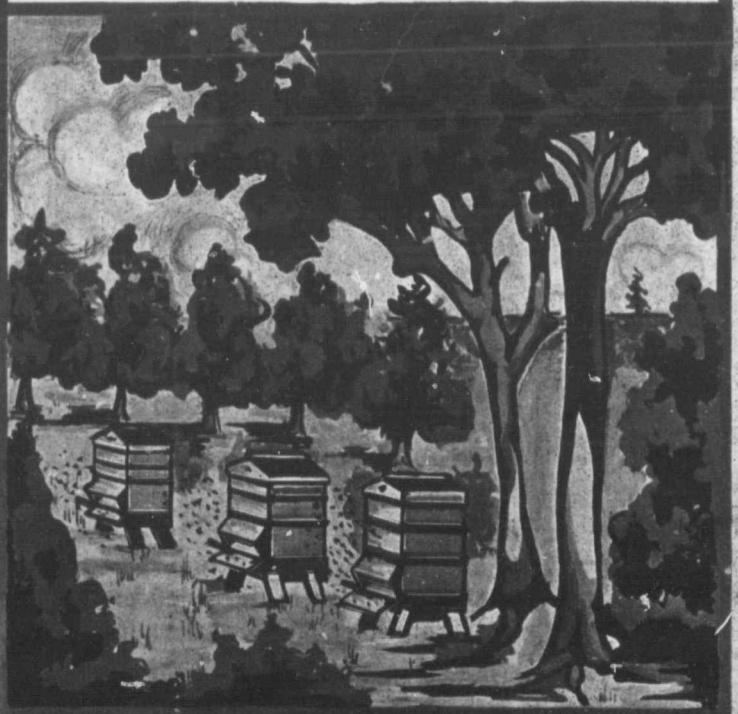
THE CANADIAN BEE JOURNAL

Vol. 18, No. 7. JULY 1910 $1.00 Per Annum



PUBLISHED BY
THE HURLEY PRINTING, COMPANY.
BRANTFORD, CANADA.

The Canadian Bee

Devoted to the Interests

JAS. J. HURLEY,

Published month
The HURLEY PRIN
Brantford, O

TERMS

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The HURLEY PRINTI
Brantford, Ont

The Canadian Bee Journal

Devoted to the Interests of Bee-Keepers

JAS. J. HURLEY, Editor

Published monthly by
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Brantford, Ont.

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Organized 1880
Incorporated March, 1886

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Bee-keepers desiring the services of the inspector of apiaries should address their requests to Hon. James S. Duff, Minister of Agriculture, Toronto, **giving nearest railway station and distance of apiary** from station.

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

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To Old and New Subscribers: Our Clubbing List for 1910 includes the following Remarkable Offers

WE WILL SEND

The CANADIAN BEE JOURNAL

WITH

The British Bee Journal, $1.50 ..	For	$2 25
Gleanings in Bee Culture, $1	For	1 95
The American Bee Journal, $1 ..	For	1 75
Bee-Keepers' Review, $1	For	1 75
Irish Bee Journal, 36c.	For	1.25
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Farmers' Advocate, 1.50.....	For	2 25
Weekly Sun, $1	For	1 75
News (Daily) Toronto	For	2 20
The Horseman (Chicago)	For	3 50

Mail and Empire for $1.50

The Canadian Bee Journal

Brantford :: Canada

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JAS. J. HURL

Vol. 18, No. 7.

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The Canadian Bee Journal

PUBLISHED MONTHLY

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

Vol. 18, No. 7. JULY, 1910 Whole No. 545

And now for the extracting of the choicest of nature's sweets.

* * *

The National Bee-Keepers' Association will meet in convention on Oct. 12 and 13, 1910, at Albany, N. Y., in the city Hall. We hope Canada will be well represented.

* * *

"Feeding is not the whole thing." Of course not. We quite agree. Live bees are a necessary requisite! Who said feeding was the whole thing, anyway?

* * *

Do not dump your honey on the market at any old price. The Honey Crop Committee has an opportunity to get in some good work this year. Wait for its report.

* * *

We beg to offer our congratulations to Editor York of the American Bee Journal. We have been favored with an announcement of his marriage on Saturday, July 2nd, to Grace Hitchcock, of Kingston, Ill. The happy couple will be at home after September 1st, at 4522 North Ashland Avenue, Ravenswood, Chicago. May his shadow increase.

* * *

About the middle of June the clover flow started in with a rush. In some districts it will be very good. The wet spring weather has made the clover crop on light land very abundant, and somewhat in advance of the heavier land. Those who were fortunate enough to brirg their bees up to June 15 in good condition, will harvest a good fair crop. In some places the yield has not been as good as in others. In our own county —the County of Brant—the crop will be satisfactory.

There are two kinds of feeding. Feeding for winter stores, wherein the bees are given food enough to carry them for four or five months. This is feeding stores. The philosophy of spring feeding is, however, very different. It is not feed for stores, but feed for immediate consumption. The object being to stimulate the bees and they in their turn to stimulate the queen, and thus assist the natural instincts of the bee. If this be true, spring feed should be given in small quantities at regular intervals.

* * *

We are pleased to announce that we have arranged for a series of articles on our most prominent Canadian bee-keepers. Mr. W. White has undertaken the task, and of his ability to do so, his opening article is a sufficient testimony. Mr. McEvoy's name was the best known to Mr. White before his arrival in Canada, and naturally he was the first with whom to seek an interview. What his impressions were will be found in his own words in another column. Thus we present to our readers this month, the opening sketch of the series. Mr. McEvoy's methods of apiculture will constitute the chief feature of the sketch, which will be continued next month. We congratulate ourselves in being so fortunate as to secure the services of one so ably qualified, and can assure our readers that something very interesting and profitable lies before them. Who will be the subject of the next sketch we will not announce in advance. We feel quite sure that when Mr. White calls upon you, you will be agreeably impressed, and can bespeak for him a cordial reception.

Apropos of this question of feeding. In the early part of May we met Mr. J. W. Clark of Cainsville, and on enquiring about his bees, he replied that he thought they were doing well. We asked if he had examined any of the colonies. He replied that he had not. We pointed out that brood-rearing had been very heavy and there might possibly be a shortage of stores. On arriving home he examined several colonies and immediately telephoned us that honey stores were entirely exhausted, notwithstanding the fact that he had fed abundatnly last fall. He immediately fed sugar syrup. He then journeyed to one of his neighbors and made the same enquiry. The reply he got was that they were doing splendidly. Never was better. This, of course, from external indications. An examination was made, and some were found to be absolutely without a bit of honey. The bees would have been dead in a few days. What did feeding do in this case? If feeding is a necessary evil, then let us embrace the evil. Better live bees than dead ones.

* * *

A Toronto wholesale house has sent out a post card to all the bee-keepers of Ontario which reads as follows:

"We will esteem it a favor if you will state on a post card, prospects you have for honey crop, extracted and comb, quantity and quality compared with other seasons, and also your ideas of price f.o.b. your station, the former put up in sixty pound tins, crated, and the latter twelve sections to a case with glass front. Your prompt reply will oblige. Any information given will be cheerfully reciprocated."

The above is a sample of the cool, calculated and bare-faced impudence with which some business men approach what they are pleased to call the "farmer." The Ontario bee-keeper is asked to place these gentlemen in possession of information worth many dollars to them, at his own expense—he is to supply the card and postage—and receives the assurance that it "will be cheerfully reciprocated." And what will be the manner of the reciprocation? If replies are obtained, as they expect, and as they have received them in the past, a very careful calculation will be made of the honey crop. Possessing this information they will reply to those forwarding the card, in a manner somewhat as follows:

"We find on summing up our various reports on the honey crop that there has been a very fair take of honey, and prices are expected to be easy. We will be pleased to take the quantity you offer, but it will be necessary for you to come down on your price. Kindly let us know the lowest price you will take for the lot. We have a quantity offered at a much lower figure than your quotation. Yours, etc."

This will be the nature of the reciprocation, (judging from past years), for your information sent at your own expense. Formerly they sent a card for reply. This year they are economizing and shifting the expense upon the bee-keepers. Let us make a brief calculation of what they are saving. It is stated by our Agricultural department that there are 5,000 bee-keepers in Ontario. Let us assume that they write to only one-half of them. Two thousand five hundred official post cards will cost $25. They suppose, of course, and rightly, that no bee-keeper is small enough to refuse to spend one cent to make reply. Thus they will get valuable information as to crop conditions for nothing, from the very men whose interests it is to withhold just such information—and they get it free of postage, too! Our advice to our readers is to withhold any reply to this request, at least until after the honey crop committee makes its report. We have no hesitation in saying that it will mean many hundreds of dollars to the bee-keepers of Ontario if this is done.

