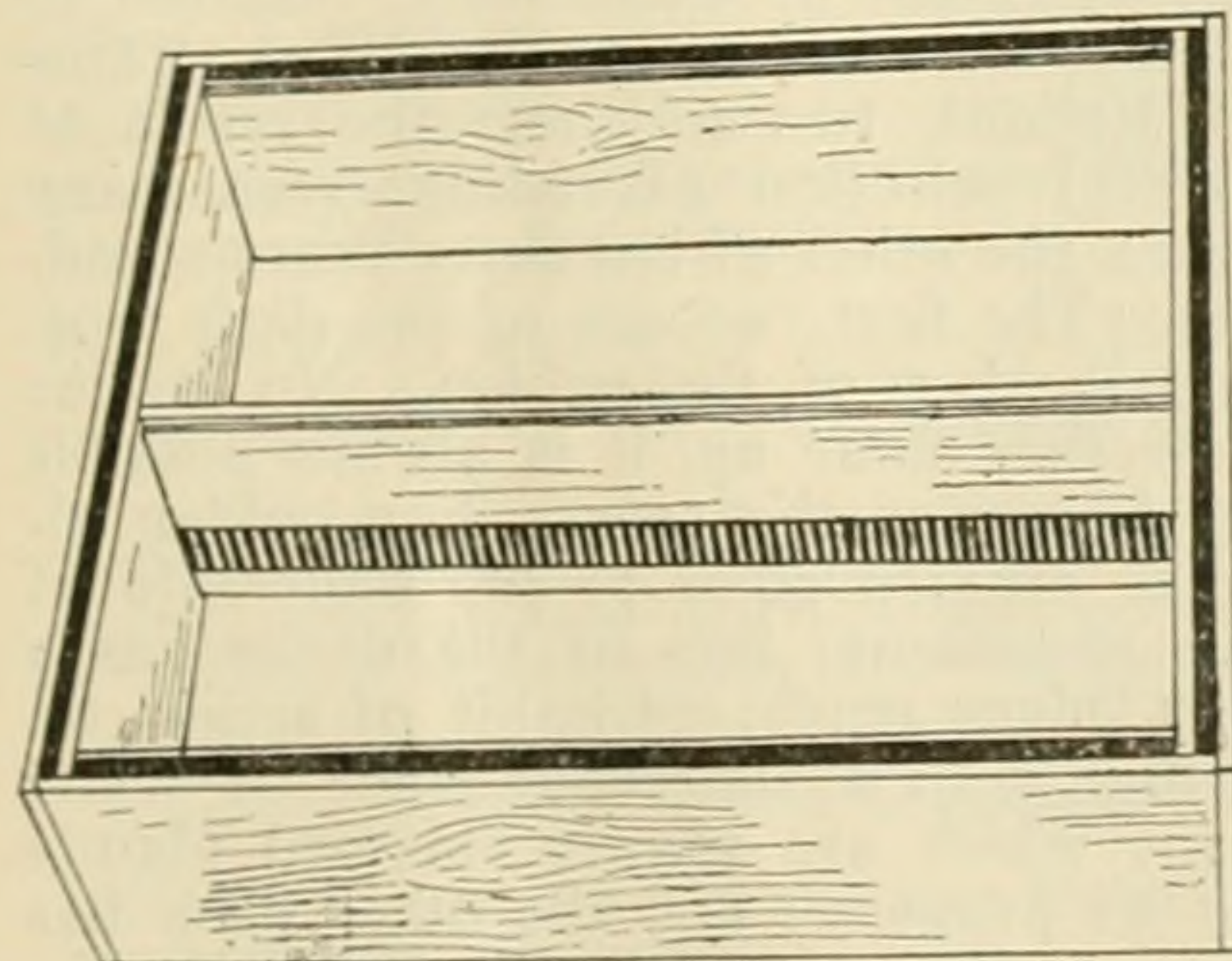
making 4 divisions in each side of the hive, or 8 in all. This allows for 8 queens all together.

The partition between the 2 rows of frames has a 2-inch space near the bottom extending the full length of the hive, and left open except for wire-cloth which keeps the bees apart, but allows a common scent throughout the hive. All division-boards are also about half wire-cloth.

There are 4 entrances on each side, one for each queen and her progeny, and 4 extra entrances at the ends, two at each end, for use until queens are mated.

When the hive is filled with nuclei, the entrances are arranged as follows: Two center entrances on each side left open, with a board fastened up between to help the queen to get back into the right place on her return from mating. The outside 2 entrances on both sides are closed, and those in the ends of the hive opened in their stead. This arrangement leaves very little danger of queens getting into the wrong place, and I have never had any trouble from that source. As soon as all queens are mated all entrances are opened on the sides of the hive and the end ones closed.

The first year I started 1 and 2 frame nuclei in it, and although they were



EMPTY SUPER HOLDING 52 FULL-DEPTH FRAMES.

started late they were all built up until each had their 6 frames filled solid with brood and honey, at the close of the white honey-flow.

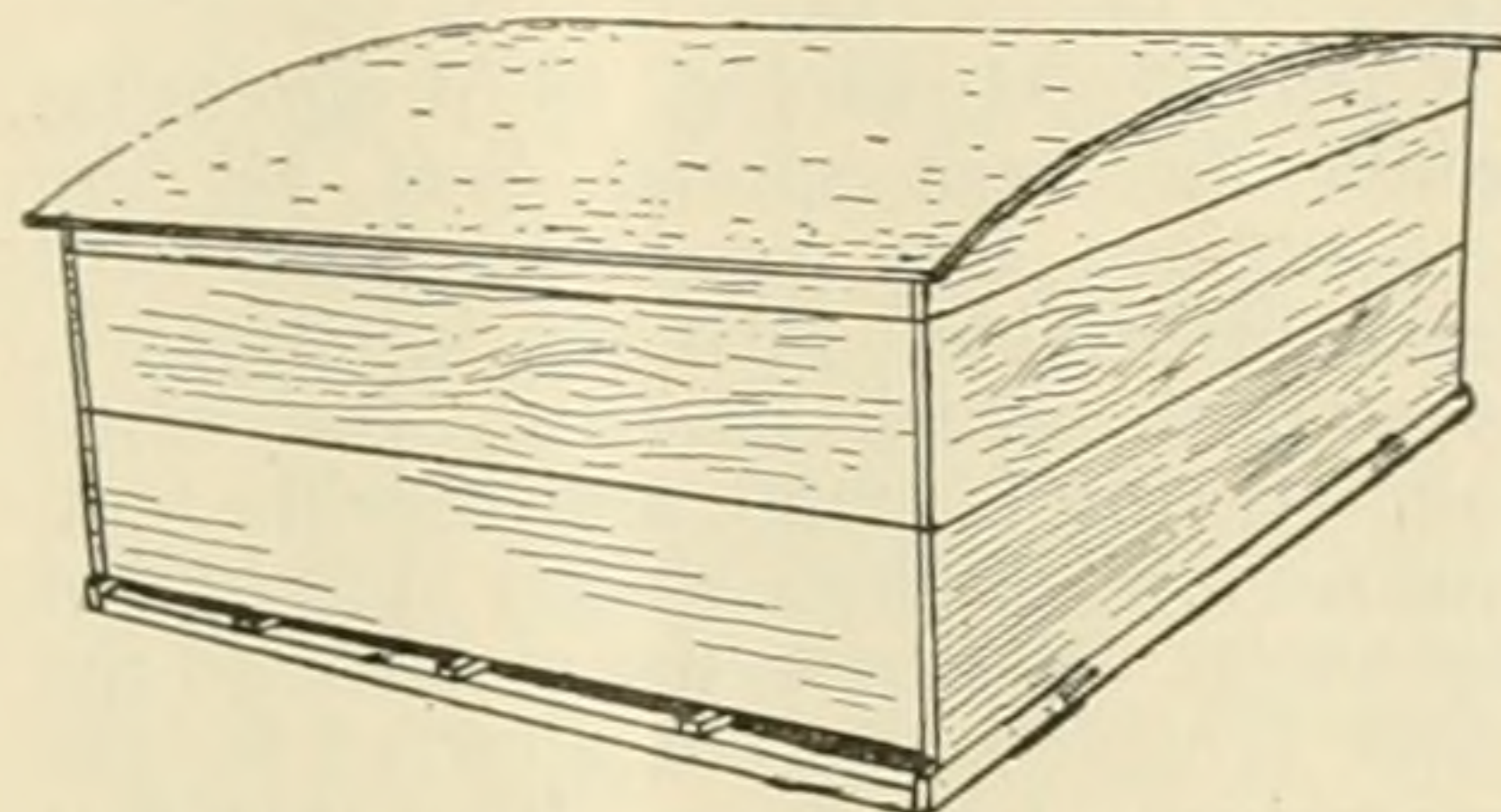
I had a huge super, or upper story built, containing 52 standard Hoffman

frames, which I placed on top, and then stood back and watched results. It was a very light fall flow that year, and from 27 colonies, aside from this one, I secured only about 150 pounds of extracted honey. The mammoth colony alone stored 120 pounds of fall honey, or within 30 pounds of as much as all the rest combined.

Late fall, however, showed the weak point in the hive. There is a large cover that goes over all, and then each partition has its individual cover. These little covers would warp, or perhaps failed to fit perfectly in the first place, and when fall came those queens got to visiting. The consequence was that that winter found them with but 2 queens in the hive—one in each opposite corner,

I forgot to mention that the hive was made double-walled all through, with a one-inch space between walls.

I placed the empty super on top, filled with chaff, and left them. Both colonies wintered through until spring, but were evidently weakened badly, for they dwindled rapidly in the spring, and by April both were dead. Since then I have used the hive simply to store combs containing choice cells, and find it a fine thing for this purpose. Throughout the summer, when I find a choice cell that I wish to save, I place it in one of these compart-



HIVE WITH SUPER AND COVER COMPLETE.

ments, and soon have the hive filled with choice queens. Then, as I find inferior queens through the yard, I snap their heads off and replace with this new stock. Meantime, they are building up finely in the big hive, and when fall comes I have enough to make from 2 to 4 rousing colonies to go into the winter.

Barryton, Mich.

## Great Results from Shaking?

BY BARON M. LIEAWFUL.

It has been many months since I have had occasion to write to the "Old Reliable"—not since I was moved to let the Public know of the wonderful method practiced by Conscientious D. But keeping bees under that plan and rearing queens by running extra lives into them through their umbilical cords, have both become chestnutty, and so I hailed with delight the newly-found shaking system. There is something merry in the very name; it rather tends to set up a rhythmic motion of one's diaphragm just to listen to that name.

I have now practiced this system two years. Not only has it proved an undreamed-of success in the way of honey crops, but has opened up new

fields of thought. One of those fields is centered around my dear old maternal grandfather. It is now plain to me why the dear old man was so successful with his bees. Farmers from miles around used to come to him to learn his methods of getting phenomenal yields of honey. They never learned—rather missed the very reason by ascribing wonder to the fact that he could get such results, suffering as he did with the *shaking palsy*.


The only disadvantage in the shaking-system is the labor element, an item not to be overlooked when one is getting along in years. To overcome this disadvantage I set all my inventive genius at work. At first I arranged my hives in rows, the fronts of the hives on pivots and the backs on eccentric cams. The cams were rotated by a small water-motor. It was found that one-half hour of 3 rotations to the second at sunrise, and 15 minutes of 2 rotations to the second at noon, brought out the best results. All colonies thus treated averaged 767 pounds for the season, against the 37 average of those not treated. This paid a splendid income from the money invested, especially as the water cost only 12 cents per 1000 gallons, and 1000 gallons very nearly did the work of one day.

I was envious, however, of my cousin Ananias who lived near the Cherryville trolley-line. Ananias's apiary is on a lot close to the trolley. The land is slightly boggy, though not wet at the surface. Every passing trolley causes the ground to shake for a hundred yards, especially when a car is well-loaded and has a flat wheel. All the cars on this line are flat-wheeled, by the way, because it is a one-horse affair which buys second-hand cars. Four cars per day pass, six on Sundays. Ananias says that his bees averaged nearly half again as great a gain on Sundays as they did on week-days. Along towards August Ananias heard that the company was going to buy new cars, because they had done so well that season. Well, Ananias, who is a stock-holder, got a few of the officials up to his house, and after talking persuaded them to pay a dividend instead, seeing no dividend had ever been paid. How long his good luck will continue, I don't know.

I had a grand idea come last spring, though, when I read about that chap who hitches a vacuum pump to the middle of his combs. Why not go him one better and extract the honey automatically? Previous to this time I had not shaken during the busy day-hours except at a slower speed for a few minutes after dinner. The newly gathered nectar, after an hour or so of work, caused trouble by shaking from the combs. Then it occurred to me that I might make use of this very difficulty. It was, you will perceive, a blessing in disguise, just as was the disease of my sainted ancestor.

Little tin troughs were prepared and attached to the frames and carried to a common trough which led down the slope to my honey-tank. I now arranged an automatic device which would bring on a 4-rotation-to-the-second speed every 20 minutes, to be kept up 6 minutes. In this way the accumulated nectar was shaken from the





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frames and trickled merrily down to the tank. The frequent stimulus to the bees, and the ever-ready combs caused an immediate break in my records. The daily run jumped from 35 pounds per colony to 53, a most interesting reversal of the figures.

Do not for a moment think that I failed to recognize that this nectar was insufficiently cured. After the machinery was in good working order my only work all summer was the running of my automatic honey-curer, and my automatic 5-gallon can-filler. My work consisted in driving the loads of honey to the depot and making out shipping receipts, not to mention a little other clerical work.

I hesitate to make public these shaky results, for I fear that so many friends of the American Bee Journal will immediately start similar apiarian plants and cause a glut in the honey market. Since I have succeeded in getting this machinery to run without a hitch, I find that I can produce honey at 3 mills per pound, and it is on the strength of this fact alone that I venture to publish this story of my astonishing success.

There is still one problem which I am unable to fathom. If shaking brings such incredible results, why shouldn't the shaking palsy which afflicts bees also prove beneficial? I am planning, another season, to experiment along this line, and trust, through the discovery of the proper serum, to get something with which we can inoculate our queens, and thereby bring about a perfectly natural shake.

Ananiasville, New England.

## Making Progress in Bee-culture

*Read before the Connecticut Bee-Keepers' Association*

BY ARTHUR C. MILLER.

The successful progress with bees has been largely a matter of management or manipulation. The oldest records indicate a large dependence on sundry operations. All manners and sorts of hives and appliances, designed to facilitate different manipulations, have been offered, urged and forgotten, only to be followed by more. With the advent of the bees from Italy about 1860, attention was called to the fact that bees varied in temperament and abilities, but beyond the continued importation of queens from Italy, and later the introduction of other races, very little has been done in the way of developing the bee. Here and there some bee-keeper has made some cross-mating, or selected for color, and now and then some more progressive or inquisitive man has made long-continued effort to breed an improved strain. But scarcely without exception all have leaned heavily on pet theories of manipulation to secure results in honey.

As illustrative, consider the frequent enlarging and contracting of entrances, transposing brood, stimulative feeding, etc., for getting colonies ready for the harvest. And then there are the sundry expedients for persuading the bees to enter the supers, to keep them at work and prevent them from swarming.

