

# The Canadian Bee Journal

Devoted to the Interests of Bee-Keepers

Vol. 18, No. 3.

March 1910

\$1.00 Per Annum

THEN there came a time of struggling for some self-spacing arrangement, closed-end, partly-closed-end, and what not. I tried a good many different kinds. Closed-ends were probably warmer for wintering, and were certainly self-spacing, but it took time to avoid killing bees, and the trouble with propolis was no small matter. Half-closed-ends were the same in kind, only different in degree.

Of these last the Hoffman is probably the most popular, and I put in use enough to fill a few hives, and most of them are still in use. When new they work very nicely, but as propolis accumulates the difficulty of handling increases, and the frames become more and more crowded, until it is almost impossible to get out the dummy, the easier thing being to pry out with a good deal of force, the first frame, either with or without the dummy. Indeed, the difficulty of getting out the frames is so great, that the sight of a set of Hoffman frames when the cover is removed always produces something like a shudder.

Although I could not have anything in the line of closed-ends, I wanted the advantage of the self-spacing, and not finding anything on the market to suit me I was, in a manner, compelled to adopt something of my own "get-up," and so for several years I have used with much satisfaction the Miller frame.—Dr. Miller's "Forty Years Among the Bees."

PUBLISHED BY

The HURLEY PRINTING CO.  
BRANTFORD, CANADA

## THAT PILE OF OLD COMBS

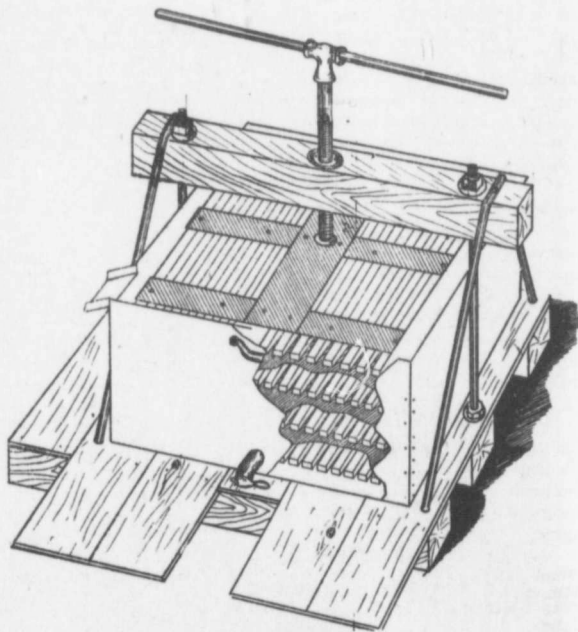
**T**HE Honey Season over, and the bees snugly packed away for the Winter, the Bee-keeper will be able to turn his attention to the accumulation of old and broken combs in the honey house and other places. To the careful Apiarist this accumulation represents so much extra cash over and above his honey crop, and will be treated accordingly. He uses a Wax Press, of course—the latest and best.

The old systems of boiling and steaming did not extract much more than half the wax the comb contained, the steam press was better but still there was sufficient left in the refuse to make it excellent but expensive fire kindling. The latest and best is that of pressing under water, which separates and washes out the wax, practically removing every particle of the valuable.

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Wax Taken  
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BRANTFORD, ONTARIO

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March, 1910

**The Canadian Bee**

Devoted to the Interests of Beekeepers

JAS. J. HURLEY

Published monthly  
The HURLEY PRESS  
Brantford

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Incorporated March, 1886

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Place of Meeting: Toronto. Hall and dates to be selected by Executive.

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Brantford

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JAS. J. HU

Vol. 18, No. 3.

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1910

# The Canadian Bee Journal

PUBLISHED MONTHLY

JAS. J. HURLEY, EDITOR, BRANTFORD, ONTARIO, CANADA

Vol. 18, No. 3.

MARCH, 1910

Whole No. 541

If there was any one point brought out with more emphasis than another at the New York Conventions, it was the importance of having Italian bees in combatting black brood. One inspector after another got up and stated with emphasis that it was simply impossible to cure black brood with black bees.—Bee-Keepers Review.

\* \* \*

In the Farmers Advocate of February 3rd, Mr. Holtermann, replying to certain questions asked by a correspondent, has this to say in reply to the following question: "Is there any way that a person can cure foul brood?" He replies, "Yes. The method is to shake the bees from diseased comb, honey, pollen and brood, giving them starters of comb foundation in frames. After two days, shake again upon starters of full sheets of foundation."

Is this an error of the printer, or is it an oversight on Mr. Holtermann's part? "Two" days is not long enough; it should have read "four".

\* \* \*

That our Department of Agriculture is fully alive to the interests of apiculture is shown by recent action in reference to the experimental apiarist, Mr. Pettit, whose salary has been raised to \$1500. per annum. He is now to give his whole time to the work. He will be located at Guelph, in connection with the Agricultural College, where one of the experimental apiaries will be kept. A small apiary will be retained at Jordan Harbor, and conducted as an "out apiary." Guelph will, however, be the headquarters for all apicultural work, both in teach-

ing and experiment. An appropriation of \$750 has been set aside this year for an apicultural equipment at Guelph. All correspondence should be addressed to Mr. Pettit, at the O.A.C. Guelph. Mr. Pettit will not have any special district in connection with the inspection work the coming season, but will possibly be called in to settle any disputes which may arise, or look after any cases that the Department may consider specially serious. An additional grant of \$500 for the inspection work has also been made by the legislature, so that the figure now stands at \$3000. With some slight increase in the number of inspectors it is still thought necessary to limit each inspector to a certain number of days in the season, possibly this will vary somewhat according to the districts, dependent upon knowledge gained from past years as to the extent of foul brood in each district. This is a matter that will receive attention before the inspection season opens. All these matters had been arranged by the Department some time ago, but owing to the fact that the estimates could not be made public before their submission to the House, the announcement could not be made earlier. These changes are almost entirely due to the indefatigable efforts of Mr. Hodgetts, who has kept himself in close touch with Provincial apicultural requirements, and whose sane advice has been most helpful to the Minister and his deputy. All of the above is a distinct advance in the status of apicultural in the province. It will now take rank with other important agricultural departments at the Agricultural College.

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Journal  
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How prodigal nature sometimes is of life; and how stupidly wasteful and destructive. With the fine weather during the first days of March our bees began to clean house. The weather being very mild the bees flew freely. Sunday, the 6th was very mild. Being at home on this day, we of course took a view of the bees, and watched their activities after their long rest. A large number of dead bees lay at the entrances. We were wondering how many of these were dead when coming from the hive. Perhaps not more than 50 per cent. of them. Many lit upon the snow, never to rise again. But that phenomenon which brought forth the opening remark of this paragraph lay in the fact that when a bee flew out with a dead one, it found an almost impossible task to get loose from it. Its struggles seemed of no avail. However it turned, the dead bee turned with it, being apparently of no weight. The vigorous fanning of the wings seemed to be of no avail; all its efforts to fly seemed to be retarded by what appeared to be the excessive weight of the dead bee. Finally in its struggles it drops from the alighting board into the snow or water below, where it is doomed to death, tied to its dead companion. Can anything be thought of more pitiful or pathetic, to be embraced by the dead, and be without power to shake ones self free. We witnessed this act many times over and over. We felt our helplessness when nothing could be devised to render help to the busy little house cleaner, who was offering up his life that the home may be cleaned. What a lesson for us humans. And alas! how clumsy nature is—sometimes.

\* \* \*

We have pleasure in clipping the following from the Irish Bee Journal:

Honouring an Irishman in Canada.—A purse and an address have been presented to the famous Wm. McEvoy "on behalf of bee-keepers generally, and members of the Ontario Association in particular." Mr. Holtermann, referring to the happy event, in Gleanings, says that Canadians are proud of McEvoy. "The Germans

have invented almost everything that has developed modern apiculture; the United States has very largely improved upon these inventions; but a Canadian has discovered how to grapple with Foul Brood." Upon this, the Canadian Bee Journal makes the following comment—"Yes, the Germans have done much, but McEvoy—he's Irish. Hurrah for Ireland. I.B.J. please copy." It is like the Canadian Bee Journal to give honour where honour is due. We congratulate Wm. McEvoy upon his success, and Canada upon its Bee Journal.

\* \* \*

By including Apiculture as one of the subjects to be dealt with by the Experimental Union, Mr. Pettit has given evidence that he is on his job. This is a decided step forward, and shows what can be done under proper organization, with a good man leading the way. This year experiments with swarming will be taken up. We trust our readers will show their appreciation by co-operating heartily and writing Mr. Pettit at the O.A.C., Guelph, immediately. Now that the Agricultural Department has shown a generous disposition to encourage apiculture, it is up to our bee-keepers to show their appreciation, and thus prove to the Department's satisfaction that it is meeting with the wishes of the bee men, and complying with "a long felt want."

\* \* \*

Mr. J. W. Clark, of Cainsville, is an example of what a man can do who possesses energy and brains. Located on twenty-five acres of land, and combining fruit, poultry and bees, he is demonstrating what can be done by specializing. The offer of a college position at the head of the poultry department at a salary of two thousand a year was not strong enough to pull him off his twenty-five acres. Here is a man who can get ten dollars per dozen for eggs, and twenty-five dollars each for his birds. Recently he has been lecturing at the Agricultural College, Guelph, in connection with their short course, and took pleasure in telling how it was done. He has very generously promised the C.B.J. a thrilling talk on that triumphant trinity, "Fruit, Poultry and Bees."