Mr. Isaac Balmer, of Bu
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Mr. Isaac Balmer, of Burlington, is the proud possessor of a large automobile, and enjoys the unique distinction of being the first Canadian bee-keeper to make use of this machine for going to and from his out apiaries. On Sunday, 19th June, we had the pleasure of a call from Mr. Balmer, accompanied by Mr. and Mrs. McEvoy and one of their sons. The party left Brantford about 12 o'clock p.m., and made the run of about thirty-five miles in quick time without mishap. Mr. Balmer has gone very extensively into bees, and is confident that the investment will pay him. He can make quick time between his yards, carrying all his supplies back and forth. By the removal of the top and the substitution of a platform at the rear, he is able to carry quite a load. The visit was a very enjoyable one, and he promised to repeat it. When the Canadian Bee Journal reaches the ten thousand subscription mark, our readers may expect a similar call from ourselves. In the meantime we must be satisfied with short-distance walking—but we have great hopes.

* * *

Referring to our objection to the twelve-frame hives, the American Bee Journal says:

"R. F. Holtermann and the Canadian Bee Journal are not agreed as to the size of hives. Mr. Holtermann says that "a large hive (a 12-frame Langstroth) is much better than an 8-frame." Editor Hurley says:

" 'We do not hesitate to take issue with Mr. Holtermann in this statement. The 12-frame is too large to winter in; it is too large for spring; it is too large for fall. There is, in our opinion, too much 'barn' room for the bees to keep at the necessary temperature." '

'There is just a possibility that Mr. Holtermann might say: "To be sure, a 12-frame is too large; but better have a hive too 'barny' than too small." Possible, but not probable; and not at all probable that he will agree with Mr. Hurley when the latter says: "We would not recommend anything larger than 9 or 10 frames." '

'Possibly the friction between these two Canuck leaders may throw a spark of light on this vexed question."

We do not like that last paragraph. It is a veiled insinuation that our objection to the twelve-frame hive is not sincere, and taken merely to be opposed to Mr. Holtermann. Does it occur to friend York that some of Mr. Holtermann's warmest friends are opposed to the twelve-frame hive? Gleanings is not in agreement with Mr. H. on the matter. As for friction, there is none. Mr. Holtermann and the writer are now good friends, and, we trust, may continue so. We would rather have had your opinion on the utility of the twelve-frame hive, than insinuations as to our motives.

Questions and Answers

BY THE EDITOR

TO MAKE RAPID INCREASE.

If you have a section devoted to answers to correspondents, would you kindly answer the following:

Am starting with one hive from which I want to increase as rapidly as possible, regardless of honey result. I wish to introduce a good, tested, imported queen to the first hive I obtain. I also wish to obtain without swarming as I do not wish to risk losing swarm. Have to send away for the queen. Would it do to put queen in new hive upon arrival with a few frames of sealed brood with young bees upon it, from present hive, even though present hive is not building any queen cells.

If you could answer direct it might save me much time. Addressed envelope enclosed.

I. C. CAMPBELL.

[It will be an easy matter for you to increase along the lines which you suggest. If your hive is a good strong one, it is possible for you to increase it to three, provided you had two queens

ready to put in each nuclei. If, however, you are getting only one queen, divide your hive in about half, giving the new hive capped brood to the extent of about half that is in the hive. Introduce your new queen to this and by fall you will have two strong colonies. You could make nuclei at this time of the year of two frames of capped brood and sufficient number of bees to cover it, provided you had a new laying queen to introduce to each. As you are getting one queen, however, divide the hive in half as above. In a week's time you can get another queen and you could still make another hive by dividing each equally again. Force breeding as much as possible between now and the end of September and then be sure to feed up well for winter with sugar syrup made from two parts of sugar to one of water.—Ed.]

GASOLINE ENGINE FOR EXTRACTING.

As a reader of the C. B. J., will you tell me if any bee-keepers are using the gasoline engine for extracting, and how do they like it; and are they running the belt from the engine to the extractor, or if they have a counter shaft with a loose pulley so that one can reverse the combs in the basket without stopping the engine. Would like to be enlightened as I am thinking of getting 1 h.p. engine to make my bee hives and do the extracting. Could send the item through the columns of the journal.

A. BLAIS.

Reply by Dennis Nolan.

The style of extractor I use works better in reversing the baskets, to reverse the motion of the reel. In order to attach the engine to the extractor, you require a set of counter shafts.

If you are using your extractor in only one yard a set of shafts can be set up on any place in the building. If you are moving your extracting outfit around to different apiaries you will need a set of shafts made in a sort of jack style.

I use a home-made set, which were made by setting two 2 inch maple planks, 3 feet long, by 12 inches wide, placed parallel to each other, 10 inches apart. Two ⅝ steel shafts go through and project at each side far enough to take a pulley 1¾ inches thick. The belt from the engine attached to the pulley on the other. The diameter of these two pulleys would have to be determined by the speed of the engine, and the size of the pulley on the engine and extractor. On the centre of the shaft next to the engine a permanent pulley 7 in. diameter and 6 or 7 in. wide, upon which runs two belts to the next shaft with two loose or idle pulleys on either side of a fixed pulley; these pulleys are 7 in. in diameter and 1¾ in. wide.

One belt being straight and the other crossed will give the different motions required, by having a belt shifter attached to each belt which can be moved on or off the centre pully giving the different motions to extractors requiring such.

With this attachment it is not necessary to stop the engine as long as you have the combs ready to keep your extractor running.

[Our thanks are due to Mr. Nolan for kindly answering the above enquiry.—Ed.]

NOVEL SCENIC FEATURE.

Battle Between Airship and Dreadnought at the Canadian National.

They're anticipating history at the Canadian National Exhibition this year where they will produce as one of the big features of the fireworks spectacle a battle between an airship and a dreadnought. The monsters of the sea and air advancing from different sides of the arena will meet in a terrific fight in which the dreadnought is sunk and the airship finally blows up. It's something entirely new in fireworks and as spectacular as it is novel.

SPRING FEEI

Mr. Byer Has Doubts as t

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CENIC FEATURE.

Airship and Dreadnought
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SPRING FEEDING

Mr. Byer Has Doubts as to its Expediency

As a rule it is much more pleasant to tell of our successes than it is to speak of our failures, and for this reason perhaps we often fail to profit by the experience of others, as said experiences are not apt to be given for fear they might bring ridicule to the one relating them. Not being exceptionally thin-skinned, the writer of these notes feels inclined to relate somewhat in detail the experiences of the past spring in so far as it concerns the vital problem of having the bees in the very best condition for the honey flow. While there are two camps among bee-keepers usually, in so far as the spring feeding of bees is concerned, the past season we were pretty much a unit in the matter, as many of us who are opposed to the practice found ourselves under the painful necessity of feeding the bees or allowing them to starve. Our 300 colonies like most bees this year were very strong all through the early part of the season—so strong, in fact, that we had 270 of them with the supers on, before fruit bloom opened. Just about the 20th of May, my good wife and myself seriously considered how we would get time to take off the fruit bloom honey which seemed almost a possibility when we looked over the immense colonies and the great showing of fruit bloom. But all at once the weather turned bad and stayed bad continually till about June 15th.

Bees had been short of stores right along, although going into winter quarters very heavy last fall. Up to the time mentioned sufficient had come in to keep the bees going, and now (although I viewed with considerable apprehension the empty brood chambers), I thought that that panacea (?) for all spring ills of bees—feeding syrup—would bring us safely through into the promised land. Accordingly the programme was mapped out and the Cashel and Altona yards were fed every three days in the open—the 80 colonies in one yard and 90 in the other would clean up 175 pounds of syrup made from 100 pounds of sugar, in about two hours. At home the bees were fed by feeders in the hives, and in so far as I know no brood was allowed to suffer as unsealed stores were in the hives up to the clover flow. Of course "unsealed stores" refers to the sugar syrup being fed them, as all told I doubt if there was 100 pounds of honey in the hives by June 15th. The small yard at Markham only 3 miles away from home, had enough honey to carry them through the bad weather, although early in the spring a few of them that were light at that time, were given a 20-pound dose each at the time. Of these bees more anon.

Now, as to all these bees being fed faithfully, everything seemed to go well till about June 1st, when all at once the old bees dropped out of sight by the thousands, and continued to "drop" right up till clover flow. As a result, for the quick good flow of the first eight days of clover, in the majority of our hives we had brood galore with scarcely enough bees to cover and care for it, let alone to go up and store in the supers. At this date, two weeks later, we have bees galore, but the clover is not yielding, and is nearly dried up with the excessively dry and hot weather we have been having. Now, listen to the contrast in so far as those two lots of bees are concerned that had honey and were not fed. They came into the clover boiling over with bees, and the 40 colonies stored more honey than all the rest of the other two yards together. All around us, wherever farmers had a few bees in big hives with lots of honey to carry them through, the bees held their own and gave a fair surplus. But I hear someone say: "But feeding helped me out"—in fact, on my desk before me lies a letter from a good friend who says that he is convinced that it is necessary to do judicious feeding in order

to have the hives boiling over with bees for the honey flow. He says: "It has saved hundreds of colonies around here, and a quart jar of syrup fed to his own bees had resulted in 100 lbs. of honey being on some of the hives." I will agree "that it saved many colonies" as without feeding it would have meant many of our colonies starving to death. "One swallow does not make a summer," and I venture the opinion that if a goodly supply of honey had been in the hives at the time in lieu of the feeding, that the results would have been just as good or better than was the case. If pollen was present in the hives the syrup may have stimulated some, and, indeed, it may have anyway, as friend Sibbald thinks that the old bees were chiled and lost in a vain attempt to find pollen, which was so scarce in the hives. After all things are carefully considered, I am inclined to think that Mr. Sibbald's theory is correct. Without the pollen the syrup did nothing else by way of benefit except to save the brood and keep the old bees from starving. Some may think this is too radical a statement, but it is born out by sad experience, and I am going to take the liberty to quote from a private letter from friend Adams on the matter. As most of the Journal readers are aware, Mr. Adams is an advocate of spring feeding, or rather shall I say **has been** an advocate, as I really believe after this spring's experience he will not be so sure about the benefits of syrup feeding in the spring. Quoting briefly from Mr. Adams' letter, he says: "We fed syrup every evening to every colony, but the only good it did was to save the brood already started, it did not stimulate the queens or prevent the bees from killing off the drones." Friend Sibbald says: "I hardly think the feeding of sugar syrup alone in the spring, is the whole thing, do you?" I unhesitatingly answer no, and if given the option of having a nice reserve of honey in the hives for a long spell of bad weather, or the sugar syrup for every night feeding, the honey would be my choice, even if I could get the sugar gratis. Perhaps, a bit radical some one will say—well, explain why those 40 colonies not fed anything, yet being able to store four times more than any of the other stocks fed for three weeks, more or less?