All this is but the following in the

footsteps of the ancient bee-keepers, due largely to man's natural tendencies, much to the exploitation of devices and implements by the supply manufacturers, and perhaps quite as much to the supposed difficulty of breeding bees up to any high standard.

Occasionally some one has urged the keeping of more bees, and doing less fussing with them, and such advice is good, but it does not go far enough.

Perhaps I can best show you how to lessen manipulation, increase your crops, make certain the business, and put yourselves in the line of progress by relating a few of the habits of the bees, the factors governing their well-being, and relate to you some of the results of my efforts to produce a "thoroughbred" bee.

Like all the rest of animal life the bee seeks physical comfort. Food, warmth, dryness, are the essentials of its well-being. In the search for its food the sense of smell plays the chief part, and in very much of its activity the bee "follows its nose." In any shelter which will protect them from moisture, the bees, with sufficient food, will keep themselves warm. Warmth is the second great essential in its life, but, as you will later see, man's efforts to help the bee to keep warm often do more harm than good. To keep dry, the bee endeavors to cement up every crack and crevice. It is to keep in the heat, that the bee uses the propolis.

When brood-rearing is progressing rapidly the bees spread over all the comb-surface they can cover and still keep comfortable. It is not intelligence, but warmth, which governs. But when brood-rearing is small, and outside temperature low, the bees cluster closely and keep warm. But note, the air around the cluster is practically not affected by the **temperature of the bees.** Bear that fact in mind when you pack your bees in a thick-walled, chaff-packed hive. Your bees would be better off in winter, wrapped in a sheet of waterproof paper.

In the winter the thick walls keep them cold, not warm; and often prevent the escape of moisture, particularly with a small entrance. In the spring and fall, and in cool summer nights, common in some places, the thick hives are a help, but simpler and cheaper devices answer as well, or better.

To keep dry, the bee at all times wants plenty of air. In the winter, help it by giving all the entrance possible. I would rather have no floor on my hives than to have the entrances reduced to two inches by one-half inch, as is a common practice. In the winter the bee is dependent upon the sun and natural air movements for keeping dry, but in the warmer seasons it controls the air-currents to such an extent of giving "more than enough" in winter and summer, but in spring and fall reducing it to "not enough." The reasons for a reduction at such times are that, in the spring, a relatively small force of bees is trying to care for a large surface of brood, and incidentally much heat is escaping from them. In the fall, decreasing force is trying to keep warm, and ripen and seal its stores, which are much spread out, hence heat escapes.

In the height of the harvest a large

force is generating much heat, is throwing off much moisture, and must have a large opening for ventilation, therefore, the wide open entrance, say 18 inches by one inch.

But properly to conduct their work, bees must be kept warm, and as the night advances they lessen or stop their fanning. If the temperature of the air drops they gather more and more compactly, finally, perhaps, leaving the supers and clustering closely on the brood. If you understand the law of wax-production, you will see the loss. Protection then by means of a double wall or wrapping pays.

It is not generally known that bees sleep, perhaps not just in the sense that we do, but still it is a condition of absolute stillness. Individually bees may be found sleeping at almost any time, but the whole colony goes to sleep about midnight, and sleeps till about 3 a.m. This is in June. Let them sleep in the supers. It will pay.

With a proper condition of bees of a suitable strain, the only thing which can be called "manipulation" in the foregoing is control of the entrance done with a plain stick of wood, used once in the fall.

I have cut the manipulation to a minimum, but I have based it on a proper hive and on "proper condition of bees." I know that you have been soundly instructed in hives by your able president, Mr. Latham, so I will at once take up the subject of the bees.

The great consideration is to have all colonies uniform at all times; but how many men reach such ideal conditions? They can be reached, and easily, too. The chief essentials are to have all colonies with queens of the same age and same breeding. The first half is easy; the second is not, unless you will train yourselves to study the bee so carefully that you can tell beyond a reasonable doubt just how your queens have mated. Now, I do not mean, to see if the workers have three bands, but that all queens are mated to drones of one particular queen. That is possible and not very difficult if you care to apply yourself. It means that you must learn to see many things besides stripes. You must recognize color tints, hair color and density, shape, extent of excitability, reaction to smoke, etc. I have in mind three strains of Italians, two of them the result of careful selection extending over many years, the other of but three years standing. The first two are of the dark type, and the last of the golden. No matter how they mate up, it is always possible to determine the cross. The golden always gives a color to the underside of the abdomens; one of the darks has a **pure** habit of action, together with a superabundance of white hair, which are always stamped plainly on its progeny; and the other dark has a pink tint which seems indelible.

But you need not go so far, though that will pay, and the thorough-breeder must do that, and more. Select as a queen-mother one whose workers possess the traits you want, and use her as long as she lives. Take the one of her queen daughters which produces the largest and most uniformly marked



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drones as a drone-mother, and force her to drone-production, and for such purpose combs not over half-drone are better than those all drone-cells.

By taking away combs of drone-brood about as soon as all eggs are hatched, and giving them to queenless colonies, or placing them above an excluder over a strong colony, and giving an upper entrance, it is easy to secure ten to twenty thousand drones.

By suppressing all other drones in the apiary, desired matings are about always certain.

The next step is to rear all queens at as near the same time as possible, and rear twice as many as you need. Keep these in nuclei until well tested, say 6 weeks from the time they begin to lay. Select the best and requeen every colony, saving only the two breeding queens. I find the best time to requeen is from the middle to last of August.

If you have worked with a good strain of bees, and have selected intelligently, you will find that your colonies will be marvelously uniform, strong for fall and winter, big and ready for the earliest spring harvest, not given to swarming, and yielding returns away above any average you have been accustomed to.

And they will do it all without manipulation. The brood-nest is not touched except to remove the old queens, the new ones being run in at the same time, and beginning their duties within 5 minutes. Putting on and removing supers are not classed as manipulations, and the slight attention to the entrance, twice in spring—once to contract and once to enlarge—and the same in the fall, is hardly worthy to be so called.

The future progress of apiculture lies in developing the bee by careful breeding, and the possibilities which lie therein, I believe to be beyond anything we have dreamed of. Already I have and you can do as much, or more, if you will.

Providence, R. I.

## Miscellaneous News.

(Continued from page 315.)

### Bee-Culture and the Government

The following shows what has been done in the interest of bee-keeping by the Department of Agriculture at Washington—it is a fine exhibit:

U. S. DEPARTMENT OF AGRICULTURE.  
BUREAU OF ENTOMOLOGY.  
BEE-CULTURE. Washington, D. C.

The following publications relating to bee-culture, prepared in the Bureau of Entomology, are for free distribution, and may be obtained by addressing the Secretary of Agriculture: *Farmers' Bulletin No. 397, "Bees."* By E. F. Phillips, Ph. D. 1910. 44 pp.

A general account of the management of bees.

[*Farmers' Bulletin No. 59, "Bee-Keeping,"* has been discontinued.]

*Circular No. 79, "The Brood Diseases of Bees."* By E. F. Phillips, Ph. D. 1906. 5 pp.

This publication gives briefly the symptoms of the various brood diseases, with directions for treatment.

*Circular No. 94, "The Cause of American Foul Brood."* By G. F. White, Ph. D. 1907. 4 pp.

This publication contains a brief account of the investigations which demonstrated for the first time the cause of one of the brood diseases of bees, American foul brood.

The following publications are not for free distribution, but may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at the prices indicated. All remittances should be made payable to him, and not to the Department of Agriculture, and should be sent by postal money order or by New York exchange. If currency is sent it is at the sender's risk; such remittances, however, usually arrive safely. STAMPS, PERSONAL CHECKS, OR FOREIGN MONEY WILL NOT BE ACCEPTED IN ANY CASE.

#### BUREAU OF ENTOMOLOGY.

Bulletin No. 1, "The Honey Bee." By Frank Benton. 1899. 118 pp.

[This bulletin has been discontinued, owing to the fact that later investigations have shown the error of certain portions which, when the bulletin was prepared, were generally accepted as correct. The subjects treated are discussed in the various later publications of the Bureau.]

Bulletin No. 55, "The Rearing of Queen-Bees." By E. F. Phillips, Ph. D. 1905. 32 pp. 17 figs. Price 5c.

A general account of the methods used in queen-rearing. Several methods are given so that the bee-keeper may choose those best suited to his individual needs.

Bulletin No. 70, "Report of the Meeting of Inspectors of Apiaries, San Antonio, Tex., Nov. 12, 1906." 1907. 79 pp., 1 plate. Price 15c.

Contains an account of the history of bee-disease investigations, the relationship of bacteria to bee-diseases, and a discussion of treatment by various inspectors of apiaries and other practical bee-keepers who are familiar with diseases of bees.

Bulletin No. 75, Part I, "Production and Care of Extracted Honey." By E. F. Phillips, Ph. D. "Methods of Honey Testing for Bee-Keepers." By C. A. Browne, Ph. D. 1907. 18 pp. Price 5c.

The methods of producing extracted honey with special reference to the care of honey after it is taken from the bees so that its value may not be decreased by improper handling. The second portion of the publication gives some simple tests for adulteration.

Bulletin No. 75, Part II, "Wax-Moths and American Foul Brood." By E. F. Phillips, Ph. D. 1907. Pp. 19-22, 3 plates. Price 5c.

An account of the behavior of the two species of wax-moths on combs containing American foul brood, showing that moths do not clean up the disease-carrying scales.

Bulletin No. 75, Part III, "Bee-Diseases in Massachusetts." By Burton N. Gates. 1908. Pp. 23-32, map. Price 5c.

An account of the distribution of the brood diseases of bees in the State, with brief directions for controlling them.

Bulletin No. 75, Part IV, "The Relation of the Etiology (Cause) of Bee-Diseases to the Treatment." By G. F. White, Ph. D. 1908. Pp. 33-42. Price 5c.

The necessity for a knowledge of the cause of bee-diseases before rational treat-

ment is possible is pointed out. The present state of our knowledge of the causes of disease is summarized.

Bulletin No. 75, Part V, "A Brief Survey of Hawaiian Bee-Keeping." By E. F. Phillips, Ph. D. 1909. Pp. 43-58, 6 plates. Price 15c.

An account of the bee-keeping methods used in a tropical country and a comparison with mainland conditions. Some new manipulations are recommended.

Bulletin No. 75, Part VI, "The Status of Apiculture in the United States." By E. F. Phillips, Ph. D. 1909. Pp. 59-80. Price 5c.

A survey of present-day bee-keeping in the United States, with suggestions as to the work yet to be done before apiculture will have reached its fullest development.

Bulletin No. 75, Part VII, "Bee-Keeping in Massachusetts." By Burton N. Gates. 1909. Pp. 81-109. Price 5c.

An account of a detailed study of the apicultural conditions in Massachusetts. The object of this paper is to find out what are the actual conditions and needs of bee-keeping in New England.

Bulletin No. 75 (7 parts). A table of contents and index to the entire bulletin will be issued soon, after which the seven parts with contents and index will be published under one cover.

Technical Series, No. 14, "The Bacteria of the Apiary, with Special Reference to Bee-Diseases." By G. F. White, Ph. D. 1906. 50 pp. Price 10c.

A technical study of the bacteria found under normal conditions, with special attention to those found in diseased brood.

Technical Series No. 18, "The Anatomy of the Honey-Bee." By R. E. Snodgrass. 1909. 162 pp., 57 text figures. Price 20c.

An account of the structure of the bee, with technical terms omitted as far as possible. Practically all of the illustrations are new, and the various parts are interpreted according to the best usage in comparative anatomy of insects. A brief discussion of the physiology of the various organs is included.

#### BUREAU OF CHEMISTRY.

Bulletin No. 110, "Chemical Analysis and Composition of American Honeys." By C. A. Browne. Including "A Microscopical Study of Honey Pollen." By W. J. Young. 1908. 93 pp. Price 30c.

A very comprehensive study of the chemical composition of American honeys. This publication is technical in nature, and will perhaps be little used by practical bee-keepers, but it is an important contribution to apicultural literature. By means of this work the detection of honey adulteration is much aided.

Applications for the following publication may be addressed to the Secretary of Apiculture:

HAWAII AGRICULTURAL EXPERIMENT STATION, HONOLULU, HAWAII.

Bulletin No. 17, "Hawaiian Honeys." By D



FATHER BRUIN (reading).—"Another strike threatened. The Amalgamated Union of Honey and Wax Workers have declared for a 12-hour instead of an 8-hour day. Unless the flowers agree hereafter to remain open long enough for the Union to work 12 hours per day, the Amalgamated Union of Honey and Wax Workers have decided to strike. Consumers who haven't a good supply of honey on hand had better secure it at once, as the prospects of a new crop this season are very slight."—*St. Nicholas.*



# American Bee Journal

L. Van Dine and Alice R. Thompson. 1908. 21 pp., 1 plate.

A study of the source and composition of the honeys of Hawaii. The peculiar conditions found on these islands are dealt with.

The apicultural investigations of the Bureau of Entomology comprise several distinct lines of work, and the results are published when completed. Announcement of the new publications is generally made in the journals devoted to bee-keeping and new lists similar to this will be published from time to time.

The Bureau is pleased to give every aid possible to those interested in bee-keeping by answering questions which may arise. The earnest co-operation of the bee-keeping public is solicited. Respectfully,

L. O. HOWARD, Chief of Bureau.

Surely, the foregoing is an encouraging showing. We were surprised when we received the above, printed on a large postal card. Bee-keepers everywhere should avail themselves of any or all of the above list of very helpful publications.

## What Darkens Honey-Dew?

Honey-dew being a live topic this year, here is something instructive from D. M. Macdonald, which appears in the British Bee Journal:

Not that all honey-dew is so very bad, for there are at least two kinds of it, differing considerably in composition. One is a saccharine juice, which exudes under certain climatic conditions from the leaves of various trees, amongst them being oak, chestnut, lime, beech, ash, conifers, and fruit trees. Now, as is well known, there visits these "sweating" leaves an aphid which feeds greedily on this sweet substance. It, like the bee, has something in the nature of a honey sac, quite separate from its ordinary stomach, from which, when the sac gets overcharged, it regurgitates, or rejects, "aphidian honey" by means of two tubes used for no other purpose, fortunately for the bees and their keepers.

In itself this fluid, which is a secretion, not an excretion, would not be wholly unpalatable. It looks like a bright, sparkling, clear drop of liquid when held up against the light, and tastes by no means harsh. But, unfortunately, a soot fungus grows on the leaves, making them appear as if they had been coated with this substance. To the sorrow of the bee-keeper and to his serious loss, this gives a black, inky appearance to the saccharine matter when it is gathered and consigned to the cells, and when extracted it looks dark and muddy, sometimes resembling in color blacking or coal-tar. Much of it in the admixture thoroughly injures the sale of the honey, and even a little of it goes far to deteriorate the quality and flavor.

## Reduced Rates to Albany

We have received information from Vice-President W. D. Wright, that a fare and three-fifths on the certificate plan for the National convention at Albany has been secured within certain limits, and provided there are 100 persons present who have railroad certificates, and who have paid 75 cents or more for their fare to Albany.

Tickets at the regular full one-way first-class fare for the going journey may be secured from Oct. 8th to 11th inclusive. Be sure that when purchasing your going ticket you request a certificate. Do not make the mistake of asking for a receipt.