## NOTES AND CO

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NOTES AND COMMENTS

(By J. L. Byer)

This winter, alternately with our own clover honey we have been using on our table a beautiful sample of basswood honey obtained from a friend near lake Erie. In explanation I might say that it is now eight years since we have had any basswood honey in our locality, and when I had the privilege of tasting the honey referred to, a longing for some of the old style article presented itself, with the result that two sixty pound cans were at once ordered. The honey is of very heavy body, the kind that will simply **rope** when lifted on a spoon, and I suppose largely because of having had none of this honey from the basswood for so long, we think it about the best honey from that source that we have ever had on the table. Nothing uncommon about having basswood honey, no doubt some will be saying, and if it were not for a very peculiar feature that we have found with this particular sample, it is not likely that we would have thought about mentioning the matter.

The honey in question remained perfectly clear till about January 1st, and then when it did granulate, it got to be about the hardest bit of honey that we have ever handled. In fact it is so hard that a heavy knife will take but chips out of the pail that are as white and smooth in the grain as the best cream candy. The peculiar feature that we have referred to comes in evidence when we go to liquify the honey, for instead of getting clear as was the case before it granulated, it persists in having a creamy color so dense that it does not look like honey at all when put in glass.

Perhaps if it were heated long enough this trouble would be done away with, but so far I have but left it twenty-four hours in warm water after it seemed to be all dissolved, and after that length of time the dull, cloudy appearance remains

as stated. The thought came to me, that if honey with this peculiarity happened to come into the hands of some one who was bottling for the trade, quite a bit of trouble might be caused by it, as it certainly would not do to put it up in glass when it looks as I have described. Personally we can advance no reason for the peculiarity, unless as has just occurred to me as I am writing, the fact of us removing it out of the tins in small pieces before melting may cause a lot of air bubbles, which on account of the extreme density of the honey may be a long time in clearing. This is only a theory, and to prove if it has anything to do with the matter, I will melt the next pail used in the same package it is now in. I might say that when the honey was received it was all run into five pound pails so as to be handier for using, and to avoid spoiling the lithographing on these, pails we have been removing the honey into another vessel for liquifying purposes.

[A very nice point Mr. Byer. Your theory is, doubtless, correct. Let us know the result when you have liquified it, without admitting the air.—Ed.]

For quite a few years now, I have been trying to practice with success two items in wintering that are indorsed by a number of apiarists here in Ontario and in other places. These two things are: wintering with sealed covers over the bees, and contracting the entrances of the hives to a space of say four or five inches wide by half an inch deep. Whenever these methods have been tried, results have never been satisfactory for the first named item, and as for the last named, disaster generally followed any colonies that I left with the small entrance till spring. I am aware that a number of good bee-keepers advocate the small entrance, but that does not constitute it a crime to record an honest expression of failure in the hands of another. The smaller entrance, notwithstanding my

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poor success with it, has always appeared to me, in some ways to be **reasonable**, and that factor no doubt explains the fact of my fixing up a few colonies each year that way in the hopes of making a success of the plan. Right here let me remark that where the bees can be readily attended to at any time and the entrances carefully watched, I have no doubt but what the small entrance works all right, but let me add that with the large entrance **always** works all right. So with this years experience again, I believe I will again resolve never to contract the entrance of a strong colony to as small a capacity as is so often advised these days. "This years experience,"—yes, that is the reason that prompts me to mention the subject just now, so I might as well briefly explain, even if it does show poor management or whatever the fraternity may chose to call it.

Some time in early December I happened to be at one of the yards, and as I passed down among the hives I thought how **cold** those big entrances 12 by  $\frac{1}{2}$  looked, and so for **humanitarian** reasons (certainly past experience does not justify me in giving any other reason) I decided to contract those entrances up a bit. This was done by splitting shingles and nailing one over each entrance, after having with a knife cut out an entrance in the centre, about 4 inches wide and  $\frac{3}{8}$  deep. This merciful (?) act was done to sixteen colonies if I am exact, the others being left with the big cold doors as some would say.

Yesterday (February 28th) the bees had a partial flight, and as I happened to be near the yard where the entrances were contracted, I went in and removed the snow from the hives so that the bees could fly if they were so minded. Just here let me say that these colonies were very strong with bees in the fall, and by all appearances in this section there has been more honey dew in the hives than was anticipated, as there are more dead

bees in front of the hives than is usual, and some colonies are showing unmistakable signs of dysentery. Well, the moment I began to take away the snow from these colonies with contracted entrances, it was easy to see that all was not as it should have been. February has been a steady cold month with no thaws, and as a result the dead bees had not been gathered out at any time and the floor had got covered and then the **entrances** had got jammed. That is at least what had happened to these sixteen colonies, and if I had not got around when I did, no doubt all would have been badly damaged, if not destroyed. As it was, one colony was completely closed, and as I came to it there was a roar that could be heard outside plainly. After some work the entrance was cleared and the bees came out with a rush, but judging from the odor of the colony and the looks of the entrance after the flight, the colony in question is to be of the no good class for 1910, even if it should not die outright. I might yet add that in the cleaning of the entrances, the first thing that was done was to pull off those shingles and throw them at least far enough away so that I would not be tempted to tack them on again before April at the earliest. To-day I was at the Cashel apiary that has received no more attention than the bees I have been talking about—less in fact, as I did not **shingle** any of the entrances there. Of the ninety colonies in the yard, not one was bothered in the least with dead bees in the entrances. Those that want to close up the entrances for winter may, this is a free country, but as for this scribbler, we want for a strong colony nothing less than ten or twelve inches wide by one-half inch deep. A number of our hives have entrances five inches wide and one inch deep, and aside from the danger of mice entering, this entrance gives best results of all in yards that cannot be visited often during the winter,

March, 1910  
and that are apt to be for any length of time

Again referring to ed covers versus porous the bees, we would sa ter with sealed covers the bees so much be style of packing, we r to leave the plan that

#### TAKING BEES F HOFFMAN Indexed

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I would be obliged your correspondents, hint on the best mod from cellar, (which with bottom boards Boardman plan, havi tween each hive), so t out around cellar wh hives; also if you thi practice to commence frames. I have now on the wide top l frames, and like the as I will require m spring, and think the advantages over the s used the former) wou it would be advisable when ordering new with the stapled one interchangeable? A any of your readers received.

Mt. View P.O., We

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hives than is usual, showing unmistakably. Well, the moment I saw the snow from the contracted entrances, I thought it all was not as it was. In February has been a month with no thaws, and the bees had not been out of the time and the floor, then the entrances are at least what I call the sixteen colonies, around when I did, they have been badly damaged. As it was, one was closed, and as I heard a roar that could not be only. After some were cleared and the bees rushed, but judging from the colony and the entrance after the flight, the bees were of the no good kind, it should not die, but that in the entrance, the first thing I did was to pull off those bees, at least far as I could. I would not be able to go on again before long. To-day I was at the entrance, has received no bees I have been able to act, as I did not see the entrances there. Of the yard, not one was left with dead bees, those that want to stay for winter may, but as for this, I have a strong colony of twelve inches deep. A number of entrances five inches deep, and aside from the entrance, this entrance is all in yards that during the winter,

and that are apt to be covered with snow for any length of time.

Again referring to the question of sealed covers versus porous absorbents over the bees, we would say that we can winter with sealed covers, but as we winter the bees so much better with the other style of packing, we now deem it unwise to leave the plan that gives best results.

#### TAKING BEES FROM CELLAR— HOFFMAN FRAMES

Enclosed find order for \$1.50, being subscription for the Canadian Bee Journal. I think the Journal is much improved under the present management, and wish you every success with same.

I would be obliged if you, or any of your correspondents, would give me a hint on the best mode of removing bees from cellar, (which have been stowed with bottom boards removed, after the Boardman plan, having 4 inch space between each hive), so that they may not fly out around cellar when one goes to lift hives; also if you think it would be good practice to commence using the Hoffman frames. I have now perhaps 20 colonies on the wide top bar, staple spacing frames, and like them fairly well. But as I will require more new ones this spring, and think the Hoffman has some advantages over the stapled ones, (I never used the former) would you advise me if it would be advisable to get the Hoffman when ordering new ones, or continue on with the stapled ones. Would they be interchangeable? A word from you or any of your readers would be thankfully received.

JAS. GARDNER.

Mt. View P.O., Wellington Co., Ont.

[Answering the last question, first, we would advise you to stay with the frames you have. They are much better. The Hoffman frames are interchangeable with them, but you will find the staple spac-

ing away ahead of the Hoffman. We would say by no means make the change. If you do, we believe you will regret it.

#### Removing Bees from Cellar

Open your cellar doors some hours before commencing to remove the bees, so that the temperature of the cellar will be the same as that outside. Keep the cellar dark. Avoid taking in lights. Handle the bees quickly and gently. Have your bottom boards all ready to set the hive upon, and carry it out on its bottom board, and set it down gently on its stand. A little care and discretion will avoid all trouble. Having the temperature of the cellar the same as that outside is the main feature. We quote the following from Dr. Miller's "Forty Years Among the Bees", which bears specially upon your question. Observe closely what he says, and you will have no trouble.

#### Cellar Aired Before Carrying

"When it is warm enough to carry out bees, it will be understood that the cellar is likely to become a good deal warmer than 45 degrees, the temperature near which it is desirable to keep the cellar throughout the winter. So if carrying out is undertaken without any previous preparation, when the cellar-door is opened the bees will pour out of the hives and out of the cellar-door, sailing about in confusion, causing some loss and making the work of carrying exceedingly unpleasant. This must be avoided; so the previous evening, as soon as it becomes dusk, cellar door and window are thrown wide open.

Having the cellar open the previous night makes it much pleasanter to carry out the bees, which do not generally come out of their hives till some time after being set on their stands. If at any time a colony seems inclined to come out of the hive, a little smoke is given at the entrance. At other times it would be bad to have smoke in the cellar, but as the bees are immediately to have a chance to fly, it does no harm to have the cellar filled with smoke.

#### Taking Bees All Out at Once

Some object to taking all the bees out at the same time, for fear of so much excitement that the bees will swarm out and return to the wrong hives. I have never had much trouble in that way.