Some may wonder why we did not have honey on hand when we are so prejudiced against the spring feeding of syrup. Well, in the first place this is the first time we have ever had the necessity of feeding much at that time of the year, and last fall the hives were so heavy that at that time it was a problem how we would get all the buckwheat honey out of the hives before clover would come on.

Another reason is the fact that in the past foul brood has been so generally seeded around our section that we have deemed it very risky to feed honey, as more than once we have foul brood brought in from our neighbors. Have always advised against the feeding of honey, and to be consistent have refrained from doing so myself.

From what we have written already, it will not be necessary to tell the readers of the Journal that we are not flooding the market with honey this year, for unless the basswood should yield a lit, our crop will be exceedingly light. A large acreage of buckwheat was to be sown, but unless rain comes soon we will have no buckwheat and thus have to feed for winter stores. However, such things are part and parcel of beekeeping as a business; hence we are not worrying any about these matters.

Since writing the foregoing, have noticed that I have said nothing as to size of hive used, and friend McEvoy, and some others who like to good-naturedly poke fun at the "barns" I use, will be saying that my big hives were responsible for the disaster chronicled. Perhaps, if I would just say that Messrs. Sibbald, Adams and some others I could mention, do not use "barns," that would answer the argu-

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ment, but aside from the experience of others, we had an object lesson in this line of hives as well this spring. Twenty-five colonies were bought, all being in fairly good shape, ten of them being in Danzenbaker hives, and 15 in 8-frame Langstroth. After their railway journey they were almost devoid of honey, and for three weeks required constant feeding—in fact, received more attention than any other of the hives. To-day they are without exception, the poorest colonies I have, and if what little some of them had in the supers was taken off, not enough honey would be left in the brood nest for the bees' breakfast.

[Our readers are certainly under an obligation to Mr. Byer for this frank and courageous statement regarding his experience this spring. Practically all knowledge has come to us by experience. Our failures are sometimes as profitable to us as our successes. The man who can relate his failures as cheerfully as his successes is the kind of man to whom we are all greatly indebted. Mr. Byer's experience this spring is unfortunate, but we think he is likely to make a great mistake if he condemns feeding off-hand as a result. It is our humble opinion that he has jumped at conclusions that are unwarranted. We have urged feeding very strongly this spring, owing to the extraordinary and exceptional conditions of the weather. We did this owing to the condition in which we found our own bees and those of some of our neighbors. These conditions were: Owing to the exceptionally fine weather in March, which continued well on into April, brood-rearing was advanced to a most unusual degree. This pointed to a large consumption of stores, with practically nothing available from the fields till dandelion or fruit bloom opened. When it was clearly seen that bad weather would prevent the anticipated stores from these two sources we saw—or thought we saw—danger ahead. As a result we strongly urged feeding. We are still convinced we did the right thing. This timely feeding saved the lives of many hives, and saved much brood that would otherwise have been lost. This Mr. Byer practically admits. We think our readers will admit it also. If this be the case, why make an almost indiscriminate attack on feeding? During an extraordinary spring such as the one just past, feeding sugar for the purpose of saving the lives of the bees and their brood, is an entirely different question from that of feeding for stimulative purposes—i. e., urging the queen to lay continuously to secure populous hives.

It is well to keep these two ideas well defined. There is a difference of opinion as to the expedience of stimulative feeding in spring. Mr. Adams has been and is yet a firm believer in it. Mr. Byer has entirely misapprehended Mr. Adams' position. Mr. Adams was referring entirely to the peculiar weather conditions of this spring. After the receipt of the above letter we called Mr. Adams in, and asked him to make his position clear. What he has to say will be found below. Mr. Byer quotes from a letter he had before him: "It has saved many hundreds of colonies around here, and a quart jar of syrup fed his own bees has resulted in 100 pounds of honey being on some of the hives." Let us say here that that letter was written by ourselves. But, we regret to say, that Mr. Byer has made a serious error in quoting us. Perhaps he has quoted from memory; if so, his pre-conceived ideas have played tricks with his memory. Fortunately we have a copy of the letter by us. Let us give it as it lay on Mr. Byer's desk:

"There is no getting away from the fact, in my opinion, that if you want to have strong colonies, boiling over with bees, you have got to do some judicious feeding. I know what feeding has done this year. It has saved hundreds of colonies about here. During all that bad weather, the latter part of May and the

first of June, a quart jar of syrup fed to the bees **every other day** has resulted in 100 pounds of honey now being on the hives, and the bees working in the third super."

It will be noticed that Mr. Byer overlooked the most essential feature of the above paragraph. Our statement is substantially correct, and can be vouched for by Mr. W. C. Good, B.A., on whose farm some of the hives were placed.

Anything that Mr. Adams may have written can not invalidate that statement; in fact, we know that Mr. Adams and his father, can both tell a like story. Had it not been for this feeding, brood rearing would have stopped. The feeding was sufficiently stimulating to keep brood rearing at a normal pace, because stimulative feeding can have little effect on bees that are not flying actively. During the bad weather in the latter part of May and first ten days of June, the bees did scarcely any flying at all. What flying they did do was in an attempt to gather honey from fruit bloom. The idea of exhausting themselves in a "vain attempt to find pollen," is to our mind an absurdity. Let it be remembered that during the fine weather in March and April, the bees had abundance of opportunity to gather pollen, and had secured abundance of it. Therefore, what they wanted at the former date was honey. Hives that have abundance of food to carry the bees up to fruit bloom, or, as in this spring, up to clover flow, will come through all right. But, we hold, and Mr. Adams will agree with us, that they will do **better** if given stimulative feeding. This, we believe, is the real point at issue, but we have seen it demonstrated to our entire satisfaction. Now, the next logical thought is, how is this feeding to be done? Certainly not as Mr. Byer did it. We think he has failed in his methods. Nothing can be more destructive of the vital force of a bee than a mad scramble for feed outside, where the bees of 80 or 100 colonies are desperately fighting for the feed. It is simply a carnival of robbing en masse. We have looked upon it and can adequately describe it in no other terms. Neither is feeding twenty pounds at a time a proper method. After a careful reading of Mr. Byers' letter we have come to the conclusion that he has not sufficiently discriminated between feeding as a necessary precaution against starvation, and stimulative feeding for the purpose of forcing brood-rearing above the normal. In fact, we fear he has got the two somewhat mixed, as is his metaphore: "I thought that that panacea (?) for all spring ills of bees—feeding syrup—would bring us safely into the promised land." We do not think that Mr. Byers' position can be called radical.

We trust that this question will receive a thorough discussion. Our columns are open to any and all of our readers to say fully and fearlessly what they think upon it, and if they cannot agree with our view of the matter, we will rejoice at being put right.—Ed.]

Mr. Adams' Opinion.

I was much interested in reading Mr. Byers' letter to you relating his experiences this spring with feeding his bees, and it does seem to me that he goes somewhat out of his way to condemn a manipulation which he admits himself that he practiced only under compulsion and under conditions that were unfavorable to its success.

Now, Mr. Editor, stimulative feeding has given us a safe and sure method of putting our bees in the best condition possible to take advantage of the clover honey flow, and I do not like to see it condemned unconditionally, because it did not do the impossible.

We fed our bees regularly every evening this season between fruit bloom and clover, and brought them through without having any of the brood starve, but there was very little stimulation of the queen. The weather was so cool and wet that

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the bees stayed in the hives. In fact, the condition of things was much like it is in the late fall, brood-rearing practically at a stand still and very little life in the cluster. We found that it was impossible to get queen cells accepted during this time and had to give up all attempts until the weather turned favorable again.

Now, in cool wet weather when bees cannot fly out, no amount of feeding will stimulate them to rearing brood, but it will save the brood already started. On the other hand with bright warm days, like we usually have during the latter part of May or early June, a little syrup fed regularly every evening will have a wonderful effect on the colony. It not only prevents the brood from starving at a time when no honey is coming in, but it keeps the queen laying and by the time clover is ready to yield there is a splendid force of bees to take advantage of it.