Certificates are not kept at all stations. If not obtainable at your home station, the agent will inform you at what station they can be obtained. In such places you can purchase a local ticket thence, and from there purchase a full ticket, and secure the certificate, to place of meeting. Immediately on ar-

rival at the meeting present your certificates for indorsement.

A special agent of the Trunk Line Association will be in attendance Oct. 13 from 9 a.m. to the close of the convention, to validate certificates. A fee of 25 cents will be charged at the meeting for each certificate validated. All certificates must be validated, and there must be not less than 100 persons having regularly issued certificates, obtained from ticket agents at the starting point showing payment of a regular full one-way, first-class fare of not less than 75 cents on going journey. Your validated certificate will be authority for three-fifths fare returning up to and including Oct. 17.

From stations from which it is possible to reach Albany by noon of Oct. 13th, tickets may also be sold for morning trains of that date. All who have to pay 75 cents or more for fare are requested to get a certificate one way, which will help to get the required number.

The reduction is from Trunk Line and Central Passenger Association Territory as follows:

### RAILROADS IN TRUNK LINE ASSOCIATION.

Baltimore & Ohio R. R. (Pittsburg, Bellaire, Wheeling, Parkersburg, Kenova and east thereof).  
Baltimore Steam Packet Co.  
Buffalo & Susquehanna Ry.  
Buffalo, Rochester & Pittsburg Ry.  
Central Railroad of New Jersey.  
Chesapeake & Ohio Ry. (Kenova, W. Va., and east thereof).  
Chesapeake Steamship Co.  
Cumberland Valley R. R.  
Delaware & Hudson Co.  
Delaware, Lackawanna & Western R. R.  
Erie R. R. (Buffalo, Suspension Bridge, Dunkirk, Salamanca, and east thereof).  
Chautauqua Traction Co.  
Fonda, Johnstown & Gloversville R. R.  
Jamestown, Chautauqua & Lake Erie Ry.  
Lehigh Valley R. R.  
New York Central & Hudson River R. R.  
New York, Philadelphia & Norfolk R. R.  
Norfolk & Washington Steamboat Co.  
Pennsylvania R. R.  
Philadelphia & Reading Ry.  
Pittsburg, Shawmut & Northern R. R.  
Western Maryland R. R.  
West Shore R. R.

### ROADS IN CENTRAL PASSENGER ASSOCIATION

Ann Arbor R. R.  
Baltimore & Ohio R. R.  
Baltimore & Ohio Southwestern R. R.  
Bessemer & Lake Erie R. R.  
Chesapeake & Ohio Ry.  
Chesapeake & Ohio Ry. Co. of Indiana.  
Chicago & Alton R. R.  
Chicago & Eastern Illinois R. R.  
Chicago, Indianapolis & Louisville Ry.  
Chicago, Indiana & Southern R. R.  
Chicago, Peoria & St. Louis Ry.  
Cincinnati & Muskingum Valley R. R. Co.  
Cincinnati, Hamilton & Dayton Ry.  
Cincinnati Northern R. R.  
Cleveland, Akron & Columbus Ry. Co.  
Cleveland, Cincinnati, Chicago & St. Louis Ry.  
Dayton & Union R. R.  
Detroit & Mackinac Ry.  
Detroit, Toledo & Ironton Ry.  
Dunkirk, Allegheny Valley & Pittsburg R. R. Erie R. R.  
Evansville & Indianapolis R. R.  
Evansville & Terre Haute R. R.  
Ft. Wayne, Cincinnati & Louisville R. R.  
Grand Rapids & Indiana Ry.  
Grand Trunk Ry. System.  
Hocking Valley Ry.  
Iowa Central Ry.  
Kanawha & Michigan Ry.  
Lake Erie, Alliance & Wheeling R. R.  
Lake Erie & Western R. R.  
Lake Shore & Michigan Southern Ry.  
Louisville & Nashville R. R.  
Louisville, Henderson & St. Louis R. R.  
Marietta, Columbus & Cleveland R. R.  
Michigan Central R. R.  
Minneapolis & St. Louis R. R.  
Mobile & Ohio R. R.  
New York, Chicago & St. Louis R. R.  
Norfolk & Western Ry.

Northern Ohio Ry.  
Pennsylvania Company.  
Pere Marquette R. R.  
Pittsburg & Lake Erie R. R.  
Pittsburg, Cincinnati, Chicago & St. Louis Ry.  
Southern Ry.  
Toledo & Ohio Central Ry.  
Toledo, St. Louis & Western R. R.  
Vandalia R. R. Co.  
Wabash R. R.  
Wabash Pittsburg Terminal Ry.  
Wheeling & Lake Erie R. R.  
Zanesville & Western Ry.

We also expect the reduction to be effective in the following territory, viz.: New England, Eastern Canada, Territory west of Buffalo and Pittsburg to Denver and Cheyenne, and north of the Ohio River; Cairo, Ill., St. Louis, Kansas City, and Indian Territory and Oklahoma.

### A FEW FACTS ABOUT ALBANY.

Albany is the oldest surviving settlement in the 13 original States, and was founded in 1614 by the Dutch traders who followed the voyage of the discoverer of the Hudson River. It was known successively as Fort Nassau, Beaverwyck and Williamstadt, and was protected from incursions of the Indians by a stockade and a moat.

In 1623 the West Indian Company built Fort Orange (Aurania) on Capitol Hill, and the village became the center of the fur trade in North America. In 1664 it was transferred to the British, and the name was changed to Albany, in honor of the Duke of York and Albany, afterward James II. It received its charter in 1686, and became the capitol of the State in 1797. The first general Congress, at which plans for colonial federation were discussed, was held in Albany in 1754. "Yankee Doodle" was written in the garden of the historic manor house now known as Fort Cralo, which is still standing on the east bank of the Hudson opposite Albany.

Besides its antiquity, there are many other things about the city that are interesting to tourists; notably its \$25,000,000 Capitol Building, the \$4,000,000 State Educational Building in course of erection, many beautiful bank buildings, etc.

## The Illinois State Convention

The 20th annual session of the Illinois State Bee-Keepers' Association will be held at the State House, Thursday and Friday, Nov. 17 and 18, 1910.

We expect to have a number of the most prominent bee-keepers of the State, among them our worthy president, Mr. C. P. Dadant, as well as others outside our own State.

Among the other things that will be on the program will be the report of our foul brood inspector, A. L. Kildow, of Putnam, Ill., who will show on a map all the counties of the State wherein foul brood exists, as far as discovered.

Regarding hotel and railroad rates, a notice will be sent to all the members of the Association not later than Nov. 1st. To any not members, who wish to attend the convention, if they will notify the secretary, a like notice will be sent to them. Make up your mind to come and have a good time.

JAS. A. STONE, Sec.

Rt. 4, Springfield, Ill.



## Dr. Miller's Question-Box

Send Questions either to the office of the American Bee Journal or direct to  
DR. C. C. MILLER, MARENGO, ILL.  
He does NOT answer bee-keeping questions by mail.

### Introducing Queens—Feeding Nucleus

1. Is a Banat, Caucasian, or a Cyprian queen any harder to introduce than an Italian?  
2. I bought a 3-frame nucleus; would it be all right for winter if fed?

NEW YORK.

ANSWERS.—1. I think not.  
2. Rather doubtful; although in the right kind of a cellar it might succeed.

### American Foul Brood.

My bees are not doing very well. They have the American foul brood. What must I do to cure it? Some take the bees from the old hive and put them into a new one, and then disinfect the hive; but what they use to disinfect with, I don't know.

PENNSYLVANIA.

ANSWER.—There is probably nothing better than the McEvoy treatment. If you send to Dr. E. F. Phillips, Dept. of Agriculture, Washington, D. C., he will send you a free bulletin about the disease and its cure. Some disinfect the hive by throwing a handful of straw into the empty hive and burning it out; some wet with kerosene the inside and burn it; and some use a painter's torch. Probably the greater number do nothing at all in the way of disinfecting the hive, believing it unnecessary.

### Metal Queen-Cell Bases.

Has anybody ever used metal queen-cell bases? If so, why are they not in more general use? I have used some this season in an experimental way, and like them very much. They have so many advantages over others; there is no transferring of the larvæ, no royal jelly to be obtained; they are strong and can be used over and over again, etc.: in fact, they have the advantages of all the others, with few of their disadvantages.

IOWA.

ANSWER.—I do not remember to have heard of metal being used, although wood is in common use. Wood has the advantage of being a poorer conductor of heat than metal, and it is likely that no one has thought of metal having any advantage over wood.

### Sowing Yellow Sweet Clover Seed.

1. When is the best time to sow yellow sweet clover seed, and how shall I prepare the ground? I want to sow where I have corn.  
2. How many pounds of seed to the acre?

TENNESSEE.

ANSWERS.—1. Either the white or the yellow variety of sweet clover may be sown spring or fall, or at the same time other clover is sown in your locality. It doesn't matter a great deal as to preparation of the ground. Prepared as for other clover will be all right, only the ground should be rolled down hard after sowing, as it seems to heave worse in winter than red clover. In your corn ground you may get as good a stand as any other way by sowing without any preparation whatever, at a time when the ground is rather wet, and allowing a lot of stock to tramp it down all over. That seems like a slipshod way of doing things, but the worse you treat sweet clover the better it seems to succeed. The fact is, it is not the easiest thing to get a good stand when ground is very nicely prepared—at least not in this locality.

2. There is no definite agreement as to the amount of seed per acre, but much lighter seeding will do than for other clovers, as a single stalk will cover more than a square foot of ground. If it all grows, 10 pounds to the acre ought to be a great plenty.

### Grading Honey for Market.

1. You answered my questions on page 292, on grading honey, and selling honey on commission. What I want to know is, Are all the sections in a case of 24 sections of equal weight, or do they run from 13½ to 16 ounces

in the case? I have been weighing all sections and putting all of the 16-ounce sections in a case by themselves; the same way with 15-ounce, 14, 13 and 12. Any under 12 ounces are put back to be filled out, if it is not too late in the season; and if some of the cells of the 14, 13 and 12 are not capped over I put them back. As I understand the grading rules, some of the customers get a 13½-ounce section for 16 cents, while others of the same case get a 16-ounce sections for 16 cents. I try to fix it so all will be treated alike.

NEW YORK.

ANSWER.—In a case of sections there are different weights, and the sections may run up to 16 ounces each, or more; only so that no section shall weigh less than 13½ ounces, and that the cases shall average not less than 21 pounds each. If the grocer sells the sections by weight, of course the consumer pays for the number of ounces he gets; if the honey is sold by the section, then some customers will get better bargains than others.

### Soured Honey—Short of Winter Stores.

1. I took off 300 pounds of honey, Aug. 20, which seemed to be nice honey, yellow color, good taste, and all sealed up nicely. I stored it in a warm room, and now it is fermenting, running out through the cappings, and is beginning to have quite a sour taste. Today I am putting it back on the hives to see if the bees can put it in shape. What would you advise me to do with it? What caused it? I do not believe it is honey-dew.

2. My bees are all in Danzenbaker hives, and are working in the supers yet, but it looks as if they did not have enough stores below to winter on. Do you believe there is any danger of their giving a surplus and not providing for themselves?

MISSOURI.

ANSWERS.—1. I don't know what was the trouble. Sometimes bees seal up honey when it is not sufficiently ripened, and that might have occurred in your case. The character of the honey must have had something to do with it. Probably you did the very best thing when you gave it back to the bees.

2. If there is no fall flow, and the early flow stops short while the frames are full of brood, there may be too little honey in the hive for winter, especially in 8-frame hives or smaller. But if there is a fall flow, the bees are sure to crowd honey into the brood-chamber, even if it leaves no room for the queen. At least that is the way it is here. As your bees were working in supers Sept. 14, if you had looked in the brood-chamber on that date I'm pretty sure you would have found lots of honey and not much brood.

### Getting Bees from Bee-Trees—Albino Bees.

1. At a distance of about 7 miles from where I live, on the banks of a river, there are, perhaps, hundreds of bee-trees. The bees can easily be gotten out. But to get some of them it would take a whole day, as the bees have their entrance 1 or 2 inches above the ground and run down into the roots, so that I would have to dig up the whole tree, and some of these trees are very large. How could they be gotten out without the use of some kind of an escape?

2. Please explain one or more ways in which bees may be taken out of a tree without the use of smoke.

3. Could one by chopping a hole about the end of the combs (lower end), and setting a cup of gasoline up close to the combs, drive out all of the bees, no matter in what direction the holes run?

4. In my bee-book I never found anything stating the difference between an albino and another race of bees. Is there anything peculiar about them?

5. Do they gather much? Where could I buy such a queen?

My bees are golden Italians, and those in the trees are golden also. CALIFORNIA.

ANSWERS.—1. Try this: Put in your smoker rags saturated with carbolic acid; blow into the hole the vapor lightly at first, so as not to stupefy the bees, and continue until they think it is pleasanter outside.

2. Besides smoke or some other vapor objectionable to the bees, I don't think of any other way except chopping or using an escape.

3. I'm afraid that merely setting a cup of gasoline there might not trouble the bees enough. Blowing it in with a smoker might do better.

4. If I am rightly informed, albinos among bees are somewhat like albinos of the human race or other animals; there is a deficiency of coloring pigment. This is accompanied by weakness in other respects; although some have reported albino bees that were said to be good. I have seen nothing about albinos for several years, and don't know where you would find them.



### Report for Two Seasons.

I am very thankful for the Bee Journal. It has been a great help to me during the summer. I bought 2 colonies of bees in fall of 1908. They wintered all right, but 1909 was a poor year. They increased to 4 colonies and produced not more than 6 pounds of honey. This year I increased to 16 colonies from the 4 and got between 300 and 400 pounds of comb honey. Some swarms united and went to the woods.

Bagley, Minn.

ALGOT BERTSON.

### Freaky 1910 in Central Nebraska.

March was summer; April and May winter; June cold spring; and July hot and dry (only ½ inch of precipitation for the month.) With a small working force of bees, and the nectar drying so fast, the flow from alfalfa and sweet clover was slow, but now we are getting a favorable freak finish to the season. August has been cool and showery, and the low places are a jungle of Spanish-needle (first time I've seen it here in 6 years). We are getting a fine fall flow. I expect 1500 pounds of honey or better, which means a 60-pound average per colony.

LOUIS MACEY.

N. Platte, Nebr., Sept. 7.

### Score Another for the Blacks.

When I hear men bragging about black bees, I think of our boss in the lumber-woods. He was always telling the boys of the good qualities of his wife. He had so much to say in praise of her that I made a long, lonely walk through the woods to see his home and his wife.

She was a "nigger!"  
Arden, Nebr., Sept. 5.

W. H. MILLS.

### Ripening Honey.

That little air space at the top of every cell of honey as it is in the comb is of particular need. Immediately resting on the honey is an albuminous film. The rising and falling of the temperature causes a waste of a portion of the honey which passes off as carbonic acid gas. The gas passes through the film first and then as the wax cap of the cell is dry the gas can work its way through into the outer atmosphere. If the honey rested against the wax capping the gas could not get through and the refuse would be retained in the honey, and the honey would be spoiled.