Neither have I had any evil results from putting colonies on stands different from the ones they occupied the previous fall.

I am not sure that I can tell for certain just why there should be this difference in different apiaries, but I think I can see some reason for it. As already mentioned the cellar is left wide open all night the night before the bees are carried out, and it is possible that just in that little thing lies the secret of the difference. When the weather begins to warm up in the spring, before it is time to cary out the bees, it often happens that there comes a warm day when the outside temperature runs up to 50 degrees or more, and possibly this may continue more than a day. Such times are hard on the ventilation of the cellar.

#### Temperature and Ventilation

Please remember that the ventilation of the cellar depends on the difference of the weight of the air in the cellar and the weight of the outside air. Also remember that the difference in weight depends on the difference in temperature. Warm air is lighter than cold air. So when the air outside the cellar is colder and heavier than that inside, it forces itself in and crowds up the warm air, precisely in the same way—although not with the same degree of force—precisely in the same way that water would pour into the cellar if a body of water surrounded the cellar. If the water were lighter than the air, no water would flow into the cellar. So long as the outside air is colder than the inside ventilation continues.

Suppose, now, that the air in the cellar stands at 45 or 50 degrees, and that the outside air becomes warmed up to the same temperature. There will be an equilibrium in weight and there will be no ventilation. The air in the cellar is all the time becoming vitiated by the breathing of the bees, and no matter what the ventilation of the hives, it can do little good so long as there is no pure air in the cellar. The bees become frantic in their desire for fresh air, and if carried out while in this condition they will rush out of the hive, the excitement becoming so great that soon after being put on their stands whole colonies will swarm out. If the cellar has been open all night, they will find little change of air on being carried out, and so will not fly out of the hives for the sake of getting air, but only to take their cleansing flight."

### MAKING AND CLARIFYING OF BEESWAX

*Indexed*  
Some observations by Orel L. Hershiser

As indicated by numerous inquiries, many bee-keepers are in need of and seeking for information on this important subject, notwithstanding all that has been said at conventions and written in the apicultural press.

All who have investigated wax extracting methods are agreed that the crude process employed prior to the introduction of scientifically constructed devices for separating the wax from the slumgum were grossly wasteful of this valuable product of the apiary. All bee-keepers who still employ antiquated methods are sustaining a loss, or rather a waste, of wax in the same proportion as did our predecessors of the craft.

It was formerly the opinion of many bee-keepers that old black comb contained very little wax, and it is safe to say that many thousand pounds of the precious substance has been burned, buried or consigned to the compost heap in utter ignorance of the fact that dollars were being almost literally thrown away.

In the opinion of the writer, wax is the easiest product of the apiary to gather and keep. There is no rush necessary to extract the materials. If kept dry and free from moth they will remain unimpaired indefinitely and may be rendered when other apiarian duties are not crowding. A box or other receptacle should be kept in a handy place in the apiary in which to save all discarded combs and scrapings as they accumulate. It will be surprising to those who have never saved the scrapings when cleaning hives and frames in the spring preparatory to putting on supers, to see how much wax can be gathered up in this way in the course of the season. Do not throw away the black knobs of burr comb found on long used bottom boards; there is lots of wax in them. Do not regard the scrapings

from sections as value a large percentage of comb, such as may be used box hives contain of its weight in wax, amount of pollen and therein. The amount varies; comb built on will contain more wax than is used. If no there will be still less older the comb the greater amount of wax. To illustrate stroth combs that have continuous use, will more than 10 that have been year.

There has been considerable discussion from time to time on the merits of extracting wax by steam versus hot water to be almost universal that the steam press, operated, will leave a large percentage of wax obtainable with the hot water in consequence the la machine is rapidly growing the merits of the cold as against the common water press has come under discussion. The essential difference between the two styles of the cold press the wax the slumgum by means immersed in hot water the water press the wax the slumgum by means immersed in hot water. The press the maximum of from the slumgum by and releasing of press is possible to obtain the desired this intermittent press with hot water by a press without repeating or more times for each treated. By a repetition cooking the material same three or more times

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from sections as valueless; they contain a large percentage of wax. Average old comb, such as may be obtained from long used box hives contains from 35 to 50% of its weight in wax, depending on the amount of pollen and propolis contained therein. The amount of wax in a comb varies; comb built on heavy foundation will contain more wax than if light foundation is used. If no foundation is used there will be still less. Generally the older the comb the greater will be the amount of wax. To illustrate: 10 Langstroth combs that have been ten years in continuous use, will contain more wax than 10 that have been in use but one year.

There has been considerable discussion from time to time on the various methods of extracting wax and notably on the steam versus hot water presses. It seems to be almost universally conceded now that the steam press, when economically operated, will leave in the slumgum a large percentage of wax that is easily obtainable with the hot water press, and in consequence the latter style of wax machine is rapidly growing in favor. Also the merits of the cold press, so called, as against the commonly styled hot water press has come in for more or less discussion. The essential difference between the two styles of presses is that in the cold press the wax is squeezed out of the slumgum by means of a press **not immersed** in hot water, while in the hot water press the wax is squeezed out of the slumgum by means of a press **immersed** in hot water. In the hot water press the maximum of wax is separated from the slumgum by repeated pressings and releasing of pressure. It is impossible to obtain the desirable results of this intermittent pressure and saturation with hot water by means of the cold press without repeating the process one or more times for each lot of material treated. By a repetition of the process of cooking the material and pressing the same three or more times, it is obvious

that reasonably clean work may be accomplished.

It has been claimed that wax from the cold press is of better quality than that from the hot water press. Not having used the former, my impressions are not based upon experience. However, reflection has failed to reveal to the writer why the wax from one process is in any particular different from that of the other. In each are the materials, old comb, cappings or slumgum, cooked in a sufficient quantity of water. In each is both water and wax, in intermixture, squeezed out of the slumgum. In neither is it necessary to overcook the wax or make it of dull color by prolonged boiling. In the cold press the wax and water run out into a receptacle as fast as squeezed from the slumgum, and the operation of cooking and putting through the press is (preferably several times repeated) to ensure desirable results as to reasonably clean extracting, while in the hot water press the wax floats on the surface of the hot water as it is squeezed out of the slumgum, and is drawn or flooded off as it accumulates. If there is any difference here that would affect quality, it is beyond the writer's ken. Perhaps, like the ultra violet rays of light that are said to be present although not discernable, except by the use of delicate and powerful scientific instruments, this alleged superior quality is a reality, although out of sight and impossible to comprehend by the unaided senses. Value, however, is a practical test of quality that appeals to the wax producer, and if the users of the hot water press are advised where they can get a premium on ruling prices for wax produced from the cold press it will be a scoring point that will not be overlooked. In the absence of practical indications of superiority of wax from the cold press the users of the hot water method will continue in the assurance that they are losing nothing on the score of quality.



The reasons for the more satisfactory working of the hot water press are very clear. The cheeses of slumgum being submerged in hot water, the pressing is repeated at intervals, each pressing squeezing out water and wax and each releasing of pressure allowing the slumgum to expand and absorb hot water. The result is that the hot water washes or forces the wax out of the slumgum so that, except a very small residue unprofitable to try to obtain, the slumgum finally contains nothing but water in absorption, and all without the necessity of cooking and pressing more than one time through the extractor.

It is otherwise with the steam press. With it but one pressing is made and even repeated pressings would not avail to accomplish the work in the same thorough manner as is obtained by the use of any of the hot water processes. Oft repeated and carefully executed experiments have demonstrated that the steam press will necessarily leave in the slumgum a large amount of wax, held there by capillary attraction together with a certain amount of moisture which no amount of pressure will expel. The process of subjecting a mass of slumgum to great pressure results in rendering its surface hard and compact, which greatly impedes the escape of wax from the less compressed interior portions. Obviously the thicker the mass of slumgum the greater will be the proportion of wax held back from escape through the constantly hardening exterior of the mass as the pressing continues, and, as in a thick mass the wax has a greater distance to travel to become free, the surface becomes too compact for escape of wax before it is reached. None of these difficulties are present in the hot water process, the intermittent pressure operating to ultimately expel the wax so that, within fractional limits, the wax is secured and only water and a trace is held in capillary attraction.

The solar extractor is popular with most bee and honey specialists. Its economical use is confined to cappings and comparatively new comb that is rich in wax. Its use is not to be recommended for old comb, as the large percentage of foreign material acts as a sponge to hold the wax and prevent it from being released when melted. Slumgum from the solar extractor contains over 30% of wax as a rule. The ease with which wax may be obtained by the use of the hot water press has caused the solar extractor to go out of use with the writer, and I am quite certain that wax produced in the solar from the same kind of materials, cappings or old comb, that is produced from the hot water press would be no better from the point of quality. Be it remembered that such rich and superior materials as white cappings will make the finest quality of wax if simply melted and strained. As the product of the solar extractor is mostly cappings and other high grade materials it is not surprising that it has a good reputation for turning out a fine quality of wax. When it comes to old comb the solar extractor will not take out enough wax to pay for operating it.

A word of caution in the operation of hot water presses may be beneficial to some who have not made the matter a study. The cheeses should not be made too thick. The shorter the distance the wax has to travel to become free the quicker and cleaner will be the work. Better make more cheeses and have them not over half an inch to one inch thick when pressed. When pressing it is profitable to avoid being too hasty. Turn the screw down gently at first, the gradual pressure permitting the wax and water to escape from the cheese. Do not turn the screw down as far as it will go at the first pressing, but when down as far as it will go with very moderate exertion, reverse the motion and release the pressure. This will allow the cheese to become saturated with water again

and when the pressure minutes afterwards is out with it more screw may be turned. This operation, each time turned a little farther until completed. By proceeding with the intermittent operation with hot water washed out of the surface of it remain cheese the best retained found is a loosely woven cloth or burlap as it Bran bags cut up in are good material.

finely woven to admit of wax and water and filled with the slumgum. Wax is one of the things to cleanse of foreign matter the reason that it is usually associated with gravity than the impurities has a few particles of or they are made to or stirring they may be passing through fairly fine results are obtained in a deep vessel. Fine material that are heavy will settle to the bottom moved from the cage.