I have never found that capped honey in the hives will do this. It is the proper thing early in the season until brood-rearing has advanced to the stage that young bees are hatching out freely, but when frames get filled up with brood and the colony has advanced to the stage that young bees are replacing the old ones the capped honey in the hives is not enough to keep the queen laying up to her full capacity.

But the anti-feeders say that in unfavorable weather it results disastrously. Well, it didn't this spring and the weather was certainly unfavorable. True, it did not have the same effect that it would have had had conditions been favorable, but it did save the brood already started from starving.

There was no flying out and getting lost in the cold. The feeding was done in the evening with Alexander feeders on each hive, and the only flying that took place was done by about half a dozen bees from each colony coming out and circling around in the air a few minutes and then going quietly back.

We have been able to secure a fair crop of honey in the yards that were not broken up for queen rearing; the average will run about 70 lbs per hive.

I have written more particularly about stimulative feeding with reference to honey production, but would just like to say in connection with queen rearing that we could not raise queens commercially without it. It is not a panacea for all the ills that bees are subject to, but it is a mighty good thing in the hands of an intelligent apiarist.

F. P ADAMS.

FEEDING OR STARVATION

Jacob Haberer.

I have been keeping bees now for twenty years, with average good results. I have never done anything big as many others. In these twenty years I have had no total failures and but two very poor crops. What it will be this year I can not say yet. At first we had good wintering, an early good start for breeding, then seven weeks fruit bloom, with only three good working days for the bees. It was almost impossible to examine a hive, either because of the cold or the robbers at hand. Unfortunately I had no sealed comb honey at hand, and feeding causes robbery. But it was a choice between feeding or starving. I have really now learned what amount of feed is needed during May if nothing comes from the field. Here I may say again that this too early heavy breeding is not what it looks to be. Many of my colonies with three combs of brood in April are ahead of those with six and seven. Of the later there was also a large (15-20) per cent. of early superceding or loss of queens. Of course those colonies were all united, except one, where the queen seemed not so bad. You will doubtless say "many old queens," but I lost as many one year olds as 2 year olds. This loss of queens was mostly in the outside wintered col-

onies. The honey flow so far is continuous, but light, but we have had very dry weather, with little comb building and foundation drawing, but sufficient flow and heat to start swarming fever in spite of large entrances and the lifting of sealed brood. I have practiced the latter the last few years with good success. It must be done in time, before the swarming impulse has set in, and this brood comb comes so handy for forming nuclei. There is one good thing this year, they did not bring dark honey into the supers with them.

We are having a heavy rain just while I am writing. This will help our white clover. There is a lot of it. Alsake is mostly gone. Basswood is promising and will come on in about ten days; so there is a chance yet. Two weeks ago I was in Stratford and neighborhood. I had the pleasure of calling on Mr. Davis. His bees had done good work. There was the most beautiful clover in that district. It seems alsike is gaining in favor among the farmers, and it should. I have raised it for 24 years now, and I claim a hay field mixed with alsike will always yield about one-quarter more hay.

I have two small outyards, one of 25 colonies, seven miles west; one of 30 colonies, six miles east from the home yard. There is usually a lot of white clover there, but not enough alsike. Basswood is plentiful. So far they are behind the home yard. It is the alsike that makes this difference. I believe it will not be many years until it will be seen in almost every grass field.

Bees remain in their hives, or fly but short distances from them, when bad weather may be expected.

"I wonder why bees make honey?" enquired the inquisitive youth.

"I suppose," replied his friend, "they make it to cell!"

DISINFECTION OF HIVES

Our good friend Macdonald is still hammering away at the subject of disinfection of hives. Writing in the last issue of the Irish Bee Journal (July) on the curing of foul brood, he says:

"In the hope that some useful hints may be conveyed, I humbly submit a few fruits of experience.

In a very bad case, summary measures are by far the best. "Kill to cure," should be the beeman's motto here. Make a holocaust of the whole affair, bees, if any, brood, combs, quilts, frames, everything, in fact, loose about a hive should be consumed to ashes, and even the ashes should be buried."

[How would it do to bury the spade that did the burying! and then to complete the job, beyond the peradventure of a doubt, a new spade might be procured to bury the burier.]

"If the receptacle is a skep, or even an oldish frame hive, [why oldish] it should share the same fate. Radical treatment pays best, because it is the cheapest in the end . . . . .

The Canadian or "McEvoy" method does not include this disinfection of hives which I look on as its weak point, when carried out by the average bee-keeper. Perhaps no other countries in the world have got better Foul Brood Acts than New Zealand and Switzerland, and no where else has the scourge been more effectively suppressed than in these two lands. Mr. Hopkins is emphatic on this point of disinfection, and would so treat every hive in the apiary when empty on the mere suspicion that it may have been diseased. He truly says 'eternal vigilance should be the watchword of every bee-keeper who hopes to keep down disease.' Herr Leunenberger, Chief Inspector in Switzerland, voicing the unanimous decision of the other inspectors, lays great stress on 'the absolute necessity of thoroughly disinfecting every hive.' Better testimony than that of these two authorities no bee-keeper can desire."

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Now that looks pretty much as if it should settle the matter. Here is an experience which we can vouch for:

A certain person, who for the present we will call Jones, had foul brood very bad three years ago. All his diseased comb was put through a solar wax extractor. It was a good extractor and perfectly bee tight. A large sheet iron bread pan was used to catch the drip, and down into this went wax, honey and all. The wax was removed and the honey buried, that is such part of it as would run out of the pan. The pan with the adhering honey was put back in the extractor and left there to catch the melting wax of next year, and so on. The interior of that extractor was literally covered with foul brood honey, germs, spores, bacteria, etc.—in brief, we would say there was an ocean of foul brood germs in that bread pan. Well, last August some children playing about removed the top, and the bees started to clean up. They went for that bread pan as lively as a group of political grafters (U. S. grafters, of course; we have none in Canada), goes after a government contract; and like the grafter, they made a good job of it—there was nothing left. They fairly polished it clean. Talk about disinfecting! Why, say, they cleaned it up so completely that you could not find a germ with a microscope. What visions there were of foul brood after that! Think of the heart a man would have when packing those bees away snugly for the winter. Think of that harrasing thought that every egg laid by the queen next spring would be a victim of millions of germs.

The spring of 1910 arrived. The bees came on as usual, while Jones with much fear and trembling watched the combs. But, strangt to say, (and we do think it extraordinarly strange) not a single foul cell appeared. The bees came through as clean and beautiful as the most fastidious disinfectionist could desire.

Now, the question; did the heat of the sun for the two summers kill the germs? There can be no doubt about it, for they were there in abundance. Such are the facts, however, which can be vouched for by responsible witnesses. We think it a most extraordinary thing that the heat of the sun should have done the work so thoroughly.—Ed.

THE TWELVE-FRAME HIVE

In the May issue of the C. B. J. you ask for opinions regarding the twelve-frame Langstroth hives. I have been running the twelve and eight frame some eight or nine years. I stated some two years ago in the C. B. J. that the eight frame was to small for most queens without manipulating, and the twelve frame too large. I am still of the same opinion. The twelve frame hive is big and awkward in every way; from 80 to 90 per cent of queens cannot occupy twelve frames. As soon as the first honey flow comes from clover, the outside frames are filled with honey which gives the bees the idea that the brood chamber is their storeroom, and they at once fill up the adjoining frames before starting in the supers.

Last summer I used 50 ten-frame hives, and was so well pleased with them for out-yards, that I set to work during the winter months and altered all the twelve-framed hives into ten. It gave me a lot of work to change 75 hives, bottom boards, lids, queen excluders, and as many supers, all bee escape boards and comb-honey supers. With the experience I am having this year with the ten-frame, a large amount of them filling the third full depth super this 4th of July (brood chamber and three supers for extracting), without a single swarm; the ten-frame is good enough for me. I don't want any more twelve-frame hives, not even as a present. I would sooner have the eight frame hive than the twelve; with a little extra work they can be handled very well in a home yard.

ISAAC BALMER.

CANADIAN BEE-KEEPERS

Their Methods and Successes.

No. 1

The editor in araanging for a series of articles on the leading bee-keepers of Canada is desirous of conveying to his readers an idea of the various modes of bee culture practised in different parts of the Dominion. To those whose circumstances do not furnish them with the opportunities for gaining the knowledge that a man of extended experience obtains, these articles, we believe, will prove helpful. The bee-keepers who will be the subject of the following series will help the cause of Canadian bee-keeping by detailing for the benefit of the readers of the C. B. J. the means by which they personally have achieved success in their apiarian undertakings. We suppose that nearly every bee-keeper has worked out some pet theory or idea; has invented some appliance or other, or is in exclusive possession of the knowledge of some good dodge or wrinkle. The columns of the C. B. J. will furnish a medium whereby these good things may be made known to bee-keepers in general.

WILLIAM McEVOY.

William McEvoy scarcely needs introduction to our readers. He has been called the "Father of Canadian Bee-keeping." As the official "friend, philosopher and guide" of Ontario bee-keepers he may be said to have influenced their destinies for the past twenty years. Our ranks, however, are fast increasing, and to many of the younger generation, the subject of this sketch is but a name.