If honey is sealed up in air-tight cans or jars for but a short time it is correspondingly injured. When the containers of the honey are kept in an airy room and provided with ventilated covers a film forms on the surface protecting it from the air, but the ripening



process goes on, indefinitely. Such honey when dished out is dry and thick. But where the honey has been sealed up the film is absent, and the honey is thinner, and absorbs moisture from the air at a rapid rate.

Chatsworth, Calif. C. W. DAYTON.

### Italian Bees vs. Blacks.

Of late, we have taken a great deal of interest in the different accounts about the Italian and black bees, so we are sending an account of our experience.

We have been in and around the bee-business, more or less, for the last 6 years, and have had Italians, hybrids and blacks. With us the Italians came out ahead in the long run, every time. A few of their superior qualities are: Honey-gathering, less inclined to swarm, and in better condition in spring.

A point in favor of the blacks is that the queen does not lay eggs in the super as the Italians are liable to, at least not with us. But, there is another desirable trait, and this is due to the prolificness of the queen, and, at the same time, it can be easily overcome by the use of 2 brood-chambers, or an excluder. We use the 4x5 sections, and have them about half filled with foundation. The remaining half was built mostly for drone-comb, which offered a place for the queen to lay those undesirable eggs. We do not doubt that in a good honey-flow near home, as in the case with sweet clover, no strain or variety of bees can surpass the pure blacks, but, when the harvest begins to wane, when the nectar must be sought far and wide, then the Italians are "on the job." They hang on while the blacks do practically nothing.

We all know of the wealth of nectar secreted by the common red clover, but, except when the tubes are shortened by drouth, or some other reason, it is not available for the bees. Black bees have shorter tongues than the Italians have, and, if you see them on red clover, it is more of an exception than the rule.

Our flow at present consists of buckwheat and second-growth red clover. In going to the bee-yard in the early morning when the bees are working on buckwheat, we find the blacks flying fairly well, but do not come up to the Italians. In going to the yard on a clear day after 10 o'clock, we find the Italians flying at about the same rate, while the blacks barely do anything. At this time, in going to the buckwheat pasture, we see no Italians at work at all, and what little we see are blacks, but on going to the clover fields, we find it just buzzing and alive with bees, mostly or nearly all Italians.

On examination of the hives, we find more or less dark buckwheat honey and some honeydew (if there is any to be gathered) with the blacks, and with the Italians a good surplus of red clover mixed more or less with buckwheat, but not to so large an extent as to injure the sales of the honey, as is the case with the honey taken from the blacks. We have a hard time to sell dark honey, as the people want too big a reduction for it, so this is quite an item.

All things considered, the Italians seem to be the best bees for this country.

Lititz, Pa. SNAVELY BROS.

### Tolerably Good Season.

Barring the unfavorable spring, the honey season in this locality was tolerably good. To date I have extracted 300 pounds of honey from 4 colonies, and increased to 6. I had but one natural swarm. There is still some honey in the hives, and the bees are in an excellent condition; plenty of brood in all stages; The honey in this locality has a greenish tinge, but the body and flavor are good. I sell 3 pounds for 50 cents.

I find the ordinary Italians superior to the goldens.

Cincinnati, Ohio, Aug. 31. ALBIN PLATZ.

### Italians vs. Black Bees.

Having had an experience of nearly 50 years with Italian bees, and having been acquainted with the blacks more than 75 years, I think I know something of the difference between the two races, that seem to be unalterably fixed.

For instance, in handling Italian bees, they hold their position on the combs, while the blacks scamper to the bottom of the frame, clustering in knots of both young and old bees, and drop off at the feet of the person

handling them. Many of the young bees never get back into the hive and must become a loss, except that the operator picks up and returns them to the hive, which he is not at all likely to do.

Then, again, during all the years that I have handled the Italians, I have never had a colony to fall a victim to the ravages of the bee-moth, while it is a fact that the moth often invade and completely destroy a colony of blacks. In fact, unless a colony of Italians become reduced to a mere nucleus, I never give the matter of their being hurt by the bee-moth any attention; but in the event of such a mishap, and the hive is full of comb, I at once take the precaution of reinforcing them with a frame of mature and emerging brood.

As regards the crossness of the two races, I have found but little difference, for I occasionally find a colony of Italians that are as cross as they can be, it seems to me. And, I also found the blacks no better. I have opened a hive of Italians perhaps twenty times in succession without veil, or smoke, without receiving a sting; and the next time I have received perhaps 50 stings before I could get away from them.

I have learned never to open a hive without a bee-hat on, and almost invariably have smoke at hand, and never have any trouble when this course is rigidly adhered to. However, I will except the Cyprian strain of bees, as I do not remember ever handling a colony of them that was not on the warpath; and smoke does not seem to subdue them for any considerable length of time, for as soon as the smoke would clear away, they would fall in line and seemingly attack me with renewed and increased fierceness.

In the matter of collecting and storing honey, I am not fully prepared to say definitely that the Italians excel the blacks very much, if any. It is claimed by some that the blacks seal their honey with whiter cappings than the Italians. I have never been able to note any real difference in the aggregate. However, I have seen the Italians cap their honey with whiter material, sometimes, than at other times. As to whether or not the blacks do so, I can't say having never given this feature of the subject any attention when I had blacks in my apiary.

I will recapitulate the only real points of difference in favor of the Italians that I have been able to note:

The Italians stand their ground on the combs when handling them, while the blacks run to the bottom of the combs and drop off on the ground at the operator's feet, thereby causing the loss of many bees.

Second, the Italians defend themselves much more successfully against the ravages of the bee-moth.

As I view the situation, these points of difference make it worth while to own the Italians in preference to the blacks.

Lyons, Kan.

DR. G. BOHRER.

### Byer and the Other "Buckwheaters."

FRIEND YORK:—Please tell Mr. Byer that he is correct in his belief that Albany is located near the "buckwheaters," and if he will favor us with his presence at the National convention, he will find them out in full force. Although he says he is not partial to buckwheat, I think he will find the "buckwheaters" a very good class of people to meet.

Mr. Byer said in regard to the decision to hold the National Convention in Albany, "that is really too bad." I am sorry that he feels that way about it, and believe that if he will make the most of the opportunity, he may be able to change his mind. I believe it due to our Canadian brethren, that the National Convention be held in their Dominion in the near future, and I hope to see it brought about.

Altamont, N. Y.

W. D. WRIGHT.

[Mr. Byer writes that he expects to be at the Albany convention, all being well. We didn't think that he could stay away, buckwheat honey or no buckwheat honey.

Mr. L. C. Root, of Connecticut, the son-in-law of the lamented Moses Quinby, also intends to be present at the meeting. Better go, reader, if you can possibly do it.—EDITOR.]

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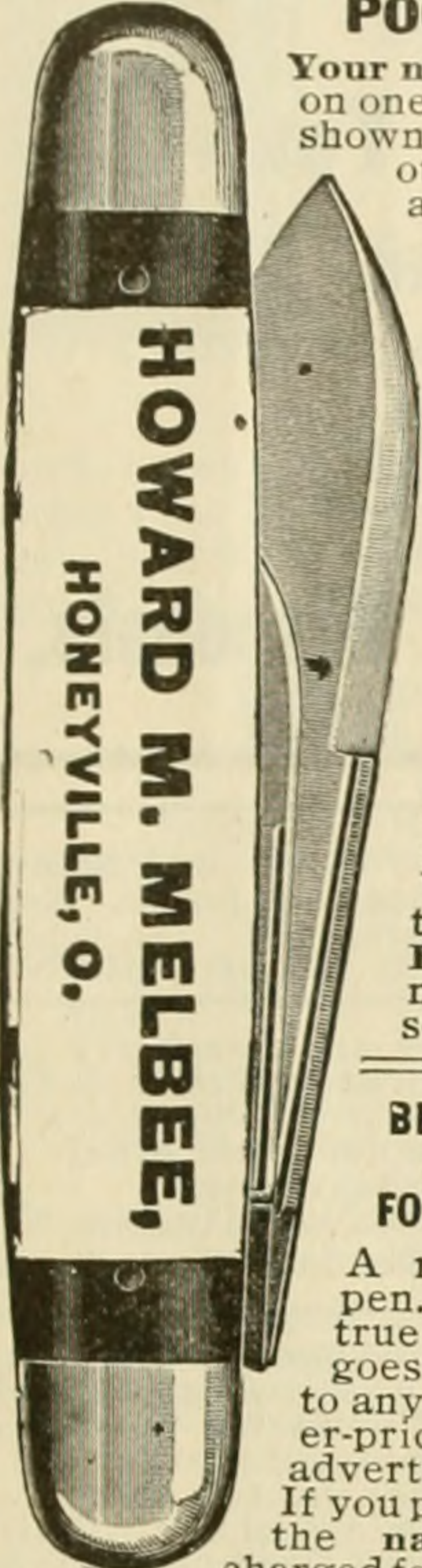


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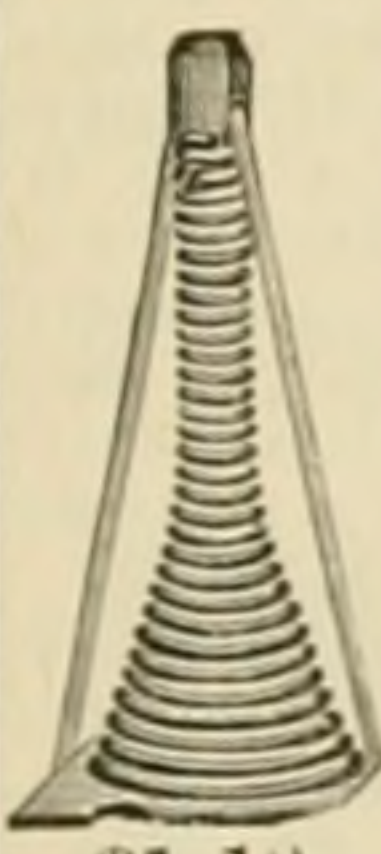
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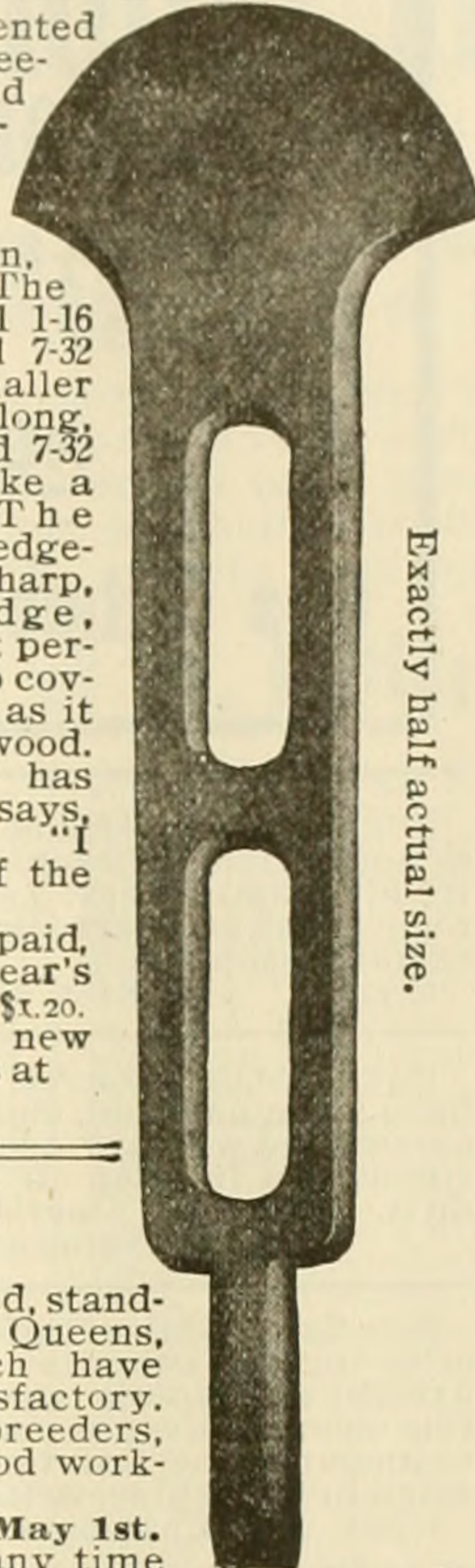
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## TRAPPER'S GUIDE FREE



Tells you when, where and how to trap. Tells you of Animal Baits that are as important to a trapper as traps. Reveals trapping secrets and gives methods that will increase the catch of any old trapper and quickly make successful trappers of the inexperienced.

Tells how to prepare skins and how to get the most money for them.

The book also contains the Game Laws of all the States and Canada and gives other information worth many dollars to any trapper. It will be sent to you free if you write at once.

**F. C. TAYLOR & CO.**

GREATEST FUR HOUSE IN THE WORLD  
30 Fur Exchange Building, St. Louis, Mo.

Please mention Am. Bee Journal when writing.

## Wants, Exchanges, Etc.

[Advertisements in this department will be inserted at 15 cents per line, with no discounts of any kind. Notices here cannot be less than two lines. If wanted in this department, you must say so when ordering.]

FOR SALE—160-lb. honey-kegs at 50c each f. o. b. factory. N. L. Stevens, Moravia, N. Y.

ITALIAN Untested Queens, 75 cents; Tested, \$1.25. Breeders, \$5.00 each. E. M. Collyer, 8A12t 75 Broadway, Ossining, N. Y.

WANTED.—Good salesmen to sell honey in city. The Snyder Bee & Honey Co., 10Atf Kingston, N. Y.

FOR SALE.—Clover, basswood, and buckwheat extracted honey in 60-lb. cans and 225-lb. kegs. W. L. Coggshall, Groton, N. Y.

MAINE-BRED Italian Queens—Untested 75c Tested \$1. Nuclei and full colonies. Red-clover strain. Write for price-list. 8A3t. Eugene Watson, R. F. D. 2, Madison, Maine.

FOR SALE—Golden Queens that produce 50 to 100 percent 5-banded bees. Untested, \$1; Tested \$1.50; Select Tes, \$2; Breeders, \$5 to \$10 8A12t J. B. Brockwell, Bradley's Store, Va

FOR SALE.—About 60 colonies of bees in 8-frame hives, all heavy with honey. Price, \$4.50 per colony, f. o. b. shipping point. 9Atf Robert Bufe, 35 11th St., Troy, N. Y.

MY APIARY of 157 colonies and all the things used to run it will be for sale in October. Price will be low. Parties interested write for full particulars. 9Atf Edwin Bevins, Leon, Iowa.

WANTED.—Sweet Clover Seed.—Submit sample with price, f. o. b. Chicago, stating amount, kind, etc. Address, Arnd Honey & Bee-Supply Co., 148 W. Superior St., Chicago, Ill.

WANTED.—Some one who wants a good location for bees, to take up a homestead or Government land. I know a few nice vacant pieces. Address, Jas. M. Level, 8Atf Yacolt, Clark Co., Wash.

FOR SALE.—As I wish to go out West and take up a homestead, I will sell a 10-acre mountain farm, suitable for a peach orchard; some fine strawberry ground, also 75 or 80 colonies bees, mostly in double deck 10-frame hives, dovetailed and Danzenbaker; 60 twin-mating hives; all necessary tools for queen-rearing; extractor, wax-press, 300 sections, comb foundation, etc. Never-failing spring of soft cold water. 9Atf A. H. Kanagy, Kishacoquillas, Pa.