Never use acid in it is necessary. When the wax is dull appearance as to greatly reduce its value the purchase use of acid you can increase its sulphuric acid will the color of wax is hatched but very little the manner of using necessary to produce

Suppose you have that it is desired to the wax in about 0



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and when the pressure is renewed a few  
 minutes afterwards the water will bring  
 out with it more wax, and now the  
 screw may be turned down a little far-  
 ther. This operation is repeated several  
 times, each time turning the screw down  
 a little farther until the pressing is com-  
 pleted. By proceeding in this manner  
 with the intermittent pressure and satur-  
 ation with hot water, the wax is literally  
 washed out of the slumgum, and only a  
 trace of it remains. In making the  
 cheese the best retaining material I have  
 found is a loosely woven but strong gunny  
 cloth or burlap as it is commonly known.  
 Bran bags, cut up in proper sized pieces  
 are good material. Cheese cloth is too  
 finely woven to admit of the free passage  
 of wax and water after the meshes have  
 filled with the slumgum.

Wax is one of the easiest substances  
 to cleanse of foreign particles of dirt for  
 the reason that it has a lower specific  
 gravity than the impurities with which it  
 is usually associated. If the melted wax  
 has a few particles floating on its surface  
 or they are made to appear by agitating  
 or stirring they may be removed by strain-  
 ing through fairly fine burlap cloth. Best  
 results are obtained by cooling the wax  
 in a deep vessel. Fine particles of foreign  
 material that are heavier than the wax  
 will settle to the bottom and may be re-  
 moved from the cage by scraping.

Never use acid in clarifying wax unless  
 it is necessary. When is it necessary?  
 When the wax is so dark or of such a  
 dull appearance as to be unsalable or as  
 to greatly reduce its value in the estima-  
 tion of the purchaser; and, when, by the  
 use of acid you can improve its appear-  
 ance and increase its value. The fact that  
 sulphuric acid will clarify and brighten  
 the color of wax has been widely pub-  
 lished but very little has been said as to  
 the manner of using it or the amount  
 necessary to produce the desired effect.

Suppose you have a quantity of wax  
 that it is desired to treat with acid. Melt  
 the wax in about one-quarter its volume

of clean water. When hot enough to re-  
 main melted without commencing to con-  
 geal on the surface for the space of about  
 ten minutes, remove from the fire. Pro-  
 vide a cooking spoon with a long handle  
 and into it pour sulphuric acid in the  
 quantity of not to exceed a half tea-  
 spoonful to a gallon of wax. Pour the  
 acid from the spoon into the wax without  
 dilluting, and at the same time commence  
 stirring vigorously and keep it up for four  
 or five minutes. When agitation of the  
 wax due to stirring has ceased, if there is  
 any scum on the service, skim it off and  
 set the vessel away to cool. If you will  
 wrap the vessel containing the wax in  
 papers or cloths or set it in a slightly larger  
 vessel to prevent the rapid radiation of  
 heat, and cover with a lid having a hole  
 one or two inches in diameter in the cen-  
 ter to cause it to cool more rapidly at  
 that point it will be more likely to cool  
 into a solid cake.

After the acid has been thoroughly in-  
 termixed by stirring, like magic, it will  
 be seen, dark and cloudy looking wax will  
 assume a bright yellow and transparent  
 appearance when dipped up and allowed  
 to run from the spoon. The acid seems  
 to have the effect of causing the particles  
 of impurities that cause the cloudy ap-  
 pearance, to separate from the wax leav-  
 ing it in its natural bright yellow color.  
 Undoubtedly the use of a large percent-  
 age of acid is injurious. It is a strong  
 re-agent and a little goes a great way It  
 is better to use a little rather than to  
 get too much. Diluting the acid with  
 water before introducing into the wax has  
 been tried but the results were unsatis-  
 factory, the desired effect in bringing out  
 the yellow color was not obtained. Water  
 has a strong affinity for sulphuric acid  
 and it is my opinion that wax treated as  
 per above directions will be free from  
 acid. However, this is a question for the  
 chemist and the attention of the Provincial  
 Apiarist, Mr. Pettit, is respectfully called  
 to the point. Perhaps it is not too much  
 to expect of him also to conduct experi-

ments looking to an authoritative settlement of the question of the effect of acid on the quality of the wax.

Some say "Don't have dirty wax that needs the use of acid." May as well say "Don't have dark honey." I suppose some bee-keepers would gladly employ some harmless re-agent to make dark horey light in color, if it would enhance the price sufficiently to make it pay; and if there are others who would lose money by such a process because their customers did not want it so treated they would exercise poor business judgment if they meddled with the clarifying process.

These remarks are not to encourage the use of acid, but rather to show how profitably and harmlessly to use it when needed, so far as my experience has enlightened me.

Kenmore, N.Y.

#### JACOB GOES BACK TO HIS OLD LOVE

J. Alpaugh.

Bees must be all muzzled! I see by the Toronto News how to muzzle cows so that they cannot drink, and in that way adulterate the milk; also to muzzle ladies hat pins so that they cannot jagg a fellow in the face. I suggest that we muzzle the bees also, so that they cannot bite your neighbor's horse or children—some call it biting; I never thought it felt like a bite.

If I ever chance to get any more bees like some I once got from Boomer of Linwood, I think I will get a special kind of muzzle for them. One constructed more to prevent them from sitting down than biting.

I have now been out of bees for three years, but I expect to try them again this spring, if I can find any to buy, just to see if I have forgotten how to manage them. See my ad. in the want and exchange column.

This is the time of year to give your bees attention and protection. See that

there is some kind of a wind break all around the bee yard. See that they are not getting short of stores. As soon as they can fly nicely give them some kind of substitute for pollen in shallow trays or boxes in some sheltered place near the hives. Also some luke-warm water to sip, which will not chill them when loaded. Where bees have been wintered out of doors, see that there is no damp or wet packing. Clean all the dead bees off the bottom board, so that a good healthy bee will not get lost on a cool day, trying to carry them out and away. If there is snow about the boxes shovel it all away from the entrance, and when the bees want to fly see that there is something about the box for them to light on besides cold snow. Straw or chaff scattered around the hives on the snow, enables a good many bees to get back that would otherwise be lost.

Galt, Ont.

[This last suggestion is a capital one, friend Alpaugh, we will do it at once. It may mitigate to some extent the sad scene we witnessed on Sunday last, to which we refer in another column. Your letter has one serious fault, and we won't forgive you for it either; it is too short. Try and make it a little longer next time.—Ed.]

#### THE PATENT LAW.

Referring again to the patent law, Mr. Holtermann has obtained legal advice as to the point in dispute, and it would appear that his contention is the correct one. We are very glad to have this point cleared up, as we were among a very large number of business men who held that a patented article could be privately made and used without violating the law. Some of our most prominent business men hold this view. We were talking with an engineer only a few days ago, and he stated that this was his opinion also. Such an opinion could not be so generally held

March, 1910

if it were not for the more honored in th observance. The fo plain the matter ful cepted as final:

Brantf  
Messrs. Ridout and  
Solicitors of Pat  
103 Bay str

Dear Sirs,—It has Canadian Bee Jour has been patented in by bee-keepers or c use, as long as it there would be no law. Your firm beir of patents and as h attention to Patent lit sidered an indisputa matter. If you can s make a reply it wi the Canadian Bee J

You  
R. F  
Re

"We are advised t mooted in your jour liberty to make and without the patent he does not sell it. erroneous idea. In t 30 of the Canadian reads in part as fo who, without the the patentee, makes practice any inventi has been obtained. liable to the patent sentatives in an ac so doing."

It is quite clear making of a patent/ fringing act whethe uses it or not. Great Britain and t hold the view that use is as wrongful Bloomer vs. Gilpin, also Frost on paten

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if it were not for the fact that the law is more honored in the breach than in the observance. The following letters will explain the matter fully and should be accepted as final:

Brantford, Feb. 23, 1910.

Messrs. Ridout and Mabee,  
Solicitors of Patents,  
103 Bay street, Toronto, Ont.:

Dear Sirs,—It has been stated in The Canadian Bee Journal that a hive which has been patented in Canada can be made by bee-keepers or others for their own use, as long as it is not sold, and yet there would be no infringement of the law. Your firm being known as solicitors of patents and as having paid special attention to Patent litigation would be considered an indisputable authority on the matter. If you can see your way to kindly make a reply it will be made public in the Canadian Bee Journal.

Yours very truly,  
R. F. HOLTERMANN.

**Reply.**

"We are advised that the idea has been mooted in your journal that anyone is at liberty to make and use a patented article without the patentee's consent, provided he does not sell it. This is an entirely erroneous idea. In the first place, Section 30 of the Canadian Patent Act, R.S.C. reads in part as follows: "Every person who, without the consent in writing of the patentee, **makes**, constructs or puts in practice any invention for which a patent has been obtained. \* \* \* shall be liable to the patentee or his legal representatives in an action for damages for so doing."

It is quite clear from this that the making of a patented invention is an infringing act whether the party so making uses it or not. Adjudicated cases in Great Britain and the United States also hold the view that "making for one's own use is as wrongful as making for sale." Bloomer vs. Gilpin, 4 Fish, p. c. 50. (See also Frost on patents, p. 413, Muntz vs.

Foster, Webb, p. c., 101; Jones vs. Pearce, 1 Webb p. c. 125).

Even if the section of our own Patent Act were not so explicit, these decisions would be followed by our courts.

A wide publicity of these facts may save some of your readers a great deal of trouble.