The frequency with which a man ventures before the public as a writer, is no criterion of his success as a bee-keeper, and unlike many other prominent beemen, McEvoy is no journalist. A master of his craft, he holds to clearly defined opinions. What he has to say he states without circumlocution. His few articles on bee-keeping have nearly all appeared in the C. B. J., and our readers will remember his eminently useful papers that appeared a year or two back. McEvoy never writes unless he considers that what he has to say will be of real benefit to his fellows. Thus it is that his influence so far has been of a purely personal nature affecting only those with whom he has come into direct contact. There are many first-class bee-keepers in Canada to-day ready to admit their indebtedness to "Mac" as they affectionately call him. In fact, several have confessed to us that nearly all they know about bee-keeping, worth knowing, they learned from McEvoy.

It was right in the middle of the clover flow that we journeyed to our friend's home in Woodburn. The time, possibly, was not the most convenient one for our host, and we felt somewhat guilty in intruding at such a period. His welcome, however, was unmistakeably sincere, his warm-hearted hospitality and merry nature shining out through his eyes as he led us across the threshold. We found ourselves in the midst of a circle of bee-keepers. In our mind, the Woodburn apiaries will long be associated with the vision of a happy, united and peaceful family. So far as we are aware, we are not subject to any ultra-æsthetic tendencies, but we must admit that the scene affected us very much.

The worthy father of three worthy sons —all expert bee-keepers—William McEvoy ought to be a happy man. And the two charming ladies of the house, Mrs. and Miss McEvoy—these also engage in the lighter operations connected with the taking of honey. The whole family appeared to possess the spirit of the hive itself.

Before we proceed further we will give a very brief account of McEvoy. The short time we were able to spend at

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Woodburn, together with his modest reluctance to speak much about himself, prevented our obtaining as full a history of him as we could have wished. William was born 66 years ago in County Halton. When a mere lad McEvoy found in bees a source of great attraction, for he loved to watch them passing in and out of the old fashioned skeps of his neighbors. This was before the advent of the moveable-comb hives. He early formed a resolution in his mind to become a bee-keeper. It was when just pasing out of his 'teens that he become the possessor of two stocks in boxes, but by the time he was thirty his apiary had increased to some seventy-five frame hives. He had become acquainted with the works of Langstroth and Quinby, and at this early age was widely known as an expert bee-keeper. We find him travelling around the country engaged in performing for his clients such operations as transferring colonies from skeps into the then new frame hives. His skill in those days appeared to his neighbors to be little short of the marvellous. At about the same period he manufactured and sold frame hives, for which there now was an increasing demand.

McEvoy, in common with many other bee-keepers, sustained serious losses as the result of "foul brood." He was perplexed as to the cause and determined to discover all he could respecting the disease. We have not space here to relate the interesting experiments he conducted; we will merely mention that he discovered the famous "cure" that goes by his name, when he ascertained beyond doubt that the disease was conveyed in the honey obtained from the disease-smitten areas of combs. This was contrary to the results of investigations made by the English scientific experimenters, Cheshire and Cheyne, whose conclusions at that time were almost universally accepted as being beyond question. When further experiments enabled McEvoy to give to the world a remedy of undoubted efficacy, the learned again took up the matter, and McEvoy's conclusions were found to be correct.

His labors to combat and stamp out foul brood disease, entitle him to the gratitude of every bee-keeper. We still have the disease with us, unfortunately, but there is not the least doubt as to the value of the McEvoy treatment, which is just as effective against bacillus larvæ as against b. alvei, or whatever name scientists may be pleased to call the pathogenic organism. In 1890, McEvoy was appointed to the post of Inspector under the Foul Brod Act, a position he continued to hold until his resignation last year. During those nineteen years it may well be said that he gave the very best of his life—his ripe experience and almost unequalled knowledge—in the service of his province, sparing not himself or his personal interests to any degree in his labors on behalf of his brother bee-keepers. He loves to give credit where credit is due, and in the chat we had about old times, he became reminiscently loquacious. To Mr. Gemmil he referred in terms of unstinted praise as the originator of the movement that resulted in the passing of the Foul Brood Act. His other friends comprise practically the whole of the bee-keeping world of the past two decades and many were the interesting incidents he related of them. Sometimes in the course of his duties he might be brought into conflict with one or another, and on behalf of his principles he was "ever a fighter," but we are certain that that Hibernian nature of his is too open and sunny to give shelter to any bitter or unworthy feeling.

Since his retirement he has been able to give the whole of his time to his apiaries, and we doubt whether there are better equipped or better managed bee-yards on the American continent than those at Woodburn.

(Continued next month).

THE NATIONAL

Albany, N. Y., has been selected by the executive committee as the place of meeting for the National Bee-Keepers' Association this year. It will probably be some time during October, although the exact date is not yet decided. [Later —Oct. 12 and 13 are the dates decided on.] Get ready for a large and enthusiastic meeting. Every bee-keeper who can possibly arrange to be present, should attend this meeting. Particulars as to the date, programme, etc., will be announced later. Watch the bee papers for it.

The membership of the National to day June 18) is 3,885. It will be more than 4,000 by the time of the National meeting. There are a few who should renew now, but after the honey-harvest all will attend to that, surely.

Many report that their bees are doing well. To-day we began extracting, and took off a ton of honey. My son, who does all the uncapping, says of all the several methods of uncapping honey he prefers the steam-heated knife.

If any member of the National wants a copy of my State Inspector's Annual Report for Wisconsin, and will write me for it, I will gladly mail a copy of it.

A renewal of membership was just received from a bee-keeper who has kept bees the greatest number of years continuously—88 years, I believe. The member is John Cline, of Darlington, Wis. The "boys" stay with us.

The number of copies of the last annual report of the National are getting low, but so long as there are any left, I will mail a copy to each new member. Also, for 4 cents for postage on each copy, I will mail to any one other back numbers of reports, as there are a few of them still left, if they are ordered.

The program of the next meeting of the National Association is being prepared. It promises to be one of the best meetings the National has held in many years. If the honey crop should prove to be a good one between now and that time, the attendance ought to be a record-breaker.

A bee-keeper sent his National dues claiming he wanted help at once, as his swarms alighted on his neighbor's apple trees, and the neighbor with a revolver said he would shoot trespassers. He claimed the bees ruined his apples, and sucked the juice from his onions! How is that for charges?

N. E. FRANCE.

HONEY SAME PRICE NOW AS 20 YEARS AGO.

Indexed

Co-operation the Remedy!

(A. Richter in American Bee Journal).

Does the gentleman from Donovan, Ill., (page 55) find a home market for all his honey? If so, he does not produce as large a crop as G. M. Doolittle.

Will any one assume that Mr. D. does not care how he puts his honey on the market? I never had the pleasure of examining the honey of either of the gentlemen, but I will wager that any of the large producers, especially Mr. D., markets a better honey than he did 20 years ago. Does he get more for his honey, or less? Why? Not because it's a luxury any more than it was 20 years ago, and if it is, all the more reason why the price should advance, for our laborers indulge themselves more to-day than they did twenty years ago.

If honey is not a food I would like to know what it is.

Honey has many substitutes. There's "Karo." So will candle-grease substitute butter if your taste was cultivated in the North Pole region.

Yes, honey is governed by the amount produced, but can any right-minded student of economics cry over-production in honey, or any other commodity, when half our population go hungry and half clothed?

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did sell for 60 cents, hence Mr. Doolittle scores another mark. There are more than 5 bee-keepers to one 20 years ago. What's the result? Each ships his surplus to the commission man in the large cities; he makes the price because he has no trouble to get all the honey he wants at his price; while on the other hand, he gets what he asks from the small buyer, who cannot afford the time to get in touch with the producer, just as the producer cannot afford the time to get in touch with the consumer. We trust to the middle-man, who, like most human beings—power makes them selfish. To increase their profits they falsely state the product was not in No. 1 condition, or that it sold for less than it did, until "they kill the goose that laid the golden egg." This is the history of the fruit-growers of California; the Michigan grape-growers; and the growers of flowers in Long Island. What was their remedy? **Co-operation!**

Would it not look like waking up to have a National Honey-Producers' Association to make your market, and accept only properly cured, honestly packed honey—the association stamp to be the guaranty of quality.

An example of the honey-producers' question can be answered by the "dairymen who furnish the Chicago milk and get 2½ cents per quart. The dealers' combine furnishes the selling organization, and gets 7 cents. Naturally dairymen are beginning to ask themselves. Why don't we furnish the selling organization ourselves, since there is where the profit is?"

I scarcely feel it my privilege to enumerate the many successes of co-operation, and take up space in the American Bee Journal, but let the gentleman from Illinois read co-operation in the Michigan grape-belt, in the Saturday Evening Post of Feb. 19, 1910, or go to the nearest library and get the history and working of the citrus growers' selling organization, of California. These organizations do the advertising, and are able to engage one gifted that way; advertising men are born—not created, and I think the ordinary bee-man would waste his money trying. Of course there are exceptions, and our friend from Illinois may be the exception.