Write Us To-Day  
for our 1910 Catalog and let us tell you all about

# DITTMER'S COMB FOUNDATION

and  
WORKING Your WAX for You.

Write us for Estimate on full Line of Supplies. It will pay you, and costs nothing.

RETAIL and WHOLESALE.

Gus Dittmer Company, - Augusta, Wisconsin.

FOR SALE.—200 8-frame hives of bees; honey-house 12x14; extractor, honey-tank, 100 extra hives and supers; 3 acres of land with 4-room house and barn. Price \$2.75 per colony; extras reasonable. N. N. Atchley, 10A2t Rt. 1, Mt. Morrison, Colo.

BACK VOLUMES OF AM. BEE JOURNAL.—We have some on hand, and would be glad to correspond with any one who may desire to complete a full set. It may be we can help do it. Address, American Bee Journal, 146 W. Superior St., Chicago, Ill.

FOR SALE.—All or half-interest in my apiaries—over 700 colonies—and every necessary fixture; also apiary sites; best location in this country; over 30 percent return on investment in the last three years. If interested in a big thing, write me. 10A2t J. E. Chambers, Crystal City, Tex.

FOR CALIFORNIA.—I have to sell an out-ward of 100 colonies of bees (more or less), built on full br. F., full stores, in L. size, b. and sh. s., dovetailed, redw.; 3 coats white, sheeted cover, each hive and colony a model. A snap for the buyer. Address, Joseph Wallrath, Antioch, Cal.

FOR SALE.—3000 lbs. new crop Sweet Clover Seed. Hulled, yellow, 4 lbs. by mail, prepaid, \$1.00; 10 lbs. to 100 lbs., 15c per lb. Unhulled yellow, 4 lbs. by mail, prepaid, 88c; 10 lbs., \$1.20; 100 lbs., \$10. White variety same price. R. L. Snodgrass, 9A3t Rt. 4, Augusta, Kan.

## Honey to Sell or Wanted

FOR SALE.—Alfalfa honey in new cans and cases; 7½ cts. per lb., f. o. b. 9A3t Geo. E. Coffin, Route 2, Parma, Idaho.

FROM THE BEE-YARDS OF HENRY STEWART the thickest, finest-flavored white clover honey I ever produced. Put up and nicely labeled in

2-lb. tin friction-top can, 36 in case, \$8.60.  
5-lb. tin friction-top pails, 12 in case, \$6.75.  
10-lb. tin friction-top pails, 6 in case, \$6.50  
1 protected tin can, 60 lbs., \$6.00.

The 2-lb. cans contain as much honey as 2½ of the average sections, and is a good retailer. Also 10,000 lbs. of Clover and Hearts-ease blend a very fine honey at a less price. Satisfaction guaranteed. Sample free. 10Atf Henry Stewart, Prophetstown, Ill.

Please mention Am. Bee Journal when writing.

FOR SALE.—Choice clover and basswood honey in 60-lb. (net) cans, 9c per lb. Amber, 8c. Satisfaction guaranteed. 10A2t F. W. Lesser, Rt 3, E. Syracuse, N. Y.

FOR SALE.—Clover and raspberry honey mixed; well ripened, and of delicious flavor; put up in new 60-lb. cans. Sample 10 cts., which may be deducted from order. Also light grade of buckwheat honey. 10A2t James McNeill, Hudson, N. Y.

Please mention Am. Bee Journal when writing.

FOR SALE.—Extracted honey gathered while the country around was covered with white clover bloom. Was extracted from sealed combs. If you want something that will satisfy, send \$5.50 per can, for two or more 60-pound cans. Edwin Bevins, 8Atf Rt. 2, Leon, Decatur Co., Iowa.

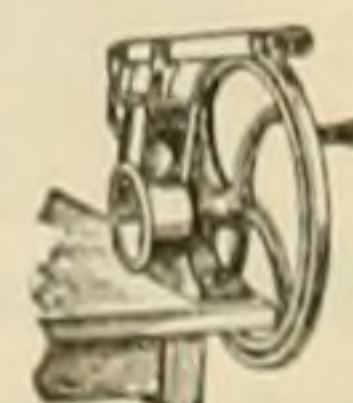
Please mention Am. Bee Journal when writing.

E. D. TOWNSEND & SONS, Michigan's most extensive honey-producers, are now offering their 1910 crop of both comb and extracted honey for sale. We extract only once, and that long after the close of the honey-flow. Aside from this, nothing but all-sealed combs is extracted in this, our "graded" table stock. Of course, it's away ahead of the ordinary extracted honey on the market, and for this exquisite article we have to get 10 cts. per pound, on track. It is in 60-lb. tin cans, 2 in a box, and we can furnish either clover or basswood flavors. A liberal sample free. E. D. Townsend & Sons, Remus, Mich.

Please mention Am. Bee Journal when writing.

EXTRACTED HONEY FOR SALE.—If you want the best honey obtainable, try our Northern Mich. Clover and Willowherb honey. Furnished in 60-lb. tins, 2 in a case. As we use shallow-extracting supers, and begin extracting from the all-sealed upper ones late in the season, our honey is perfectly ripened by the bees in the hives. Samples are free and convincing. Prices, 1 to 5 cases, 0½ cts. per lb; 6 to 10 cases, 9 cts.; 1 ton or more, 8 cts. per lb., f. o. b. near Lake City, Mich. All our honey is dead ripe, thick, and of finest flavor, and is put up in nice packages for shipping. O. H. Townsend & Son, R. F. D. 2, Otsego, Mich.

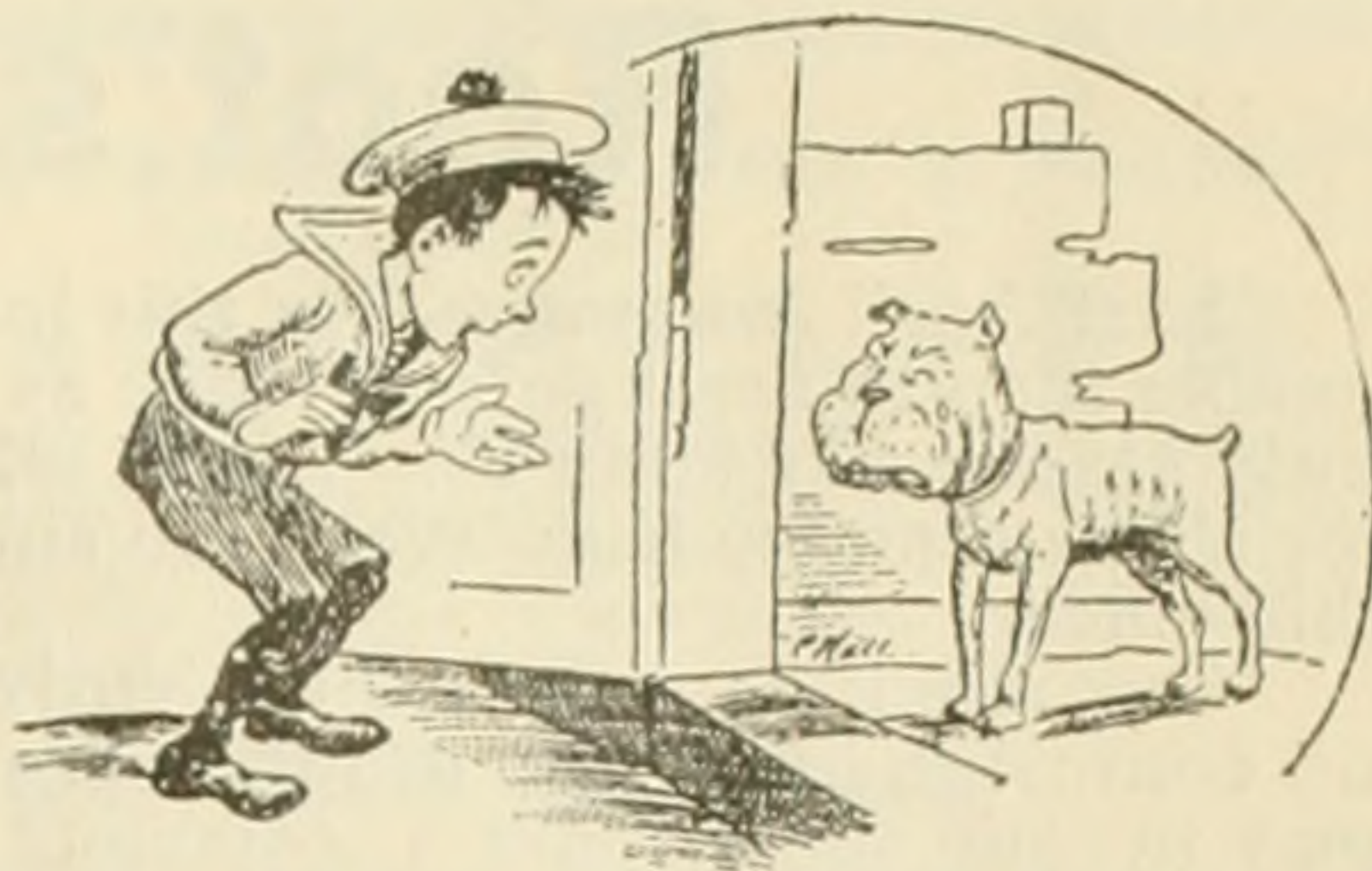
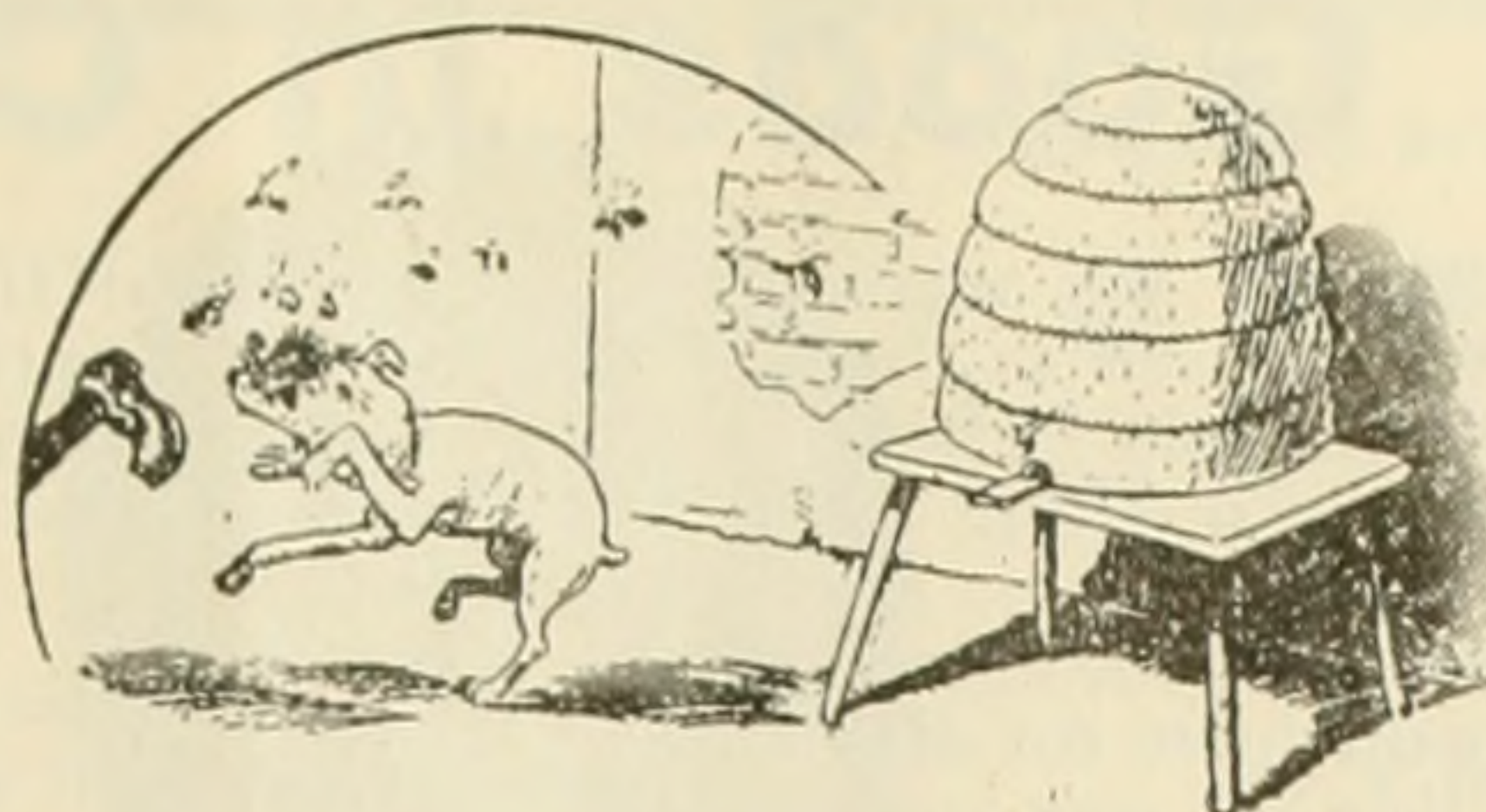
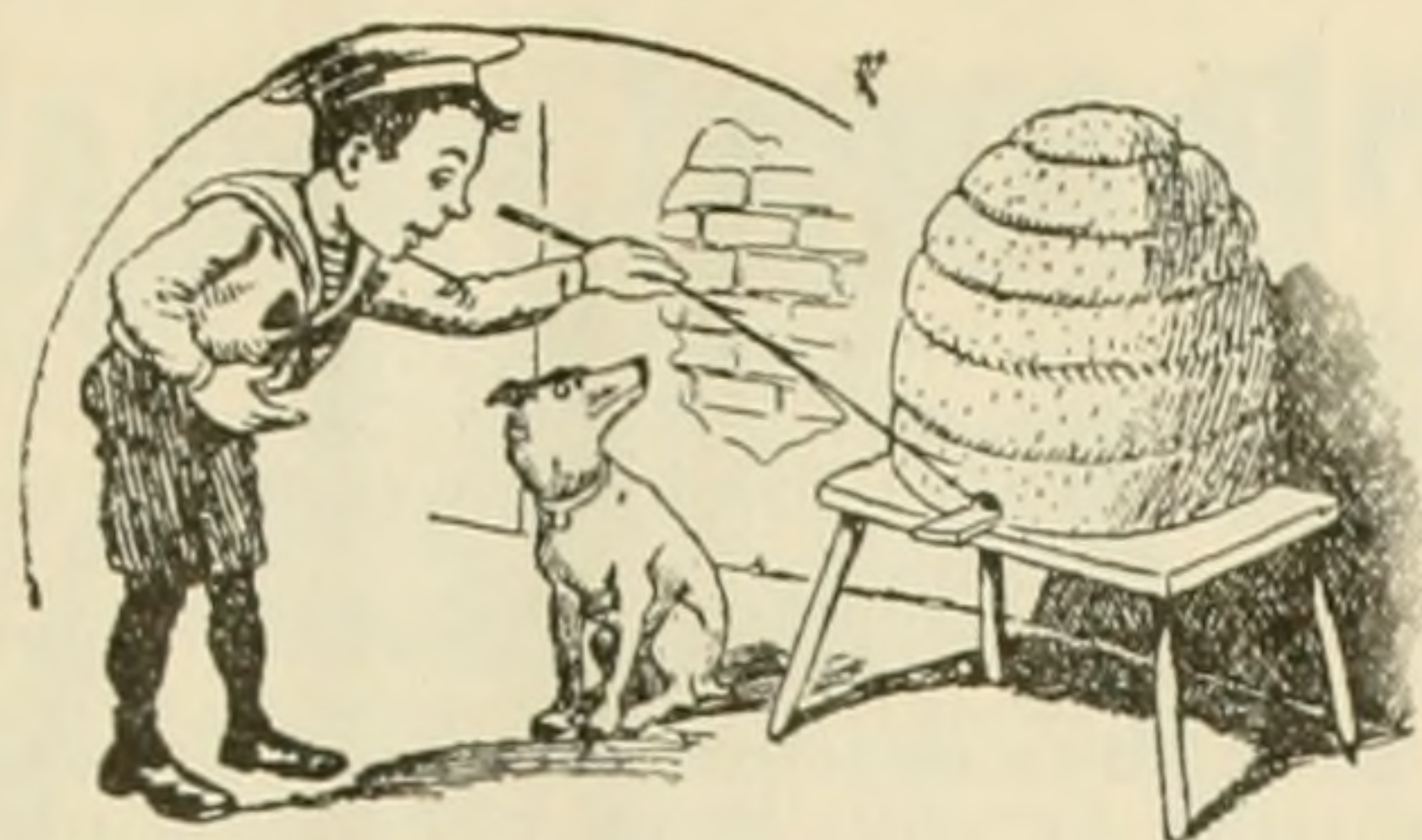
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 **Crown Bone Cutter**  
Cuts up scrap bones easily and quickly—no trouble. Feed your hens fresh out green bone daily and get more eggs. Send for catalogue. **Best Made Lowest in Price**  
WILSON BROS., Box 618, Easton, Pa.