Yours truly,  
RIDOUT & MAYBEE.

**THE POETRY OF AGRICULTURE.**

**Indexed**

A Classic by D. M. Macdonald, Banff,  
In Irish Bee Journal.

Is not the above an appropriate name for Apiculture? Here is a common field for the peer and the peasant to meet on an equal footing; and the nectar gathered by the bees of the poor man is as sweet and luscious as that of the rich. Further, the bees of the cottar are as free to roam over the meadow and moorland, over flowers and fruit blossom, and no man can bring an action against them for trespass, because there is no monopoly in regard to the source from which they garner their stores. No high walls, or high fences, can stay their flight and no prohibition notices can turn them back from the sweet-smelling reaches of heather or clover, of thyme or of lime. In rifling all these of their sweets the bee does not leave them the poorer. There is a double blessing attending on their visits, because for the nectar sucked the bees return a wealth of fructifying pollen, without which the flowers would deteriorate or die out.

No wonder then that ancient fact and fable should combine to add to the natural interest in Apis Mellifica, that she should be sung of as a "ray of divinity," as "the birds of the Muses," and as a creature with portions of "thhereal thought." The poetic Virgil ascribed their wonderful economy to divine inspiration—the direct antithesis of our cool, calculating, modern, materialistic diagnosis of what goes

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balmy breath will secrete sweet nec- will call in an un- he bees, and, in- e that our pets are fulfil their mission, lethargy and fre- garden devoted to them, I feel they," said Bon- o. The call of the e first swallow, the e lark, and the ap- r flowers of spring, haps none of these hearts as the first ar bees "reel." ve may answer the re fervent wish of e keeper.

## THE BEGINNER

### and a Bee Tree

Kinnon.

ember last, I was ad sat down to wait my way. The sun nd the weather was e. A honey bee

dodged past my nose with a business-like hum. Says I, there's a bee tree in this patch of woods and I'm going to find it.

I knew they were out for a cleansing flight and would not have far to hunt. I soon heard the familiar notes of the bees at play. They were in a soft maple and quite close to the ground. I marked the spot and returned for them next day. I took them home in the tree, which I cut about five feet long. I immediately transferred them to a proper home, and expect to winter them successfully. Some of the combs were three and a half feet long, and the tree contained thirty pounds of buckwheat honey, comb and all. In the work of transferring about a pint of bees got daubed in the honey and as the temperature lowered a good deal, they chilled and lay apparently dead. The next day a warm south wind sprang up and the sun and wind brought those bees to life again, the large majority of which joined the others in the box.

I made a thick sugar syrup, four of sugar one of honey. I tried to feed under by setting a hive over a miller feeder. The weather turned suddenly cold, so that only about three pounds of syrup was taken up. However, I was determined to save this swarm, so I made about ten pounds of candy, put the bees in the cellar and laid the candy over the frames. The bees not only transferred the candy to the combs, which I had given them, but also built comb on top of frames. On looking at them on Feb. 12 they were all O. K. with scarcely a dozen dead bees on the bottom board. The temperature of the cellar has not gone above 45° or below 40°. This bee tree was found within six acres of a buckwheat field and the combs contained about two pounds of clover honey at the top showing that this swarm had taken possession of the tree the last of clover bloom. It was probably an after swarm; they must have brooded quite late as the swarm was a very large one, and I imagine mostly

young bees, for otherwise more dead ones would be showing up in the cellar.

The buckwheat fields mentioned above were one and a half miles from my apiary and although my colonies worked on them I did not realize any surplus from this source, which goes to show that bees will not gather as profitably when they have to go that far for nectar. I might add that I am only a beginner with bees. I bought five colonies last fall, increased them to twelve, took four hundred pounds of extracted and 52 pounds of section honey. A farmer gave me twelve swarms in the latter part of September. I am wintering them on sugar syrup, fed on the half and half plan; some a little thicker. They seem to be O.K.

I intend to requeen all my colonies with the leather colored Italians next season.

St. Eugene, Ont.

## ITEMS FROM ABROAD.

Translated by Dr. Burton N. Gates, Worcester, Mass.

### The Structure of cells of Wax from Old Combs.

From Revue Eclectique d'Apiculture. Reviewed, Leipziger Bienen-Zeitung, December, 1909, Vol. 24, Part 12, p. 190.

The French apiarist, Monnier, has made an interesting experiment on the subject, in order to establish the yield of pure wax from various sorts of crude wax.

Combs which had contained no brood, yielded on the average, 82% of pure wax; wax cappings, 85%; dark combs which had served many times as brood combs, yielded 48% pure wax. Then he experimented with the refuse of a solar wax extractor, and was surprised at the result, which was from 25 to 50% on the average, although this refuse was very dark and did not appear to be worth handling. As an explanation of these facts, he says:

"When we fill the solar wax extractor with old combs or with refuse from the cleaning of hives, we usually get a considerable amount of yellow wax. If, however, dark, old combs are used, then the result is only slight, for the cast skins hold the wax and hinder its rendering. In this way the common use of the solar extractor causes the bee-keeper to suffer a considerable loss."

#### A Library of Bee Books

The Society of Apiculture of Alsace-Lorraine maintains a central library of Apicultural literature. This is a suggestion for American bee-keepers' societies. In America the publications on bee-keeping are much scattered and frequently difficult to obtain. A catalogue of this library may be obtained for 25 pf. from Herr. J. Dennler, Mutzig, editor of *Elass - Lothrengischer Bienen - Züchter*, which is the organ of the Société d'Apiculture, d'Alsace-Lorraine.

#### Germany Would Fight Adulteration of Honey

The *Leipziger-Bienenzeitung*, (Vol. 25, Pt. 2, p. 19, February, 1910), announces a campaign against artificial or adulterated honey. To the time of publication, 1,650 marks had been raised as a prize for an easy means of detecting with certainty, fraudulent honey. The tests for adulteration are to be made by "Market Police," consequently the method must be simple and direct.

#### KIND WORDS.

The C. B. J. as now conducted, and with its present staff of able writers is, I consider, all that could be desired as a general educator along the ever advancing lines of apiculture. More bee-keepers should appreciate these important facts and subscribe for the Journal.

C. BOYD.

Petrolea, Ont.

#### TRAITEMENT DE LA LOQUE

Par William McEvoy, Inspector des Ruchers, Woodburn, Ont.

Traduit de l'anglais, par Arthur Comire, Inspecteur, St. François de Lac, Comté Yamaska, Que.

Avant d'ouvrir aucune colonie, il faut aller d'une ruche à l'autre, et envoyer un peu de fumée, à l'entrée de chacune. Ceci empêchera, durant quelque temps, les abeilles des autres colonies de venir vous ennuyer, pendant que vous ouvrez une ruche et que vous en examinez les gâteaux.

Lorsque vous sortez un gâteau pour l'examiner, tournezvous le dos au soleil, et tenez le gâteau sur un plan incliné, de manière que les rayons du soleil frappent sur la partie inférieure et le fond des cellules, et alors, recherchez les écailles noires laissées dans le fond de ces cellules, quand la matière gluante, formée par les larves décomposées, s'est desséchée.

Car, là où vous trouverez des opercules perforés et une matière visqueuse, vous trouverez quantité de cellules, portant sur leur côté inférieur, ces taches noirâtres de la Loque. Chaque apiculteur devrait savoir reconnaître ces taches noirâtres produites par le couvain loqueux, car il est très important pour lui, de pouvoir les reconnaître, à première vue, pour ne pas être obligé de sortir, avec la tête d'une épingle, un peu de matière de la cellule, pour voir si cette matière s'allongera de  $\frac{3}{4}$  de pouce.

On trouvera souvent dans le même gâteau, du couvain mort d'autres maladies, avec des opercules perforés comme d'un trou d'épingle, en même temps que d'autres cellules renfermant des écailles de la Loque.

Aussi, chaque apiculteur devrait-il être en état de distinguer les différentes sortes de couvain mort. Nous trouvons souvent deux sortes de couvain mort dans la même colonie, avec peu de Loque dans le même gâteau, et que l'apiculteur n'avait

pas remarqué. Le couvain mort d'une colonie n'est pas bien qu'elle soit. Avant ce temps, le fait piller par les ruches, et alors la hâte, par des leurs colonies avait que j'arrivais, je pas le cas.

Parfois je trouve de la plus grande abeilles, et presque ou se mourant. Les gens assez "sprayage" de la fleuraison, chant pas ce qui soudaine de pres abeilles et trouva mourant, se croyant onies avaient la L.

La seule manière ne peuvent recorer première vue, est d'une épingle, dans la cellule et matière s'étire, il c'est la Loque.

Mais comme je chose la plus importante de savoir reconnaître de la Loque fera jamais beau causera jamais dans aucun rucher, la reconnaitre immédiatement.

Le miel qui se emmagasiné dans matière loqueuse en nourrissant les que les abeilles ré C'est à l'âge de jours, que la plus vain meurt de la âge plus avancé.

## LA LOQUE

Inspector des  
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, par Arthur  
François de Lac.

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pas remarqué. Après avoir essayé le couvain mort d'autres maladies, et voyant qu'il ne s'étire pas, on en conclut que la colonie n'est pas malade de la Loque, bien qu'elle soit en réalité malade. Durant ce temps, le mal empire; la ruche se fait piller par les abeilles des autres ruches, et alors la maladie se répand par tout le rucher. J'ai souvent été appelé, à la hâte, par des gens se croyant sûrs que leurs colonies avaient la Loque, et lorsque j'arrivais, je trouvais que tel n'était pas le cas.

Parfois je trouvais une perte soudaine de la plus grande partie des vieilles abeilles, et presque tout le couvain mort ou se mourant. Le mal était causé par des gens assez insensés pour faire le "sprayage" de leurs arbres fruitiers, pendant la floraison, et l'apiculteur, ne sachant pas ce qui causait ainsi la perte soudaine de presque toutes ses vieilles abeilles et trouvant tant de couvain se mourant, se croyait certain que ses colonies avaient la Loque.