All our magazines and daily papers are discussing the fact that the leading commodities have advanced 50 per cent., and attribute the advance in price to a 50 per cent. increase of money in circulation, claiming the two factors are intimately related, and commodities advance as money becomes more plentiful; but that does not feed our families nor clothe the children of the wage-earner, who is the first to suffer in a panic, and the last to benefit when prices advance. They wait for capital to be just, until they can stand it no longer, and it ends in riot. That is how co-operation is worked out in Philadelphia just now; but the man who works among the bees long loses all desire to be unjust, selfish or jealous, and I think could do as well as the California fruit-growers.

When one reads over the bee-literature he fails to find any guarding their knowledge or protecting an idea by a patent. How unlike any other profession or avocation! Can we not be proud when we read. "I cheerfully and freely give the principles in this system to all, hoping and believing that the same will prove as efficient in the hands of others as they have with me?"

White Plains, N. Y.

[We reproduce the above because it bears upon one of the most important features of apiculture. We have lately been studying the great Co-operative Movement in Great Britain, and we have been amazed at the wonderful development of the Movement. The retail grocery trade is almost in their hands, and this has given rise to the wholesale co-operative branch. The honey trade will never be in right condition until we create an organization to handle our output.—Ed.]

"THE SAVING OF WAX."

National Bee-Keepers' Association.

The following discussion took place at the last meeting of the National Bee-Keepers' Association on the above subject. It will be found very interesting. The paper was prepared by Mr. E G. Brown, of Sergeant Bluff, Iowa:

Wax is a secretion from the glands of the abdomen of the bee, and while its production is largely voluntary, it requires the consumption of a large quantity of honey to produce it. Various estimates range from six to sixteen pounds of honey being required to produce a pound of wax. The large amount of honey consumed in its production, combined with its varied uses, makes it one of the valuable products of the apiary. It is used in many places where no other materials can be substituted. For apicultural purposes there can be no substitute, and many of the large cathedrals use it exclusively for candies, as other wax or lighting materials cause a sediment to accumulate on oil paintings, which is very injurious to their beauty and durability, and wax also burns with a much steadier and clearer light.

It is also used extensively for dental and medical purposes, and in shoe polish and floor wax, and in polishing fine woodwork and stone.

It has nearly a steady market at a price of about thirty cents a pound, and if a bee-keeper is careful of his scraps of comb and hive scrapings he will find it will accumulate very rapidly.

The cappings from extracted honey are perhaps the greatest source of production, as they are nearly pure wax, and when carefully rendered produce the purest and best quality of wax. Old combs that for some reason or another have become undesirable for further use and patches of drone comb cut from the corners of the regular brood comb, furnish a large amount of wax.

Ten Langstroth frames will, when properly rendered, produce from two and a half to three and a half pounds of wax, or equal to 20 or 25 full sheets of medium brood foundation, and a chemical analysis would show that there ought to be nearly four pounds. For this reason there is no economy in using old, crooked or broken combs, and it will generally be found advisable to change one's supply of combs every eight or ten years, discarding one out of every eight or ten every year, as the wax will pay for the rendering and the new foundation, and he will be able to produce a better, clearer grade of honey, and in an infected locality will be less subject to disease.

Another source of accumulation is from the scrapings from the hives and frames, as the bees almost always seem to have a little extra wax on hand to tuck away in the corners, or on top of the frames, or between them in the form of burr combs.

In the spring when the bees are using large quantities of sealed honey they seem to want a place to store the extra wax from the cappings and for this reason pile it on top of the frames or build burr combs between them, and unless these are kept scraped off they generally cause some trouble in handling the combs and, if left until the honey flow comes on, a large amount of it will probably find its way into the super and cause dark inferior looking cappings where comb honey is produced.

The simplest method of rendering is the sun melter, and while this produces the best quality it does not get nearly all the wax, as it obtains just the free wax that will drain out of the scrapings and old combs, yet I believe every bee-keeper should have one of these in his yard as a catch-all for scraps and bits of combs, and if he is a little careful he can in a short time accumulate many times over the cost of the melter in wax saved in this manner. This form of rendering is by far the most practical for the small

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bee-keeper, and then by saving his slumgum for a year or so he will accumulate enough of this to either sell or render in some other way. But be sure to keep it dry.

The most complete and about the only way to render large quantities of old comb and slumgum is by means of hot water or steam. In order to get the wax entirely out of the melted slumgum it is necessary to have a steady, hard pressure and essential that the press cake or slumgum be thoroughly melted and kept at a high temperature during the entire operation. Where the press is arranged that the slumgum is submerged below the boiling water while pressing, it is best to apply the pressure as hard as possible and then release and allow the slum gum to boil up again and then press again.

The only material that will give any satisfaction for press sacks is common burlap, and in order to have them stand the necessary pressure they should be very heavy and strong. If too closely woven material is used the wax cannot be forced out, as the slumgum cakes to the cloth, and even the best burlap clogs very rapidly.

One of the most rapid ways of rendering wax in large quantities is to use a hot water tank heated by steam pressure, and using a steam heat under the press cake. The great drawback to this plan is the expense, which would place it beyond the means of a man who did not have a large quantity of wax to render and also other use for his steam power.

The capping melter, while it produces the best possible quality of wax, is not practical because of the inability to apply sufficient heat to melt the wax and not darken the honey.

Be sure that all wax stuff—that is, escraps of old comb, cappings, scrapings, and solar melter slumgum—are kept dry, as there is nothing that will mould quicker than this material when once it gets damp, and it takes very little mould to make dark wax out of the best material.

Black iron should always be avoided for melting apparatus as it will also color wax. Copper is considered the best material for a melting tank, although tin or galvanized iron are both good and are much cheaper.

Care should always be taken to see that wax is thoroughly strained and settled, and, to accomplish the latter, it should be cooled very slowly, and there should be some water in the bottom of the container.

It never pays to put an inferior or dirty grade of goods on the market, as it will not bring the price, and also leaves a bad impression with the dealer who buys.

BUT DON'T save wax by scrimping on the use of foundation, because for every cent you save in the cost of foundation you lose ten in the amount of honey secured and frequently twice that in crooked comb and inferior sections.

Mr. Brown—I was talking with Dr. Phillips and he says that there is another plan that will produce nearly four pounds of wax to every ten Langstroth frames; but he said that it had not been developed in a way that it could be used, and it is a new invention. The best results I have been able to get is three and a half pounds of wax out of Langstroth frames. I can get more wax out of heavy old combs where there are corners plugged in with old comb and where there are a number of sub-queen cells built on; those will accumulate more wax, so that an old frame generally yields a larger amount of wax than a new one, especially one that has been used in the brood nest about two years.

Dr. Phillips—It seems to me that this matter of wax production is a very important subject. It is almost part of our discussion this morning in the matter of foul brood control, because in order

to reduce the expense of the disease treatment, we want to get all we can from the material taken away from the bees, and every ounce of wax in a healthful colony decreases the expense of the treatment just that much. It is, of course, important for the man who has no disease, because he has a great deal of comb to render at various times.

I have never been satisfied with the wax press method of wax extraction; it has always seemed to me a slow process. I have nothing much beter to offer as far as I myself am concerned. In the first place I don't like to put the combs themselves into an ordinary wax press. In our process we always melt the combs down in a double boiler and let all the wax that will come off first, and then press the slumgum. It makes a great deal shorter operation of it where it is possible to get a double boiler, which is not very expensive. The other method to which Mr. Brown has referred is a method being developed by some beekeepers in the Hawaiian Islands; they don't use any pressure or press at all, but the slumgum is ground all to pieces, and when it comes out it is almost powder, and when it is put in the fire it does not crackle. In an operation where they took 120 colonies in an apiary and rendered the wax from all the surplus combs, some used for brood and some not, they got 4 4/10 pounds of beeswax to every ten frames of Langstroth size.

Dr. Bohrer—I am glad Dr. Phillips made mention of that matter. I have no wax press, no machine of any kind, do not handle bees enough to justify me in buying one of those expensive wax presses, and I don't believe they can get very much wax out of the comb by the time I get through with it. In order to shut the bees off from it, I put it all in a gunnisack and put it down in a dark cave, and then I take about a 30-gallon sugar kettle, I get the water boiling in it, and dump the sack in it, and in half a minute it is melted down. I boil that probably for an hour before I begin to skim off any. Then I skim it off the top with a dipper and then pour it into something like a large dishpan, and keep boiling and skimming. I did this in one case and the water began to look muddy for a while, and I took the sack out and then put on another kettle and heated that up and boiled the same sack over again, and kept skimming as long as I could get anything in the shape of wax, and poured it into a basin of water. Then I melted it again and poured it off into a cooler, and then I turned in and built a fire in the kettle and burned it out, because the wax may get up around the top, and it may be you have not destroyed all the germs. I didn't get just the whitest kind of wax, and I thought of what was made mention of by Mr. Dadant, and that is not melting the wax or rendering it out in one of those solar extractors. I did not want to use one of them because I was afraid of that where there is any foul brood about. After you have boiled that way I don't believe you could get four ounces out of it. After it had lain there a while I built a fire there and it burned up and it didn't seem to indicate there was any gelatinous substance in it.