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# American Bee Journal



## 40 Years Among the Bees

By DR. C. C. MILLER,

Associate Editor of the "American Bee Journal," and One of the Best Known and Most Successful Honey-Producers in all the World.



This book of over 340 pages tells just how Dr. Miller manages his bees to produce the most honey, which, in turn, brings the most money. Dr. Miller has been "at it" nearly 50 years, and so is abundantly competent to tell to others the best way to be successful with bees. In 1903 his crop of comb honey was over 18,000 pounds, and in 1908 nearly 20,000 pounds—and he is not located in the best honey-producing part of the United States, either—Northwestern Illinois. Dr. Miller surely understands bees and how to persuade them to go out and get the honey.

### What Practical Bee-Folks Say of Dr. Miller's Great Bee-Book:

Delighted with the many practical hints it contains.—L. STACHELHAUSEN, of Texas.

My expectations were high, but you have gone beyond them. I am delighted with the book.—E. R. ROOT, of Ohio.

I look upon the book as a valuable addition to apicultural literature.—W. S. PENDER, Editor Australasian Bee-Keeper.

After getting "Forty Years Among the Bees," I sat up late that night reading it. It is a solid and rare pleasure to get hold of such a book.—ARTHUR C. MILLER.

"Forty Years Among the Bees" has been the greatest pleasure and profit to me. There are so many most valuable ideas, and it is so beautifully told.—MRS. J. J. GLESSNER.

The specialist who wishes to produce comb honey and avoid swarming had best secure the book "Forty Years Among the Bees," and study it carefully.—Dadant's "Langstroth on the Honey-Bee."

Every chapter is permeated with that incomparable philosophy of good cheer that has so distinguished Dr. Miller's life and work. Aside from the main issue we regard this as one of the chief charms of the book.—Rocky Mountain Bee Journal.

"Forty Years Among the Bees" is a very practical work, well illustrated, written by one of the best bee-keepers of the United States, and those who know the English language will read it with the greatest profit.—Le Rucher Belge (French).

Again, there is that Nestor in bee-keeping, Dr. Miller, whose "Forty Years Among the Bees" is in my hands every day from March to September, for the very simple reason it comes nearer being specific in the details I want to know than any other book on bee-keeping.—F. DUNDAS TODD, in Gleanings.

The author goes briefly, but concisely, over his forty years of bee-keeping, for he has really kept bees for forty years. \* \* \* I feel warranted in saying that it is the masterpiece of the author's forty years among the bees.—EDITOR HUTCHINSON, in the Bee-Keepers' Review.

The book is more interesting than a regular text-book, for one who has had experience with bees. For my part, I have had a very great pleasure in reading it, and have learned

some things from it that I did not know. Dr. Miller is not only a consummate practitioner, but one of the most appreciated and most intelligent writers of the United States. His simple and unpretentious manner makes us live with him among his bees, and his book is a series of information for all the circumstances in which a bee-keeper may find himself.—ED. BERTRAND, Editor Revue Internationale (French).

Dr. C. C. Miller, one of the best known apicultural writers, even in Europe, tells in the book, "Forty Years Among the Bees," exactly how he has managed bees for the past 40 years. We recommend the book in the highest manner to bee-keepers who can read English.—Editorial in Illustrierte Monatsblaetter (German).

There is very little of what is known as modern bee-keeping which is not found in its pages ["Forty Years Among the Bees"], and stated in a way which any one, be he ever so ignorant of the industry, can understand, and yet in so interesting a way that the reader is not likely to lay the book down after he has begun to read it, if he has the time, until he has read it through.—The Modern Farmer and Busy Bee.

Dr. C. C. Miller, the world-renowned apiarist of Marengo, Ill., whose dominant traits are deep thinking and cheerfulness, has recently published another work on bee-keeping, entitled "Forty Years Among the Bees." The new volume is a real gem. \* \* \* To any one interested in bees, this volume is invaluable; in fact, we know of no other means by which the apiarian student may possess himself of so much information by little reading, and at small cost.—EDITOR HILL, in the American Bee-Keeper.

I have read page after page of it; and the more I read, the more I am convinced that it is one of the most practical books that was ever written. \* \* \* Yes, the book is full of good things—packed full of them—and I question very much whether any progressive bee-keeper, beginner or veteran, can afford not to read this book clear through. You may say you have read the Doctor's writings for years. Granted. But you will find that there are many little kinks that he describes in this book that he has never put on the pages of a bee-journal—not because he was not willing to impart what he knew; but because, when he sat down to write a book, one thing after another suggested itself until he unfolded a new story that is as good as a story and far more profitable.—EDITOR E. R. ROOT, in Gleanings in Bee Culture.

The book is bound in substantial cloth, gold-lettered, and is sent postpaid for only \$1.00; or with the American Bee Journal one year—both for \$1.75. (Or, send 3 new subscriptions to the Bee Journal—with \$3.00—and we will mail you the book free as a premium.) Every bee-keeper really ought to have both the book and the American Bee Journal, if not already possessors of them.

As Dr. Miller gets a royalty on his book—so may cents on each copy—every bee-keeper who buys it is thus helping a little to repay him for his effort to lead others to success through his writings on bee-culture.

As we have a good supply of these books on hand, we can fill all orders by return mail.

This is the time of year to read up on bee-keeping. Better send us your order at once for a copy of Dr. Miller's book, and study it carefully so as to make the most possible out of your bees. Address all orders to

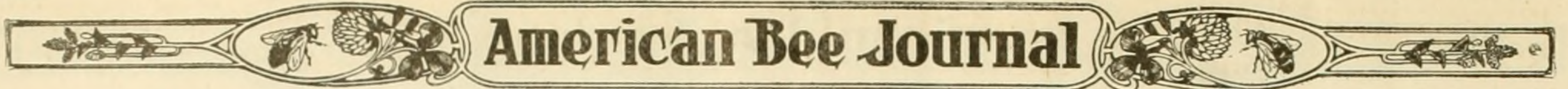
## GEORGE W. YORK & CO.

146 West Superior St.

CHICAGO, ILL.







# American Bee Journal

## Root's Goods in Chicago!

Last April we moved to this location. We were unable then to arrange our stock as we desired as the busy season was upon us. April, 1910, finds us in better shape than we have ever been since the opening of this office.

Our stock is now conveniently arranged, hence no confusion in filling orders. We now have on display in our show-room a complete line of our supplies. Call and see them. From this date we will have cars from the factory about every 10 days.

Have you received our catalog for 1910? If not, we want you to have it. A postal card request will bring one.

### Gleanings in Bee-Culture

If you have not seen a late copy of our paper, which is issued twice each month, you can't tell from a brief description how much valuable information each issue of it contains. Each issue is fully illustrated. Our writers are the very best. A trial subscription of six months (12 different copies) will cost you only 25 cents.

### Alexander's Writings

Mr. Alexander was one of the largest, if not the largest, bee-keeper in the United States, and what he has told of his methods must necessarily be of interest to large bee-keepers. He kept bees for over 40 years, and produced honey by the carload. His writings are practical, and what he has done others may do if they care to follow his teachings. Here is what a prominent bee-keeper says of his book:

"Alexander's Writings are the best thing I ever read; practical, enthusiastic, sympathetic, encouraging. I predict an enormous sale of the book. Why not get out an edition with cloth cover? It's worth while. Wish you could print more such books." WM. BAYLEY.

43 N. Brighton Ave., East Orange, N. J.

### This Book is Sold only in combination with Gleanings

From now until January 1, 1911, we offer one copy of the Alexander book with every yearly subscription

to GLEANINGS, new or renewal. You get BOTH for subscription rate alone, which is only \$1.00.

Canadian postage, 30 cts.; foreign postage, 60 cts. per year extra.

### Power Extractors

We believe all of our extractors are about as near perfect as it is possible to make them. For large apiaries one of our power machines is a great advantage. A circular of these will be sent upon request.

Read what a large producer says:

LANG, CALIF., Sept. 26, 1909.

Gentlemen:—Owing to the fact that power extractors are not in general use at the present time, it may be of interest to you to know that I used a Gilson engine "1 H. P.," together with the latest model of the 6-frame automatic extractors, "Roots," for this season's extracting. I was surprised and delighted with the work done. In extracting our heavy white-sage honey it not only cleans out the combs much cleaner than can be done by hand-power, but does it at a minimum of expense. The cost of gasoline and oil used being only 16¢ per ton of honey extracted. It takes the place of a man at \$40 per month and board, so one can readily see that it much more than paid for itself in the one season, besides doing much better work than could be otherwise. The above cost of extracting is given on the basis of gasoline at 25¢ per gallon, which is the cost here.

Truly,  
H. A. SLAYTON.

### Our Aim for the Season of 1910

This year we aim to give our customers the very best possible service. Remember, for low freight-rates and quick delivery, Chicago is as well located as any city in the United States.

### Our Location and How to Reach It

**The A. I. Root Co.** 213-231 INSTITUTE PLACE.

One block north of Chicago Ave., cor. Franklin St. Take any car going north on Wells St. Get off at Institute Place, ½ block west to Jeffery Bldg. Take elevator to 6th floor. Or take N. W. Elevated to Chicago Ave. and walk ½ block north on Franklin St. Tel. North 1484.

## Not Cheap Queens, But Queens Cheap

### Prices of 3-Band Queens

Untested Queens.....	1	6	\$ .75	\$ 4.20
Tested Queens.....	1	6	1.00	5.70
Breeder's Queens.....	1	6	5.00	

### Golden or 5-Band Queens

Untested Queens.....	1	6	\$ 1.00	\$ 5.70
Tested Queens.....	1	6	1.50	8.70
Breeders' Queens.....	1	6	10.00	

### 3-Band Nuclei

One-frame, Untested Queen...	1	6	\$ 1.75	\$ 11.20
Two " " " " " " " " " " " "	1	6	2.25	13.20
One " " Tested " " " " " " " " " " " "	1	6	2.00	11.70
Two " " " " " " " " " " " " " " " "	1	6	2.50	14.70

### 5-Band or Golden Nuclei

One-frame, Untested Queen...	1	6	\$ 2.00	\$ 11.70
Two " " " " " " " " " " " " " " " "	1	6	3.00	17.70
One " " Tested " " " " " " " " " " " "	1	6	2.50	14.70
Two " " " " " " " " " " " " " " " "	1	6	3.50	20.70

Reared from the best 3 and 5 Band Red Clover Italian Breeder Queens.

DIRECTIONS FOR BUILDING UP WEAK COLONIES—10 cents.

**W. J. Littlefield, Little Rock, Ark.**

### Can't Do Without the Bee Journal.

MESSRS. GEORGE W. YORK & Co.  
Gentlemen:—Enclosed you will find my renewal for another year to the "Old Reliable." I simply cannot do without your paper, and I believe if I could not get it I would certainly have to give up keeping bees, so closely is it linked with my bee-keeping life. You can certainly count on me for life, as I get more pleasure and profit out of a single number of your paper than a whole year costs.

WALTER E. ATKINSON.  
Baltimore Co., Md., Sept. 14, 1910.

## BETTER FRUIT

The best fruit growers' illustrated monthly published in the world. Devoted exclusively to modern and progressive fruit growing and marketing. Northwestern methods get fancy prices, and growers net \$200 to \$1000 per acre. One Dollar per year. Sample copies free.

**Better Fruit Publishing Co. HOOD RIVER, OREGON.**

## LEWIS BEEWARE — Shipped Promptly

—SEND FOR CATALOG—

**Early-Order Discounts :** —Sept. to Oct. 15th, 5%; Oct. 15th to Dec. 1st, 4%; Dec. 1st to Jan. 15, 3%; Jan. 15th to March 1st, 2%; March 1st to April 1st, 1%.

Applies to all except Honey-Packages.

**Extracted Honey for Sale,**  
and Wanted

**Beeswax Wanted.**  
27c Cash—30c Trade,

**ARND HONEY & BEE-SUPPLY CO. NOT INC.**

(Successors to the York Honey & Bee-Supply Co.)

H. M. ARND, Proprietor.

**148 West Superior St., CHICAGO, ILL.**

Please mention Am. Bee Journal when writing.



# CAPON TOOLS



**CAPONS** bring the largest profits—100 per cent more than other poultry. Caponizing is easy and soon learned. Progressive poultrymen use **PILLING CAPONIZING SETS** Postpaid \$2.50 per set with free instructions. The convenient, durable, ready-for-use kind. Best material. We also make Poultry Marker 25c, Gape Worm Extractor 25c, French Killing Knife 50c. Capon Book Free. G. P. Pilling & Son Co., Philadelphia, Pa.

Please mention Am. Bee Journal when writing.

# FOR SALE

Second-Hand Winter-Cases, complete with 7-inch covers, nailed and painted, 8 and 10 frame sizes—Root manufacture.

Have about 100 of these at 75 cts. each. Some of them have been used but one season, and all in good condition.

Also 25 Telescope Caps, nailed, at 30 cts. each; and 6 8-frame Hives. Address,

## CRYSTAL APIARY,

58th & Wood Sts., CHICAGO, ILL.

(Telephone, Wentworth 2446)

Please mention Am. Bee Journal when writing.