La seule manière sûre, pour les gens qui ne peuvent reconnaître la Loque, à première vue, est d'introduire la tête d'une épingle, dans la matière renfermée dans la cellule et de l'en sortir. Si cette matière s'étire, ils peuvent être sûrs que c'est la Loque.

Mais comme je l'ai souvent répété, la chose la plus importante à apprendre, est de savoir reconnaître les marques noirâtres de la Loque et alors la maladie ne fera jamais beaucoup de progrès et ne causera jamais de pertes importantes dans aucun rucher, parce que l'apiculteur, la reconnaissant de suite, l'enrayera immédiatement.

Le miel qui se contamine est d'abord emmagasiné dans des cellules ou la matière loqueuse s'est desséchée, et c'est en nourrissant leurs larves avec ce miel que les abeilles répandent la Loque.

C'est à l'âge de six, sept, huit et neuf jours, que la plus grande partie du couvain meurt de la Loque, plutôt qu'à un âge plus avancé. La maladie est répandue

par les abeilles pillant les colonies malades de la Loque, et elles la répandent en proportion du miel contaminé qu'elles apportent dans leurs propres ruches.

Chaque rucher malade devrait être traité, suivant la condition dans laquelle il est trouvé, non seulement de manière à se débarrasser de la maladie, mais à augmenter considérablement le nombre de ses colonies et les avoir toutes en excellente condition.

C'est durant le temps de la maladie, lorsque les abeilles recueillent du miel en abondance, que l'on peut, d'une manière sûre augmenter le nombre de ses colonies, dans un rucher madade, et l'on fait cette augmentation en réunissant deux ruches pleines du meilleur couvain, avec environ une pinte d'abeilles, jusqu'à ce que la plus grande partie du couvain soit éclos. On a ainsi un très gros essaim de jeunes abeilles, et lorsqu'elles seront placées dans une nouvelle ruche et traitées, il en résultera une colonie de première classe.

Dans chaque rucher que j'ai traité durant la miellée, j'ai toujours fait de l'augmentation, en réunissant le meilleur couvain, avec environ une pinte d'abeilles, et en le laissant jusqu'à ce que la plus grande partie du couvain soit éclos, et en le traitant alors justement de la même manière que les vieilles abeilles, que j'avais soignées en premier lieu.

**Comment guérir les Ruches de la Loque.**

Durant la miellée, lorsque les abeilles récoltent abondamment, enlevez les gâteaux, le soir, et secouez les abeilles dans leur propre ruche; donnez-leur des cadres garnis d'une lisière de fondation d'une largeur d'environ 2 pouces, et laissez-les bâtir durant quatre jours. Les abeilles travailleront sur ces lisières de fondation et les construiront en gâteaux durant ces quatre jours. Elles y déposeront le miel contaminé qu'elles ont emporté, des vieux gâteaux. Alors, le soir du quatrième jour, enlevez ces nouveaux gâteaux, et donnez leur à travailler des cadres remplis de feuilles entières de fondation, et la guérison sera complète.







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qu'ils ne pourraient pas trouver dans leurs colonies saines, assez de gâteaux dont toutes les cellules soient complètement remplies et operculées. Certainement, mais vous pouvez facilement vous procurer une quantité de ces gâteaux, en mettant le soir, en septembre, le nourrisseur Miller, sur vos colonies saines, et en donnant à ces colonies tout le sirop que vous pourrez leur faire prendre, et alors, en octobre, chacune de ces colonies ainsi nourries, pourra vous fournir les gâteaux de chaque côté, qui seront complètement remplis et bien operculés, du haut jusqu'au bas du cadre, et vous serez ainsi pourvus de tous les gâteaux dont vous aurez besoin, pour mettre en pratique la méthode de traitement à l'automne.

Dans l'automne de 1875, alors que j'avais la Loque dans mon rucher, j'en ai complété la guérison, par cette méthode de traitement. J'ai découvert moi-même, toutes mes méthodes de traitement et aucune d'elles ne fait défaut, si elle est employée convenablement.

Les ruches vides, dans lesquelles il y eut de la Loque, n'ont pas besoin de désinfection.

En traitant des colonies malades, ne les faites jamais souffrir de la faim, car cela leur fait dommage, ainsi qu'à la reine, et cela les rend impropres à accomplir l'ouvrage que vous voulez leur faire faire. Pour ma part, je n'ai jamais fait jeûner les abeilles, mais j'ai toujours essayé de voir jusqu'à quel point, je pouvais les engraisser durant le traitement, en leur donnant du sirop en abondance, lorsqu'elles ne pouvaient pas récolter de miel.

Si vous avez de beaux gâteaux blancs, qui sont propres et secs, et dans lesquels il n'y a jamais eu de Loque, ne les détruisez pas, car il n'y a aucun danger à s'en servir, sur les colonies saines, et ils sont d'une bonne valeur pour chaque apiculteur. J'ai toujours, épargné ces sortes de gâteaux, dans mes visites. J'ai, une fois, sauvé à un apiculteur de l'Etat du Vermont, qui me demandait avis, au delà

de deux milles beaux gâteaux blancs, qui ont dû lui valoir, au moins \$300.00 ; mais j'ai toujours conseillé aux apiculteurs, de convertir en cire, tous les vieux gâteaux, qui avaient renfermé, au moins, une cellule loqueuse, et la seule chose qui puisse extraire toute la cire de ces vieux gâteaux, est une bonne presse à cire. Comme elle se payera d'elle-même plusieurs fois, je conseille fortement à tous les apiculteurs d'en acheter une.

Chaque apiculteur, devrait avoir l'A. B. C. de l'apiculteur, publié par la Cie A. I. Root de Medina, Ohio. C'est un livre de grande valeur, de près de 500 pages et qui renferme tous les enseignements, les plus nouveaux, sur l'apiculture.

#### Remarque.

Tout apiculteur désirant savoir si ses abeilles sont malades de la Loque, peut envoyer, par la malle, un échantillon de gâteau malade, bien enveloppé dans une petite boîte en bois ou en ferblanc, à Arthur Comiré, St-François du Lac, Qué. Veuillez faire bien attention, que l'échantillon ne renferme pas de miel, afin de ne pas risquer d'endommager les matières postales.

#### Règlements de la Société d'Apiculture de la Province de Québec.

1<sup>o</sup>—Cette société sera connue sous le nom de "La Société d'Apiculture de la Province de Québec," et sera composée de toutes les personnes intéressées dans l'apiculture et qui deviendront membres de la dite société, en payant au Secrétaire-trésorier, la souscription d'une piastre par année.

2<sup>o</sup>—Une assemblée générale des membres de la société, aura lieu une fois par année, et sera connue, comme l'assemblée annuelle de la société. La cette assemblée ou à aucune autre assemblée générale des membres, le quorum sera de dix membres en règle.

3<sup>o</sup>—L'assemblée annuelle aura lieu le deuxième mercredi de novembre, chaque année, et le lieu de l'assemblée annuelle suivante sera fixé par les membres présents, à chaque assemblée annuelle ; la

prochaine assemblée devant avoir lieu à Montreal.

4°—L'année commencera au premier de novembre de chaque année, pour se terminer au trente-un d'octobre suivant.

5°—L'élection des officiers de la société se fera à l'assemblée annuelle, et ils demeureront en charge jusqu'à l'élection de leurs successeurs, à l'assemblée annuelle suivante.

6°—Le bureau de direction de la société, sera composé de douze membres, parmi lesquels ceux-ci choisiront un président et un vice-président.

Le bureau de direction nommera aussi un secrétaire-trésorier, lequel devra faire partie de la société.

7°—Le quorum du bureau de direction sera de cinq.

8°—Les vacances qui pourraient se produire, dans le bureau de direction, seront remplies par le président.

9°—Il sera du devoir du président de présider les assemblées et d'en régler l'ordre du jour.

10°—Le président, de concert avec le secrétaire, aura le pouvoir de convoquer des assemblées spéciales, soit du bureau de direction, soit de toute la société, lorsqu'ils le jugeront nécessaire. En l'absence du président, le vice-président le remplacera, et remplira les devoirs de sa charge.

11°—La convocation des assemblées se fera par le secrétaire-trésorier, en adressant à chacun des membres, un avis spécial, au moins sept jours, avant la date de telle assemblée.

12°—Il sera du devoir du secrétaire-trésorier, de tenir les livres de compte de la société, d'inscrire dans le registre le rapport des délibérations des assemblées, de faire la correspondance de la société, de percevoir la souscription des membres, de payer à même les fonds de la société, de dépenses nécessaires à son administration, de convoquer les assemblées, et de faire rapport des opérations de la société, à l'assemblée annuelle des membres.

13°—Ces règlements pourront être amendés, par la majorité des membres présents, à chaque assemblée annuelle, ou à une assemblée spéciale des membres convoqués, dans ce but.

A. O. COMIRE,  
Secrétaire-trésorier.

Saint-François du Lac,  
Co. d'Yamaska.

### THE NATIONAL COLUMN.

(Contributed by N. E. France, General Manager).

The Wisconsin State Bee-Keepers' Association was the first to join the National in a body, and has ever since continued to do so. It was also the first this year to vote to send a delegate to the National Convention of 1910. Let other state and local associations do likewise and build up both by so doing.

The membership of the National to-day (Feb. 19) is 3,600.

The Executive Board asks anyone to report to President York or the General Manager any suggestions as to how the National Association can be of more help to its members. Several suggestions have been received already, but others are wanted.

The revised edition of "Bee-Keepers' Legal Rights" is now in the hands of the printer. A copy will be mailed free to any member requesting it.

There have been two more recent cases of bee-keepers sending in their dues, and asking for help after getting into trouble. This is contrary to the constitution. No insurance company insures burning property.