Mr. Brown—I would like to make some comment about that plan of churning the wax. When I fixed my melting apparatus first I thought I had it so that I was going to put it in the frames and boil it up and fix it so as to churn it up and down and get the wax out of it there, but it wouldn't work for me; I didn't get over a pound and a half to a ten frame hive of that wax, and mostly all the slumgum had gotten to a point where it had melted. The weight of the slumgum was heavier than the wax and it would settle in the bottom of the tank. I wasn't satisfied and I ran the slumgum into my press, and while it looked as though there was nothing else in it, I

pressed it out and I got m
skimmed out before.

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pressed it out and I got more wax than I skimmed out before.

Mr. Hall—Mr. President, I thought I hadn't anything to say, but after Dr. Bohrer began to talk I see that his method of rendering wax has been almost identical with my method. During the last two or three years I have talked with a few who have had wax presses, and I began to think I ought to have a wax press, and I ordered one to be built for me for this fall's use. I don't know whether it has been built or not. The only difference between Dr. Bohrer's method and mine was, he said he put his dry combs into hot water. My method has been to put the combs, all broken up as finely as I could break them, into a barrel and keep it in water, some times a week or two weeks and frequently as long as three weeks, and pour the water off occasionally, and it would be as black as ink, especially these old combs, and my way was to soak up the cocoons with water so that they couldn't absorb any of the wax, and in that way cause the wax to rise to the top of the water in place of being absorbed in the cocoons.

Dr. Bohrer—You wouldn't do that with foul brood combs.

Mr. Hall—I had no foul brood combs, thank goodness. What difference it would make I don't know, except the water that would drain off would have to be dumped into a place where it would be impossible for the bees to get it.

Mr. Darby—I just wanted to add a few words to what Dr. Phillips said in reference to this method of wax rendering. I have heard these discussions at different times, and they nearly always end pretty much in the same old way. I realize the fact that our methods of rendering wax are too slow, as the doctor has said. I don't like spending five dollars' worth of time getting two dollars and a half worth of wax, and then it is a mussy, unsatisfactory thing anyway, and I think in these discussions these agitations should stimulate someone to work out a better and more speedy plan.

Mr. Ramer—I have had a little experience in melting up wax the last few years. I have tried the wax press and the solar wax extractor and I never got much satisfaction out of that, but I believe that the simplest and cheapest method that I have lit upon is that—I think I got it from A. B. C.—to take an old boiler and make a couple of pieces of slat work, one to lay in the bottom and the other on top of the sack—take a course sack. I never bother with my wax; as I get little bits I squeeze them up in a bunch; with an old comb that has been taken off the hives, squeeze it in a bunch and throw it in the sack. I tried the method of soaking, once, but I don't think that amounts to anything. I put it in the boiler, and it will soon boil all to pieces, and then I take something like a churn-dasher and churn that good, and work it and skim it off; and if you don't fill the sack too full, you can take hold of the end of that sack with something and get your wax all into a little bunch and work it, press it and churn it out. That way I have worked out at the rate of six pounds an hour, and I think I got nearly all of the wax, and the process is cheap and not a long one. That is the way I have proceeded to take out all my wax, and the process is cheap and not a long one. That is the way I have proceeded to take out all my wax in the last two or three years.

Mr. France—Just one word on this wax business. With the solar wax extractor, slumgum, if from a diseased apiary, is full of the disease, and if thrown out will spread the disease galore so that if you use the solar extractor beware of the product. I have had several instances in our state where the melting of diseased material has been the source of neighbor's bees coming there and getting the disease.

Dr. Bohrer—I advise burning it up.

Mr. France—As Dr. Phillips says, all our wax presses are, with me, too slow. I have used the Hatch-Gemmell Press, the German Press and the Hershiser. As I have gone over our state, but few bee-keepers are equipped at their home with a press suitable, while I am there a short time, to render up the wax, so I have taken with me as baggage, a press, and in nearly every instance I have used what is common on nearly all farms, a large iron kettle to do the melting in, using an abundance of water. Just as quick as the wax is melted I get it out of that kettle; I don't want to boil it as long as the doctor was speaking about here, from the fact you remember Mr. Dadant called our attention to the effect of over-boiling in making the wax more like corn-meal. I then take a long-handled dipper and put this melted wax and slumgum into the wax press first, to have that tempered up right.

I then use the press as a press to get the wax out of slumgum under hot water. In that way it is not a difficult matter for one person to run say a thousand to fifteen hundred combs through in a day, having some receptacles that you could cool the wax in. I see someone has brought here and left at the desk some samples of wax. There is a difference in the shade of those two samples, and the more iron there is the darker the shade. Don't leave wax in iron longer than you are obliged to, and by all means let it cool in wood, tin or copper. My preference would be bright tin; and wherever it cools that receptacle should have considerable hot water below the wax, and the entire can, or whatever it is that the wax cools in, should be enclosed so as to be a long time cooling.

A few years ago when I was up in Mr. Dadant's foundation factory, in their melting building, the wax that was melted was run into deep long cans perhaps half full of boiling water; those were run into a little cupboard and enclosed; in the inside there was liquid wax in abundance, yet in that can it would take from 24 to 36 hours before that wax would be into the form of a cake and the foreign material had settled out of it. As far as acid is concerned to purify the wax, we as bee-keepers, had better let that part alone, for the majority of us are not equipped. For comb foundation, men of experience have learned how much to use and can use a little of it in the final melting.

Mr. Brown—One of those samples of wax, bright yellow, is from cappings that have never been in water, but the cappings were melted; and the other side is from scrapings that were over half or two-thirds propolis. The lighter colored one is from propolis, and if you notice in the smell you will notice there is a large smell of propolis on that one cake. I noticed here a short time ago a statement that where propolis was mixed with wax it would not work for polishing purposes, and, also, if you broke a cake of wax from cappings or clear combs you could put your finger on it and rub it around and it would shine. Take a cake where there is propolis and you can't do it.

Mr. Morgan—I would like to ask Dr. Phillips or anyone who knows if wax made in the solar extractor is superior in any way to water rendered wax? I have heard it was, and that it was worth from five to ten cents a pound more than the water rendered wax.

Dr. Bohrer—It is if it is purified. That is, white wax is used for making ointments. They refine it. You can take a solar extractor and run it through as many times as you like, and get a piece of galvanized iron and get your tinner to turn the edges up at the bottom, and run it to a point, and set a basin under that with water in it, and put a pane of glass over that, and put your wax in it, and put it out in the hot sun, and the

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Dr. Phillips—The ren
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Dr. Phillips—The rendering of the white wax of commerce is not done under glass. The way the wax manufacturers take care of that is to cut it up into very fine shavings and put it out in the sun on trays and leave it till it is perfectly white. I do not think that wax from the solar wax extractor will bring a very much bigger price than the others in the market because the men who have to buy the wax have to take care of it and fix it up for their own use; and in making it up for floor polish or medical purposes or candles it all has to be re-treated anyway.

Mr. DeJong—I spoke to Mr. Dadant about that point yesterday, and he said that was all nothing, it is all the same; he said that there was no difference. This is what Mr. Morgan speaks of. A man from the Black Hills said that he melted his comb right in the kettles dry, and his wax was worth seven or eight cents a pound more than the other wax melted in hot water.

Mr. Poppleton—In one way the wax of the solar wax extractor is better than other wax; in the solar wax extractor it remains from two to three hours settling there, and that will always clarify it better than in any other way. Mr. Dadant has advanced the idea of slow melting helping the wax. It is not in the slow melting, it is in keeping it melted a long time. In the solar wax extractor it is kept so, and wax from that, if it can be properly handled, is almost always clear from the other material. I presume I have used the solar wax extractor probably more than any other bee-keeper in the United States. I use it altogether. I ran through 500 pounds this year. I have used it for over thirty years. I have yet to have the pleasure of dealing with foul brood, consequently that question has not entered into my calculations at all.

CENSUS OF AGRICULTURE

The next census of agriculture will be taken under date of 1st June, 1911.

The area, product and value of field crops harvested in 1910 will be enumerated for fall wheat, spring wheat, barley, oats, rye, corn for husking, buckwheat, beans, peas, flax, mixed grains, hay and clover, alfalfa or lucerne, corn for forage, other forage crops, turnips, mangolds, sugar beets, other field roots, tobacco and hops; and grass seed, red clover seed and alsike clover seed will be enumerated for product and value.

Grain and other field crops for the harvest of 1911 will be taken by areas only, as none of these crops will be ripe at the taking of census. The products of these crops will be gathered later in the year from the reports of correspondents.

Animal and animal products, also under the head of agriculture, will include the number of horses three years old and over, horses under three years, milch cows, other horned or neat cattle, sheep, swine, turkeys, geese, ducks, hens and chickens and hives of bees held or owned by each person at the date of the census on 1st June of 1911.

The number of horses, milch cows, other horned or neat cattle, sheep, swine and poultry sold in 1910, will be recorded, as well as the wool, milk, home-made butter, home-made cheese, eggs, and honey products of the year, and the quantities of milk and cream sent to factory or sold.

Pure-bred animals registered, or eligible for registration, which are owned at the time of taking the census will be enumerated for horses, cattle, sheep and swine, but their number will also be counted with all other animals.

BEE-KEEPING FOR FARMERS.