# Prize Takers

Pharr's Golden took first prize at 3 exhibits in Texas in 1907. We will furnish Golden, Carniolan, Caucasian, and 3-band Italian Queens, untested, \$1.00 till June 1, then 75 cents. Tested, \$1.50 till June 1, then \$1.00. For large quantities, write. Our 3-band Breeders from W. O. Victor and Grant Anderson strains; other races from the best obtainable. "Prompt service and satisfaction," is our motto. Address, 5Atf

## NEW CENTURY QUEEN-REARING CO.

or JOHN W. PHARR,

Berclair, - - Texas

Please mention Am. Bee Journal when writing.

# Good Queens

If you are going to want any Queens for increase, or replacing old queens next June, it is time to begin to think about it. I have been breeding leather-colored Italian queens for years, and they are giving excellent satisfaction. If you are interested, write. Good queens; no disease; prompt shipment, and absolute satisfaction guaranteed. Prices: June, one, 00c; three, \$2.50; six, \$4.75; doz., \$9.00; 20 or more at 60c each. 2Aot

## S. F. Trego, Swedona, Ills.

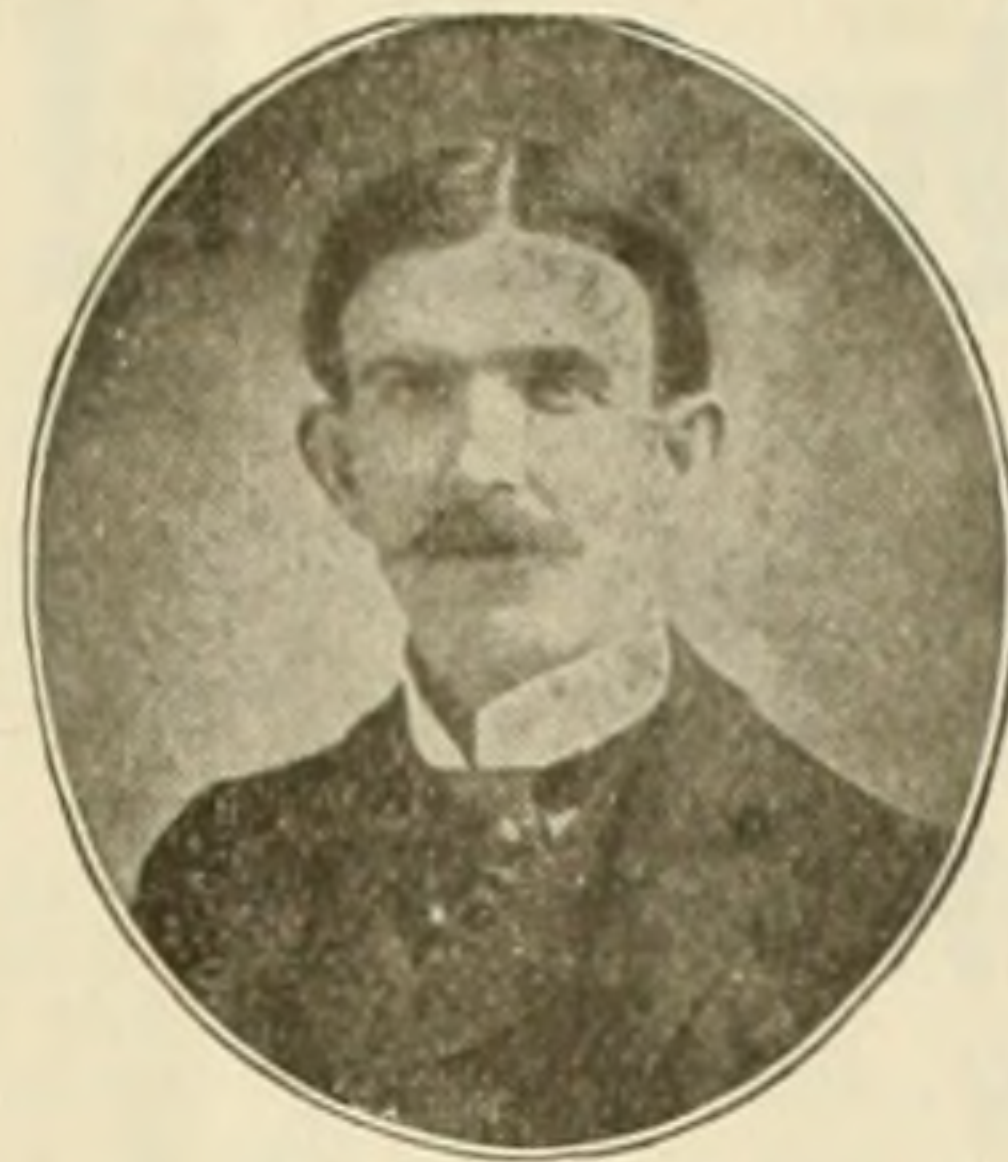
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## NORWOOD'S Texas-Bred—QUEENS

Three-banded Queen-Bees bred for business. Try them, then you'll know. Untested, \$1.00; six, \$5.00. Write us. 5Atf

E. B. NORWOOD, Del Valle, Tex.

Please mention Am. Bee Journal when writing.



"If goods are wanted quick, send to Pouder"  
(Established 1889)

## BEE-SUPPLIES

Standard hives with latest improvement; Danzenbaker Hives, Sections, Comb Foundation, Extractors, Smokers—in fact, everything used about the bees. My equipment, my stock of goods, the quality of my goods, and my shipping facilities, can not be excelled.

### Paper Milk Bottles,

for Extracted Honey. Made of heavy paper and paraffin coated, with tight seal. Every honey-producer will be interested. A descriptive circular free.

Finest **White Clover Honey** on hand at all times. I buy **Beeswax**. Catalog of supplies free.

Watter S. Pouder, Indianapolis, Ind.

859 Massachusetts Ave.

## HAND-MADE SMOKERS

Extracts from Catalogs—1907:

Chas. Dadant & Son, Hamilton, Ill.—This is the Smoker we recommend above all others.

G. B. Lewis Co., Watertown, Wis.—We have sold these Smokers for a good many years and never received a single complaint.

A. I. Root Co., Medina, Ohio.—The cone fits inside of the cup so that the liquid creosote runs down inside of the smoker.

All Bingham Smokers are stamped on the tin, "Patented 1878, 1892, and 1903," and have all the new improvements.

Smoke Engine—largest smoker made.....	\$1.50—4	inch stove
Doctor—cheapest made to use .....	1.10—3½	"
Conqueror—right for most apiaries .....	1.00—3	"
Large—lasts longer than any other.....	.90—2½	"
Little Wonder—as its name implies .....	.65—2	"



The above prices deliver Smoker at your post-office free. We send circular if requested.

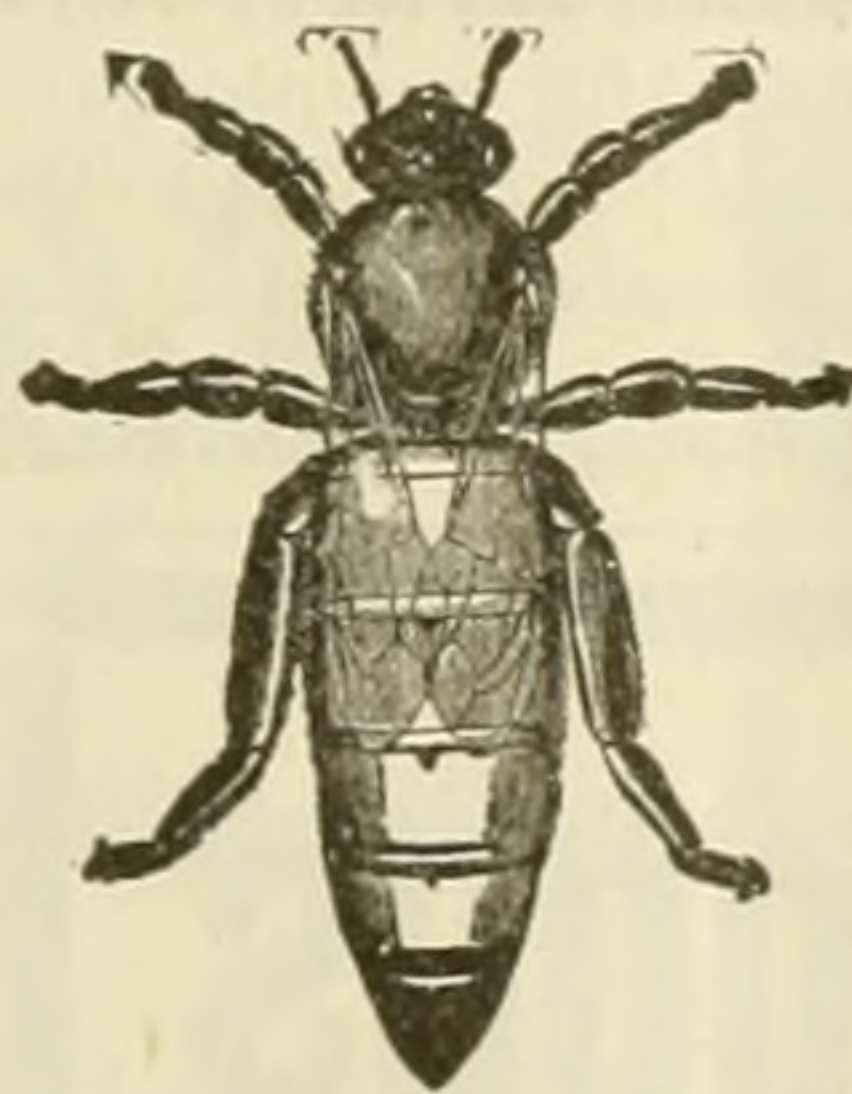
Original Bingham & Hetherington Uncapping-Knife.

T. F. BINGHAM, Alma, Mich.



Patent-d, May 20, 1879. BEST ON EARTH.

Please mention Am. Bee Journal when writing.



## DOOLITTLE'S "Scientific Queen-Rearing"



This is G. M. Doolittle's master-piece on rearing the best of queens in perfect accord with Nature's way. It is for the amateur and the veteran in bee-keeping. The A. I. Root Co., who ought to know, say this about Doolittle's queen-rearing book:

"It is practically the only comprehensive book on queen-rearing now in print. It is looked upon by many as the foundation of modern methods of rearing queens wholesale."

Mr. Doolittle's book also gives his method of producing comb honey, and the care of same; his management of swarming, weak colonies, etc. It is a book of 126 pages, and is mailed at the following prices: Bound in cloth, \$1.00; bound in leatherette, 75 cents.

### Special Clubbing Offer

We offer a cloth-bound copy of this book with the American Bee Journal one year—both for \$1.50; or a copy of the leatherette-bound edition, with the American Bee Journal one year—both for \$1.25. The cloth-bound book given free for getting 3 new subscribers at \$1. each; or the leatherette-bound copy given for 2 new subscribers.

Every bee-keeper should have a copy of Mr. Doolittle's book, as he is one of the standard authorities of the world on the subject of queen-rearing and everything else connected with bee-keeping and honey-production,

George W. York & Co.,

Chicago, Ill.

## Queens Of the 3-Band Leath'r Color'd Strain from Imported Stock

75 cents each. Selected, \$1.00.

Circular Free.

3A8 O. F. Fuller, Blackstone, Mass.

REF.—Arthur C. Miller, Providence, R. I. Please mention Am. Bee Journal when writing.

## Bee-Supplies

Distributor of Lewis' Bee-Supplies at Factory Prices in Iowa. Also Red Clover and Leather-Colored Italian Queens; and the Folding Berry Boxes, and the old-style Boxes.

Beeswax wanted. Send for Catalog.

W. J. McCARTY, Emmetsburg, Iowa

Please mention Am. Bee Journal when writing.



# American Bee Journal

## Tennessee-Bred Queens!

**All from Extra-Select Mothers,  
Davis' Best, and the  
Best Queens Money Can Buy**

38 Years' Experience in Queen-Rearing.  
Breed Three-Band Italian Queens Only.

November 1st to July 1st			July 1 to Nov. 1					
1	6	12	1	6	12			
Untested.....	\$1.00	\$5.00	\$ 9.00	\$ .75	\$4.00	\$7.50	Select Breeder	\$4.00
Select Untested..	1.25	6.50	12.00	1.00	5.00	9.00	Nuclei; no queen	1 fr 2.00
Tested .....	1.75	9.00	17.00	1.50	8.00	15.00	" " " 2 "	3.00
Select Tested....	2.50	13.50	25.00	2.00	10.00	18.00	Colony, " " 3 "	4.00
							" " " 8 "	8.00

Select queen wanted and add price to price of nucleus or full colony.  
For queens to be exported, add 20 percent to these prices, except to Canada, Cuba or Mexico.

## JOHN M. DAVIS,

Dealer in, Importer and Breeder of  
**ITALIAN QUEEN-BEES**

Depot, Telegraph and Express Offices,  
Ewell Station on L. & N. R. R. **SPRING HILL, TENN.**

*Please mention Am. Bee Journal when writing.*

### HONEY AND BEESWAX

When consigning, buying,  
or selling, consult

**R. A. BURNETT & CO.**

199 South Water St. Chicago, Ill

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### Cook's Honey-Jar.

With patent AIR-TIGHT SANITARY STOPPER is the Best and Cheapest Honey-Jar made. Sold only by

**J. H. M. Cook, 70 Cortlandt St., N. Y. City.**

Send 10 cents (half postage) for sample Jar, and catalog of WELL-BRED BEES, QUEENS, HIVES, etc.