The poison spraying of open fruit-bloom in the Southern States has begun, as some apiaries are already affected by it. Complaints of bees spotting the washings hanging on lines in the South are coming in. The North will have similar complaints later. The long, cold winter is liable to cause much spotting of washings when bees have their first

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It has been suggested that the time and place of the Bee-keepers' Conventions throughout the country may be arranged with the Executive Board of the National Association. If this is done, it may be that dates can be selected when certain officers of the National can be present at nearly all local meetings. Also, it may be that the system of meetings for the good of all can be planned, something like the various state fairs in the fall.

Director R. A. Morgan, of South Dakota, suggests that the National issue reports quarterly instead of annually, and save postage; also, that more frequent reports will help to create more interest among the bee-keepers.

Director J. E. Crane, of Vermont, thinks it would be a good thing if the National would own and rent to its members stereopticon views for bee-lectures, and thus better advertise the use of honey; and also have the National advertise in papers.

Thomas Chantry of Utah, suggests that the dues of the National be increased, so that there would be more money in the treasury, for use in the interests of the membership; and he would urge every present member to get in new members for the National.

Up to this date (Feb. 19), since the last National report was issued, the General Manager has received \$1.00 each as dues from 80 members, and 50 cents each from 545 members. This far exceeds any other year for 50-cent dues, which shows that the local associations are co-operating very nicely. The 50-cent rate to local associations, when joining in a body, helps the National both in number of members and financially.

Invitations for the next (1910) meeting of the National have been received from Toronto, Can.; Buffalo, Albany and Rochester, N. Y.; Nashville, Tenn., and Zanesville, Ohio.

The Executive Committee will not decide as to the time and place of the next meeting until, perhaps, June 1st, so there will be plenty of time for other cities to get in their invitations to the General Manager before the final decision is made.

There ought not to be very much trouble in getting the desired 5,000 membership by the time of the National Convention in 1910. There are now 3,600 members so that only 1,400 more would be necessary.

Those who are in arrears in their membership dues are kindly urged not only to remit at once to the General Manager, but also, if possible, to get their neighbor bee-keeper to become members also. In this way the 5,000 membership could be gotten within the next sixty days. Why not do it.

## National Bee-Keepers' Association

(Organized in 1870.)

### Objects.

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

### Membership Dues.

One dollar a year.

### Officers and Executive Committee.

President—GEORGE W. YORK, Chicago, Ill.  
Vice-President—W. D. WRIGHT, Altamont, N. Y.  
Secretary—LOUIS H. SCHOLL, New Braunfels, Tex.  
Treas. & Gen. Mgr.—N. E. FRANCE, Platteville, Wis.

### Twelve Directors.

G. M. Doolittle, Borodino, N. Y.  
Jas. A. Stone, Rt. 4, Springfield, Ill.  
R. A. Holekamp, 4263 Va. Ave., St. Louis, Mo.  
Wm. McEvoy, Woodburn, Ont., Canada.  
M. H. Mendleson, Ventura, Calif.  
R. C. Aikin, Loveland, Colo.  
E. L. Taylor, Lapeer, Mich.  
E. D. Townsend, Remus, Mich.  
Udo Toepperwein, San Antonio, Tex.  
J. E. Crane, Middlebury, Vt.  
E. F. Atwater, Meridian, Idaho.  
R. A. Morgan, Vermillion, S. Dak.

Are you a member? If not, why not send the annual dues of \$1.00 at once to Treas. France, or to the office of the American Bee Journal, 146 W. Superior St., Chicago, Ill.? It will be forwarded promptly to the Treasurer, and a receipt mailed to you by him. It is the desire of the officers to increase the membership to 5000 by the end of 1910. Every progressive bee-keeper should be a member of this, the greatest bee-keepers' organization in America.



## TREATING FOUL BROOD APIARIES.

William McEvoy.

When and how should this work be done and what should be saved? These are the all-important questions that every bee-keeper should fully understand. In the Canadian Bee Journal for December, 1909, page 429, Mr. Leon C. Wheeler, of Barryton, Michigan, gives us his experience in curing his diseased colonies of foul brood, which consists of hits and misses. Mr. Wheeler says: "Our first experiment was made on five colonies strong in bees, but showing unmistakable evidence of the disease. As soon as the dandelion flow commenced (this is a very light flow here, and rarely yields any surplus), these colonies were shaken on full sheets of foundation, leaving bees enough to care for the brood, which was placed over a bee-escape on top of the hive, containing the bees and foundation; this in hope that the young bees, as they hatched out would gradually work down through the escape and swell the force below. In this we were doomed to disappointment for in no instance did they get below, but simply plugged the escape with dead bees and brood, etc. We tried the same method later on in the summer, but the bees only did the same thing, clogging the entrance, and not attempting to join the force below."

Mr. Wheeler made a serious mistake to shake bees off the brood as soon as the dandelion flow commenced, because every colony needs all the field bees that they have just then to bring in honey enough to keep the brood nest supplied with **unsealed** stores, a thing they often fail to do during these light honey flows, between fruit bloom and clover. Mr. Wheeler says that when he shook bees off the combs that he left bees enough on them to take care of the brood. Mr. Wheeler is very much mistaken on this point, because the limited number of bees left on these combs could not feed all the brood that required feeding just

then, and this would end with all the unfed brood dying. Some of the largest uncapped brood worked its way out of cells, falls down, and was the main cause of the bee escapes getting clogged. If the escape had been fixed on the front of the hive, and up a couple of inches above the escape board the bee escape could not have become clogged. Bee escapes are one of the best things ever brought into an apiary, and the right place to put them is in a board over the colonies, in all cases, except where they are liable to get clogged in cases like Mr. Wheeler's.

Mr. Wheeler speaks of one case where he confined the bees for two days, and then gave them their freedom, and a comb of "supposedly clean honey," and as soon as the brood began to hatch he discovered the disease again. Very true; the bees stored the diseased honey in this comb, which they had left in them from the old combs, and as soon as brood rearing commenced his bees fed the diseased honey to it, which they had stored in that comb. Mr. Wheeler says: "We shook them again, and the first brood again showed the disease, so we finally sulphured them." If Mr. Wheeler had shaken these bees on comb foundation starters, and left them with the bees for four days, **the bees would have made these starters into little combs during these four days, and stored the diseased honey in them, and at the end of four days took the little combs out and given full sheets of foundation, he would have made a complete cure, and saved these bees that he had sulphured, which he failed to cure through his one shake.** In the summer of 1875, when experimenting, and working out the cures in my own apiary, I found that in all bad cases I had to shake the bees off the little combs they made during the first four days, and let them build comb a second time before I could get the bees cleansed of the diseased honey they took out of the old combs when shaking the bees off. I had

March, 1910

some nice combs at the time, and building combs for frames, as we had I took out the little made during the them clean comb showed up again, had been very bad why, simply because **eased honey out comb**, when I was stored it in the on fed this disease and then I had again. I found them pretty badly diseased deal of **unsealed** honey combs, when I shook combs, that I had pieces of comb that the first four day combs again before eased honey away of failures to deal keepers only shook badly diseased colonies the C.B.J. I see that on it as worse than a second time. Ver to his opinion; but case in his own apiary cure with one shake sulphuring these bees had been shaken four days after shaking foundation, Mr. Wheeler the second shake a tried the starvation of three or four colonies and in his next trial half the bees died after being confined these bees starved cause they were sick during a very light there was very little the brood chamber quickly on and had

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some nice combs that were dry and clean at the time, and after the bees had been building combs for four days on the bare frames, as we had no foundation in 1875 I took out the little combs that the bees made during the four days, and gave them clean combs. In time the disease showed up again, in all the colonies that had been very bad with foul brood; and why, simply because the bees took **diseased honey out of the new pieces of comb**, when I was shaking them off and stored it in the clean combs and later on fed this diseased honey to the brood, and then I had to treat these colonies again. I found that where colonies were pretty badly diseased, and had a good deal of **unsealed** honey in the brood chambers, when I shook the bees off the combs, that I had to take away the new pieces of comb that the bees made during the first four days and let them make combs again before I got all the diseased honey away. I have had hundreds of failures to deal with where the beekeepers only shook the bees once in very badly diseased colonies. On Page 431 of the C.B.J. I see that Mr. Wheeler looks on it as worse than useless to shake bees a second time. Very well; he is welcome to his opinion; but, what about that case in his own apiary that he failed to cure with one shake, and finished up by sulphuring these bees to death. If these bees had been shaken on starters, and four days after shaken off these on foundation, Mr. Wheeler would have found the second shake all right. Mr. Wheeler tried the starvation plan and lost the bees of three or four colonies in three days, and in his next trial he reports finding half the bees dead on the bottom boards after being confined two days. Why did these bees starve so soon? Simply because they were shaken off the combs during a very light honey flow when there was very little **unsealed** honey in the brood chamber for bees to fill up quickly on and had no time to uncap old

stores and fill up when they were being shaken off the combs. And when these bees were put in prison with only a little honey in some, and none in the majority of them, they starved sooner. All things considered, it is a mistake to treat foul brood colonies before the clover season. If Mr. Wheeler had waited until the clover season and then shook all his strongest colonies, first on starters for four days and then placed all the best brood on his weakest colonies he would have had all the sound brood well fed and when it hatched all his weakest colonies would have been turned into very strong ones, and then shook all these on starters, and after the bees had been four days on the starters shook them off on full sheets of foundation, he would have saved all the bees, had stronger colonies and got more than double the honey.