The oldest Bee-Supply Store in the East. 2Atf

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## MARSHFIELD BEE-GOODS

FRIEND BEE-KEEPER—We are prepared to fill your orders for **Sections**. A large stock on hand. Also a **Full Line of Bee-Supplies**.  
**We make prompt shipments.**

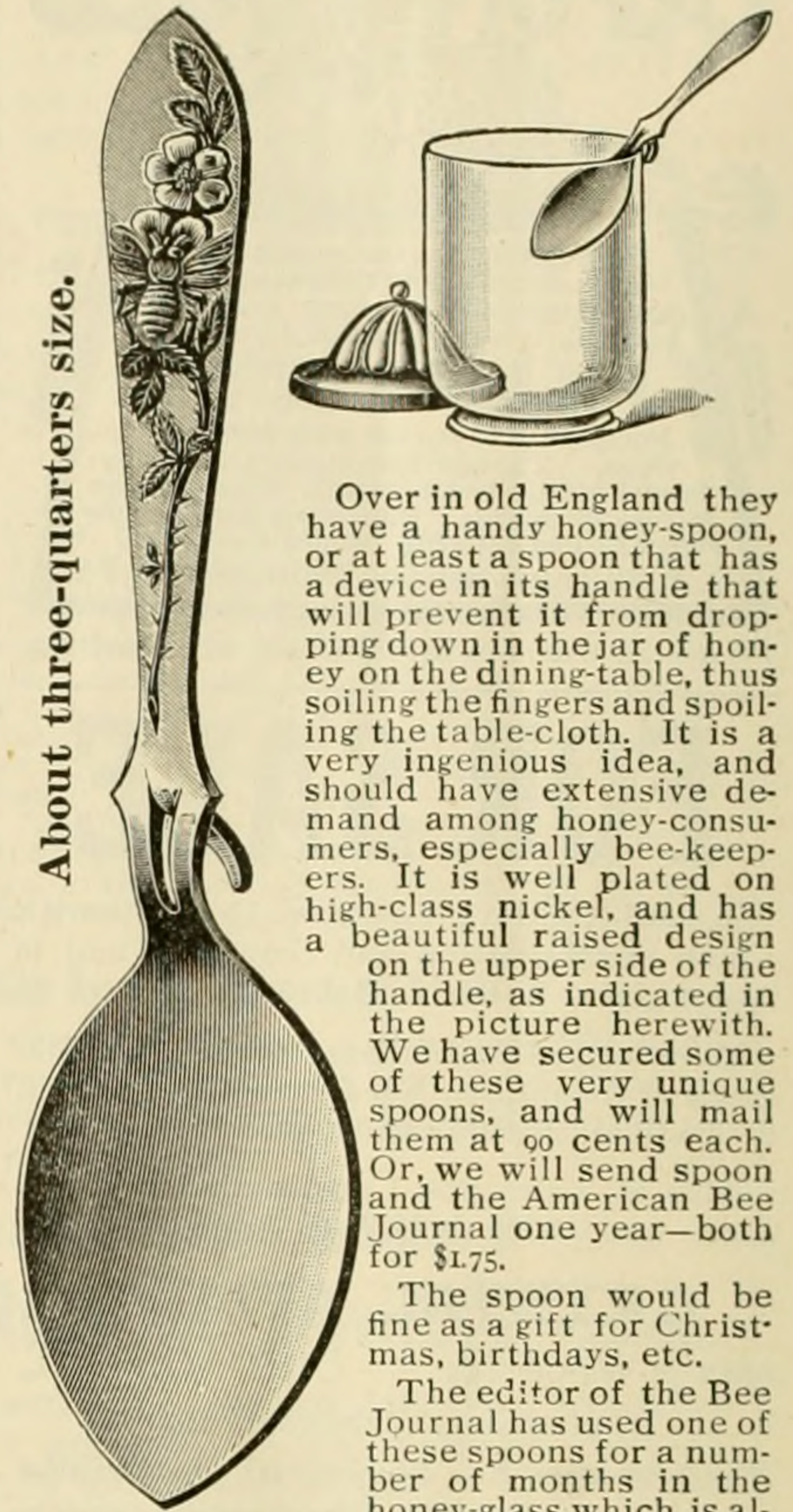
**MARSHFIELD MFG. CO.,**

**Marshfield, Wis.**

IOWA—J. W. Bittenbender, Knoxville, Gregory & Son, Ottumwa.  
KANSAS—S. C. Walker & Son, Smith Center.  
MICHIGAN—Lengst & Koenig, 127 South 13th St., Saginaw, E. S.  
S. D. Buell, Union City.  
NEBRASKA—Collier Bee-Supply Co., Fairbury.  
CANADA—N. H. Smith, Tilbury, Ont.

ARIZONA—H. W. Ryder, Phoenix.  
MINNESOTA—Northwestern Bee-Supply Co., Harmony.  
ILLINOIS—D. L. Durham, Kankakee.  
OHIO—F. M. Hollowell Harrison.  
TEXAS—White Mfg. Co., Blossom.  
WISCONSIN—S. W. Hines Mercantile Co., Cumberland.  
J. Gobi, Glenwood.

### An English Honey-Spoon



About three-quarters size.

Over in old England they have a handy honey-spoon, or at least a spoon that has a device in its handle that will prevent it from dropping down in the jar of honey on the dining-table, thus soiling the fingers and spoiling the table-cloth. It is a very ingenious idea, and should have extensive demand among honey-consumers, especially bee-keepers. It is well plated on high-class nickel, and has a beautiful raised design on the upper side of the handle, as indicated in the picture herewith. We have secured some of these very unique spoons, and will mail them at 90 cents each. Or, we will send spoon and the American Bee Journal one year—both for \$1.75.

The spoon would be fine as a gift for Christmas, birthdays, etc.

The editor of the Bee Journal has used one of these spoons for a number of months in the honey-glass which is always on his table, and he would not like to be without this spoon again, as it is so convenient, and also unusual in this country. We can fill orders promptly now. You certainly would be pleased with this honey-spoon, and so would any one to whom you might present it. Send all orders to,

**GEORGE W. YORK & CO.,**

146 W. Superior St., - CHICAGO, ILL.

*Please mention Am. Bee Journal when writing.*

We will pay 30 cents a pound for  
Choice Quality Pure

## BEESWAX

delivered New York, until further notice.

We are in the market for

## HONEY

Both COMB and EXTRACTED.  
State quantity you have to offer,  
with all particulars.

**HILDRETH & SEGELKEN,**

265-267 Greenwich St.,

**NEW YORK, N. Y.**



**Honey and Beeswax**

CHICAGO, Sept. 15.—Comb honey continues to sell upon arrival. The fancy comb is bringing 17c, and No. 1 to A No. 1, 15@16c. The amber grades are also unchanged at a range of from 1@3c less. White extracted honey is bringing from 8@9c, according to how much white clover and linden there is therein. The amber grades, from 7@7½c. Beeswax, 30@32c, with an active market for all lines.  
R. A. BURNETT & Co.

DENVER, Sept. 16.—We quote new comb honey in a jobbing way as follows: Strictly No. 1 white, per case of 24 sections, \$3.60; No. 1 light amber, \$3.35; No. 2, \$3.15. Extracted honey, white, 8½c per lb.; light amber, 7½c; strained, 6¾c. We pay 25c per lb. for average yellow beeswax delivered here.  
THE COLO. HONEY-PRODUCERS ASS'N.  
F. Rauchfuss, *Mgr.*

INDIANAPOLIS, Sept. 20.—The new crop is now moving, and demand seems to be exceptionally good for this season of year. Jobbers are offering fancy white comb at 18c; No. 1 white, 17c. Finest extracted at 10c, with some slight reductions on large quantities. It is presumed that producers are being paid about 2c less than above quotations. This is not a desirable market for amber honey. Producers of beeswax are being paid 28c cash, or 30c in trade.  
WALTER S. POWDER.

NEW YORK, Sept. 15.—We are having a good demand for comb honey, principally for No. 1 and fancy white stock. Receipts are rather light as yet, but will increase from now on. We quote: Fancy white, 15c (some exceptionally fancy lots may bring 16c); No. 1, 14c; No. 2, 13c. There are no prices established as yet on dark and buckwheat, and none on the market thus far.

These grades will range from 11@12c, possibly 13c for strictly fancy. Extracted honey in good demand, all grades. California, white and water white, 9@9½c per pound; light amber, 8@8½c; Southern, common average, 65@75c a gallon; better grades, 75@80c. (All according to quality.) West India, such as Cuban and Porto Rico, 75c a gallon. New York State white clover, 8½c per pound; dark and buckwheat, 7½c. Beeswax quiet at 29@30c.  
HILDRETH & SEGELKEN.

BOSTON, Sept. 19.—Fancy white comb honey at 16@17c; No. 1, 11@15c. Fancy white extracted, 9@10c. Beeswax, 32c.  
BLAKE-LEE CO.

KANSAS CITY, Mo., Sept. 15.—The receipts of both comb and extracted honey are good, and the demand active. We quote: No. 1 white comb, 24 sections, per case, \$3.35@3.50; No. 2, \$3.00@3.25; No. 1 amber, \$3.00; No. 2 amber, \$2.50@2.75. White extracted, per lb., 7½@8c. Amber, 6½@7c. Beeswax, per lb., 25c.  
C. C. CLEMONS PRODUCE CO.

ZANESVILLE, OHIO, Sept. 20.—Honey is in good demand at the present time. Fancy white comb brings, in a wholesale way, 17½@18c; No. 1, about 17c. Best white extracted in 60-lb. cans, 9½@10c. Producers are offered for beeswax 28c cash, or 30c in trade. Wholesale prices vary from 32@35c, according to quantity.  
EDMUND W. PEIRCE.

CINCINNATI, Sept. 14.—The market on comb honey is very firm, prices ranging in a wholesale way from \$3.75@4.00 per case for No. 1 and fancy. Off grades are not wanted at any price. Amber in barrels is selling at 6½@7c, according to quality. White clover extracted 9@9½c; white sage, 9½c; California light amber, 8½c. Beeswax is in fair demand, \$32 per 100 lbs. These are our selling prices, not what we are paying, therefore govern yourselves accordingly on these prices.  
C. H. W. WEBER & Co.

CINCINNATI, Sept. 17.—The demand for all kinds of honey is very good. Comb honey sells about as fast as the shipments arrive. The fancy grade sells readily to the grocers at 16@16½c; No. 1, 15½@16½c. For white extracted honey in 60-lb. cans we are getting 8½@10c, according to quality and quantity.

Amber in barrels at 5¾@7½c, according to quality and quantity. The above prices are the selling prices. For beeswax we are paying from 28@30c a lb. for choice bright yellow free from dirt, delivered here.  
THE FRED W. MUTH CO.

**FALCON FOUNDATION**

Years of experience in the manufacture of

**FALCON COMB FOUNDATION**

have made it PERFECT.

Bees like it, and the foremost

**Honey-Producers Use It.**

It helps materially to increase the

**Honey Crop**

(Send for our new Catalog.)

Ship us your

**BEESWAX**

to FALCONER, N. Y.

Will send shipping-tags, when you write asking for quotations.

We pay highest market prices.

**W. T. FALCONER MFG. CO.**

JAMESTOWN, N. Y.

**HONEY WANTED**

When you have any to offer, let US hear from you.  
If it is Comb Honey, state how it is put up, and the grade;  
If it is Extracted, mail us a Sample and state your lowest price delivered Cincinnati.

**We can use any amount, and are always in the market**

**C. H. W. Weber & Co.**

2146 Central Avenue,

Cincinnati, Ohio



## BEE-KEEPERS OF THE NORTH

Is Your crop of White clover Honey Short? We can furnish you

# ALFALFA HONEY

Both White and Water-White. Finest Quality. Prices quoted by return mail, and Shipments made Promptly.

**BEE SWAX** wanted for Cash or in Exchange for Bee-Supplies.

Beeswax Worked for you into

**Dadant's Foundation**

Best by Test. Let us send you proof.

Early Order Discounts now offered for Cash.

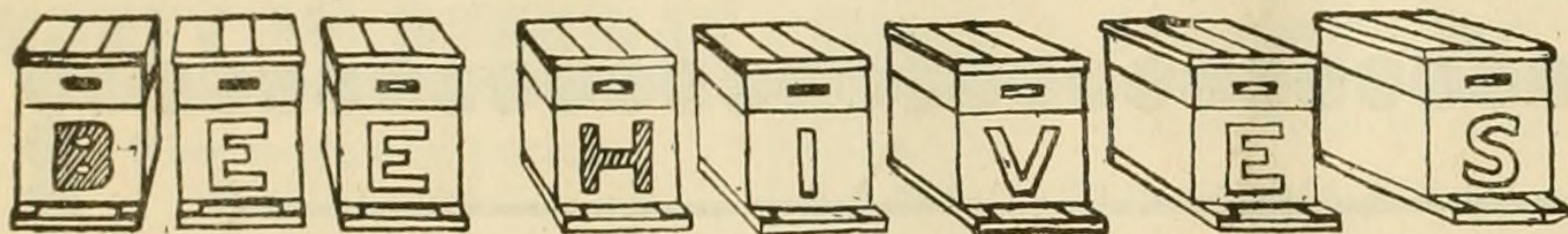
Satisfaction Always Guaranteed.

**DADANT & SONS, Hamilton, Illinois.**

BEE-KEEPERS OF THE WEST

BEE-KEEPERS OF THE EAST

## BEE-KEEPERS OF THE SOUTH



Are our **Specialty**. We furnish such extensive bee-keepers as E. D. Townsend and others. Consider getting your bees into **Protection Hives** this Fall. Give us list of Goods wanted.

**A. G. WOODMAN CO., Grand Rapids, Mich.**

Please mention Am. Bee Journal when writing.

## 50,000 Copies "Honey as a Health-Food" To Help Increase the Demand for Honey

We have had printed an edition of over 50,000 copies of the 16-page pamphlet on "Honey as a Health-Food." It is envelope size, and just the thing to create a local demand for honey.

The first part of it contains a short article on "Honey as Food," written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last is devoted to "Honey Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey as a food, the more honey they will buy.

Prices, prepaid—Sample copy for a 2-cent stamp: 50 copies for 90 cents; 100 copies for \$1.50; 250 copies for \$3.00; 500 for \$5.00; or 1000 for \$9.00. Your business card printed free at the bottom of front page on all orders for 100 or more copies.

Address all orders to

**GEORGE W. YORK & CO.,**

**Chicago, Ill.**

## Sweet Clover Seed!

Sweet Clover is rapidly becoming one of the most useful things that can be grown on the farm. Its value as a honey-plant is well known to bee-keepers, but its worth as a forage-plant and also as an enricher of the soil are not so widely known. However, Sweet Clover is coming to the front very fast these days. Some years ago it was considered as a weed by those who knew no better. The former attitude of the enlightened farmer today is changing to a great respect for and appreciation of Sweet Clover,

both as a food for stock and as a valuable fertilizer for poor and worn out soils.

There are two kinds of Sweet Clover. One is the White variety which grows sometimes as tall as 6 to 7 feet. The other is the Yellow, which grows perhaps as high as 2 to 3 feet. The latter blooms from 3 to 4 weeks ahead of the White, which (the White) begins blooming in the latitude of Chicago about July 1st, and continues in profuse bloom until frost kills it off. It is one of the best nectar-yielders known, and the honey produced from it is second to none.

The seed can be sown any time from now until next April or May. From 18 to 20 pounds per acre of the unhulled seed is

about the right quantity to sow. The seed is not yet as plentiful as it might be, for the reason that a good many who could gather it don't know its value, or that there is a demand for it sufficient to pay for the work of harvesting, threshing, etc. We, however, have been able to secure a quantity of the unhulled White Sweet Clover Seed, which unhulled is considered the best for sowing, by those who have had the longest experience with it. We can ship promptly at the following prices:

Postpaid, 1 pound for 30 cents, or 2 pounds for 50 cents. By express or freight, f. o. b. Chicago—5 pounds for \$1.00; 10 pounds for \$1.75; 25 pounds for \$4.00; 50 pounds for \$7.50; or 100 pounds for \$12.00.

If wanted by freight, it will be necessary to add 50 cents more for cartage to the above prices on each order.

If seed is desired of the Yellow Sweet Clover, add 5 cents per pound to the above prices.

Address all orders to,

**Arnd Honey & Bee-Supply Co.,**

148 W. Superior St., CHICAGO, ILL.

## A Bargain in Glass Jars!

Because we have more than we want we are going to offer some all-white, flint glass jars, with no lettering, and which are up-to-date for less than their real value.

The pound size can be used with either corks or paper discs. The latter are much cheaper, and really more desirable than corks. With paper discs (the most perfect stopper known), we will make the price only \$3.40 per gross.

The small size holds 5 ounces of honey, and it is known to the trade as the "dime jar." The regular price of this size with corks is \$3.25 per gross; but we will let them go at \$2.25 per gross.

The foregoing are real bargains for any one who uses glass honey-jars.

Jars will be shipped direct from Pittsburg, Pa., but address all orders to,

**SNYDER BEE & HONEY CO.**

KINGSTON, N. Y.

Please mention Am. Bee Journal when writing.