A few years ago I received a letter from a bee-keeper in the U. S. that was running three apiaries for comb honey, and one of these apiaries was in a bad state from foul brood. When this bee-keeper was away from home, his men brought home all the sections as the honey season had closed, and got all the sections from the three apiaries mixed up, so they could not tell which apiary that they had taken them from. As very many of these had more or less honey in, the owner did not like to risk using any of these sections on his sound apiaries, and to destroy all these sections with so much comb, was going to be an awful loss. I wrote him not to destroy one cent's worth, but to class all these sections, by putting all that had dry comb and foundation in, into crates by themselves, and use these on any colonies that needed them, and to extract the honey out of all the sections that had honey in, and place these also in crates by themselves, and in the honey season to shake or hive swarms in empty hives with half inch starters on the frames, and after putting on the queen excluders to

place these crates of sections on that he extracted the honey out of, and that all would end right, and so it did. All white extracting combs that never had brood in can be taken off diseased colonies, extracted and made perfectly safe by putting them over diseased colonies (when no honey is coming in) and leaving them there until the bees clean them out dry.

Woodburn, March 14, 1910.

#### IMPORTANCE OF RE-QUEENING.

(Continued from Page 61).

Mr. Dine (New York)—If I was going to re-queen my yard I wouldn't start nuclei. I would go to a swarm that I wanted to raise the queen from and draw out some of the brood sealed over, and insert empty combs so that the queen could fill them. Two days afterwards I would go to another swarm and get that in shape, and take these two frames and put in just the egg and let the bees raise from this. When these queen cells had got in proper shape in about twelve days I would take those queen cells out and put them in protectors on the colonies I wanted to introduce these queens to. Catch the old queen, and at the same time put the queen cell in the protector. I would do away with all the nucleus business, and I don't think the loss would be any greater from flight among those young queens from the whole colony than it would to raise the queens in nuclei and introduce them into the colony.

Mr. Holtermann—I would like to uphold Mr. Sibbald about this red clover queen business. I found just exactly what Mr. Sibbald found this year, that there were certain colonies—and let me say at once I have not had time to keep track of which, so that I will not be able to supply queens. I don't breed queens anyway. I had a percentage of colonies that gathered a considerable amount of red clover honey when others gathered nothing at all.

Mr. Sibbald spoke of the prolificness of the queen, putting that third or fourth. I admit that there is a difference in traits, but give me the colony that has the bees, and in nearly every case you will get the honey.

Mr. Sibbald spoke of the importance of always having a laying queen in the hive. I emphasize that as strongly as he does. The advantage of a prolific queen is that she continues to occupy that brood chamber with brood and does not allow crowding out by the honey; and if the queen is not prolific there is a constant decrease in the capacity of that brood chamber. It becomes practically a honey super. Mr. Sibbald said he was seeking to eradicate the swarming impulse by not taking the cells raised under the swarming impulse. That interested me very much.

Mr. Hurley—My idea in discussing this question is the discussion entirely of re-queening, and its advantages over the old fashioned way of leaving your queen in the hive for two or three years. When discussing a chosen subject we should discuss that subject, and not allow ourselves to get switched off on two or three other subjects. A discussion on re-queening is not a discussion on queen-rearing. In all our discussion we should keep this thought clearly in mind, and not ramble all over the apicultural field. Now, I consider the advantages of re-queening annually are very great to the bee-keeper, whether he be experienced or non-experienced. I suppose my remarks would be altogether uncalled for to those who are experienced men, but of course we must always consider we are speaking to a certain number of recruits, who are con-

(Concluded next month)

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**CO-OPERATIVE EXPERIMENTS IN APICULTURE, 1910.**

Indexed

**Director, Morley Pettit, Agricultural College, Guelph, Ont.**

The members of the Ontario Agricultural and Experimental Union are pleased to state that for 1910 they are prepared to add Apiculture to the list of departments for experimental work. At present there is no material to distribute, so it is proposed to take up some of the more important problems in the management of

as of any other stock on the farm. The experiment for 1910 is the control of swarming.

Each person who wishes to join in this experimental work may fill out the accompanying form of application, and return the same to the Director of the Co-operative Experiments in Apiculture at as early a date as possible. A sheet containing the instructions for the experiments, and the blank form on which to report the results of the work, will be sent to each experimenter on receipt of application blank properly filled out.



**Partial view of Apiary of W. T. Davis, Stratford, Ont.**

bees for profit. One of the greatest of these is the control of swarming. When the bees are kept from swarming entirely, more honey is secured. When they are compelled by artificial methods to swarm only at certain hours on certain days at the convenience of the beekeeper much loss of time and swarms is avoided.

Many of the most successful beekeepers never let their bees swarm, necessary increase is made in other ways which are directly under control. It is quite as important to control their increase of bees

The committee on Apicultural Experiments desires to ask that each experimenter will follow instructions very particularly, and that he will be very careful and accurate in his work, and forward to the Director a complete report of the results obtained from the experiments as soon as possible after the close of the season.

Some advantages of Co operative experimental work :

1. It will systematize bee management along definite lines and for valuable purposes.

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It will distribute the very best ideas on different departments of the business among the best beekeepers, and teach them to experiment and investigate.

3. It will lead to a substantial increase in apiary profits, and to a steady advance in apicultural education throughout Ontario.

4. It will be of great benefit to the fruit and seed industries as these are so very dependant on bees for success.

5. It will interest young people to pay their way through college by keeping bees in the summer vacation, as several are now doing in Canada and the United States.

6. It will educate along the lines of careful handling, close observation, accurate calculation and economical methods.

7. It will train apiarists to unite science with practice, and to lead others to do likewise.

8. It will help bee-keepers to understand better the scientific principles that they read about in bulletins, reports and bee journals, and that they hear about at conventions.

9. It will add dignity to this important branch of farm life.

10. It will exert a wholesome influence in keeping the farm boys and girls interested in farm work, as beekeeping offers a profitable line of work for young people of either sex.

#### Reports of Experiments.

The results of the experimental work at the College for 1909 are being published in the annual report of the College, and those of the co-operative work throughout Ontario in the Annual Report of the Ontario Agricultural and Experimental Union. Both of these reports will be mailed directly from the Ontario Department of Agriculture as soon as they are printed. If you do not receive them in due time, copies could be obtained by writing to C. C. James, Deputy Minister

of Agriculture, Parliament Buildings, Toronto, Ontario.

Address all applications for experiments in Apiculture to Morley Pettit, Ontario Agricultural College, Guelph, Ontario.

#### Application for Instructions for an Experiment in Apiculture.

I would like to conduct an experiment in Apiculture and if instructions for the same are forwarded to me I will endeavor to:

1. Carry on the work according to the instructions received.
2. Exercise care and accuracy in the work, and,
3. Report the results of the experiments as soon as possible after the close of the season, whether successful or not.

[The above is a circular sent to all beekeepers. We would strongly advise our readers to take this matter up, and cooperate with Mr. Pettit in this most important work.—Ed.]

#### 5,000 FACTS ABOUT CANADA.

The public will warmly welcome the new 1910 Edition of that indispensable booklet "5000 Facts About Canada," compiled by Frank Yeigh, whose writings and lectures on Canada are widely known. The popularity of the publication is shown by its sale of nearly 50,000 copies, not only in Canada, but through the Empire, and indeed the world. The 1910 Edition contains a large percentage of new matter, under such heads as—agriculture, mining, banking, trade, railways, wheat growing, education, religious, etc., while a new feature is a budget of Empire Facts. The book is a revelation of the riches and resources of the Dominion. It is published at 25 cents a copy by The Canadian Facts Publishing Co., 667 Spadina Avenue, Toronto, Canada, or may be had from newsdealers.

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**Want and Exchange Column**

Advertisements for this column will be received at the rate of 50 cents for 25 words, each additional word one cent. Payments strictly in advance, as the amounts are too small to permit of book-keeping. Write copy of ad. on a separate sheet from any other matter, and on one side of the paper only. Say plainly how many times ad. is to be inserted. Matter must reach us not later than the 23rd of each month

**BEEES WANTED**—I want to buy bees. Any one having the same for sale, kindly drop a line to Jacob Alpaugh, Galt, Ont.

**WANTED**—Second-hand Barnes foot-power saw. Must be in good order and cheap. Address, L, Box 55, Ormstown, Que.

**FOR SALE**—15 hives of bees, 50 hives and racks, extractor and complete outfit. Also farm adjoining village and station, 70 miles from Toronto. Apply to M. Williams, Corbetton P. O., Ont.

**FOR SALE**—About 150 colonies of bees, half an acre, dwelling, and buildings; windmill for running saws. On account of ill health will sell at bargain. Splendid locality. John Kendrick, New Dublin, Ont.

**WANTED**—To correspond immediately with anyone having bees for sale this spring. Give number of colonies, name and size of hive, and number of frames and price expected. Address, X, Y, Z, care of Canadian Bee Journal, Brantford, Ont.

**WAX WANTED**—I will pay 28 and 30 cents per lb., according to quality, for good, pure bees wax; freight prepaid to Chatham until I get stocked for the season. Wax made up and foundation for sale. W. A. Chrysler, Chatham, Ont. Box 441.

**WANTED**—Bee Journals. We are binding a number of volumes of the different Bee Journals for use in the Ontario Agricultural College, and find that quite a few copies and some complete years are missing. Please send us a list of the old journals you have, stating what price you ask for them. Morley Pettit, Provincial Apiarist, Guelph.

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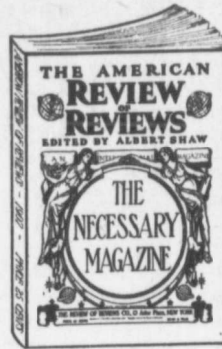
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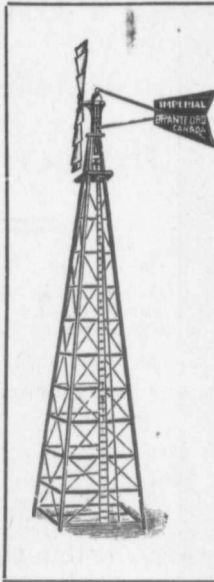
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