How many farmers are bee-keepers? From inquiries made in many directions, the writer has formed an estimate which does not approximate to one per cent. Almost every farmer keeps a few head of poultry, but bees — well, I have yet to receive an affirmative answer to the repeated question, "Do you keep bees around your place?"

In other lands the bee is regarded by the farmer as being the most profitable of all live stock, requiring as it does a minimum of attention and outlay, and yielding a very handsome annual return in sold hard cash.

The prime cost of swarm, hive and queen together with all necessary appliances should not exceed $15.00, very probably will not touch the $10.00 mark, and will yield a profit on the first year's work of from $5.00 to $15.00, whilst every succeeding year will see a largely increased return result from the suitable outlay.

"Apiary" and "hennery" should be worked hand in hand; both are eminently suitable to the orchardist, nay more, are really requisites; and both can be looked after by the gentler sex or by the younger members of the family. I venture the assertion that one hundred hens of good laying strain and pure breed, handled in conjunction with say seven hives of bees, will, if average intelligence be used in their care and treatment, yield an annual net profit of $300.00 or more. Surely such a proposition is well worthy of an hour or two of serious consideration!

It has been urged that bee-keeping is impracticable in Nova Scotia, and the same argument held sway in relation to poultry for some considerable time; the assertion that bee-keeping will not pay is just as false as the one which dubs hens "money-losers." At an expenditure of 50c. in cash and half an hour in time a hive may be made comfortable, supplied with food and then left to look after itself throughout the winter with the full assurance that, with the advent of spring the busy little creatures will awake from their long rest ready and eager to become the source of another substantial addition to the bank balance in return for such an amount of attention as would, in any other business, be regarded as ridiculously small.

The knowledge required for handling of bees is very small and in no way technical, ever-day common sense having by far the best of things in this connection; practical advice should not be difficult to obtain; the product is always certain of an unfailing market and finally, after the first feelings of timidity have been overcome the industry is one which affords a never ending source of interest and pleasure, plus profit.

I shall be only too happy to answer any enquiries which may be addresed to me on the subject for I am certain that there is a very wonderful future in store for apiculture in Nova Scotia as in anada in general.

JOHN BAYNES.

Agricultural College,
Truro, N. S.

CANADA'S NEXT CENSUS OF POPULATION.

The next census of Canada will be taken under date of June 1st, 1911, and will embrace the subjects of population, mortality, agriculture, manufactures, minerals, fisheries and dairy products.

Population will be recorded under the heads of residence and persnal description; citizenship, nationality and religion; profession, occupation and trade or means of living; wage earnings and insurance; education and language spoken, and infirmities.

Every person living on June 1st will be entered on the schedule of population by name, as a member of a family, institution or household, together with place of

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habitation, sex, relationship to head of the family or household, and whether single, married, widowed, divorced or legally separated. The month of birth, year of birth and age at last birthday will also be recorded.

Entries will be made for each person to show the country or place of birth, year of immigration to Canada, if born elsewhere, year of naturalization if formerly an alien, and also racial or tribal origin, nationality and religion. Every person of alien birth who has become a naturalized citizen is a Canadian by nationality; and every British subject with residence in, as well as every native of Canada who has acquired citizenship by birth or naturalization, is also a Canadian by nationality. But there is no Canadian by racial or tribal origin, unless the Lndians are counted.

Every person having an occupation or trade will be entered for it, but if employed in the census year at some other occupation for part or whole time he will be so recorded also. If the person is working on own acount, the entry will be so made. An entry is also required to be made showing where the person is employed, as on farm, in woollen mill, at foundry, shop, in drug store, etc.

Wage-earners are entered to show the number of weeks employed in 1910 at chief occupation or trade; at other than chief occupation, if any; the total earnings in 1910 at chief occupation; the total earnings at other than chief occupation; and the rate per hour when employed by the hour.

Entries are required to be made for each person showing the amount of insurance held at date of the census upon life, as well as against accident or sickness, together with the cost of such insurance in the census year.

Under the heading of education and language records will be taken for every person of five years of age and over showing the number of months at school in 1910, and if the person can read and write and the language commonly spoken by each person. The cost of education in 1910 for persons over 16 years of age at College, Convent or University is also called for.

The last question on the schedule of population relates to infirmities. It calls for a record of each person having an infirmity. If blind, deaf and dumb, crazy or lunatic, idiotic or silly, a record thereof shall be made in the proper column, and the age at which the infirmity appeared is required to be specified.

THE CROPS AND LIVE STOCK OF CANADA

Ottawa, July 12—The census and Statistic Office to-day reports on the condition of field crops and the number and condition of farm animals of the Dominion at June 30. For the three years 1908-1910 the field crops range in condition from 82.16 for spring wheat to 91.42 for hay and clover this year, to 80 for spring wheat and 82 for rye and peas in 1908. Fall wheat is 85.47 this year compared with 77.28 in 1909 and 89 in 1908. Oats was 90 in 1908, and 93.81 in 1909, and this year it is 86.29. Peas is 86.94 this year; last year it was 84.40, and in the previous year 82. The condition of mixed grains is nearly the same, being 84 53 this year, 86.58 last year and 84 in 1908. Hay and clover is better this year than in either of the previous years, being 91.42 compared with 76 in 1909 and 87 in 1908. The condition of alfalfa has been recorded this year for the first time, and its average is 88.94. Pasture has a condition of 89.02 this year, compared with 99 in 1908, and 87.74 last year. The conditions of all field crops are good in Ontario, the highest being 94.29 for fall wheat and the lowest 84.79 for spring wheat. Quebec crops range from 74.45 for mixed grains to 102.58 for hay and clover. Peas is 84.42 and its condition is the next above mixed grains. In Prince Edward Island,

and Nova Scotia all field crops are reported for a condition above 90 except alfalfa, which is 83.33 in the Island. Hay and clover are 104.31 in the Island and and 105.79 in Nova Scotia. Wheat, oats, mixed grains and alfalfa are reported in a condition above 90 in New Brunswick, and all other crops between 83 and 89 except alfalfa, which is 97. Hay and clover are reported at 109.68. Manitoba, Saskatchewan and Alberta have low averages throughout owing to a light rainfall in June. The general condition of crops in Manitoba is much below the average. Correspondents in nearly every district report no rains—only a few light showers and hot, dry winds that absorbed the moisture and withered the crops. The lowest average condition is reported from around Brandon and Morden, and the highest from Marquette where it is placed at a standard. In Saskatchewan the crops do not appear to have suffered from climatic conditions to the same extend as in either Alberta or Manitoba, as there have been many local showers. The reports from Lloydminster, Battleford, Indian Head and Qu'Appelle are very favorable, the condition of wheat being placed at 100 and over. The prevailing condition of crops in that part of Alberta south of townships No. 30, is below the average in consequence of drouth and hot winds. In the Edmonton district the grains, although suffering to some extent from the same causes, are in much better condition. The best reports come from the Strathcona district, and those from Athabasca Landing and Saddle Lake districts are also particularly favorable. The field crops of British Columbia are all good. The areas of late cereals—buckwheat, flax, corn for husking, beans, potatoes, turnips, and other roots, sugar beets and corn for fodder have increased this year to 2,150,382 acres, which is 279,526 acres more than last year and 247,869 acres more than in 1908. But this increase is altogether in flax, which owing to the high price offered for seed has

come into favor with the Northwest.

The only farm animals noticeable increase since 1 while sheep and swine hav condition of all these ani Dominion, exceeds 99.

Want and Exchang

WANTED—I want offer son's crop of No. 1 light ex Write at once. Angus F. M Roches, Ont.

Any quantity of No. 1 will be taken in exchange f pails, same as I use. Will for your next season's crop G. A. DE

WANTED—First-class hon extracted; can supply packa Foster & Holtermann Limite Ontario.

GOLDEN ITALIAN QU from pure Golden Italian n tle, hardy, and great hone the best that twenty years can produce. Untested, 75c per dozen; tested, $1.25; $1.50. William Elliott, Strat

WANTED—Clover or bas —finest quality—state how p tity—lowest cash price—m Edmund J. Berry, Didsbury, ences, Molson's Bank, Calgar

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come into favor with the farmers of the Northwest.

The only farm animals which show a noticeable increase since 1907 are horses, while sheep and swine have declined. The condition of all these animals over the Dominion, exceeds 99.

Want and Exchange Column

WANTED—I want offers for the season's crop of No. 1 light extracted honey. Write at once. Angus F. McLellan, Mille Roches, Ont.

Any quantity of No. 1 clover honey will be taken in exchange for 5 and 10-lb. pails, same as I use. Will contract now for your next season's crop.
G. A. DEADMAN.

WANTED—First-class honey, comb and extracted; can supply packages. Address, Foster & Holtermann Limited, Brantford, Ontario.

GOLDEN ITALIAN QUEENS—Bred from pure Golden Italian mothers; gentle, hardy, and great honey gatherers; the best that twenty years of experience can produce. Untested, 75c. each, $8.00 per dozen; tested, $1.25; select tested, $1.50. William Elliott, Strathroy, Ont.

WANTED—Clover or basswood honey—finest quality—state how put up—quantity—lowest cash price—mail sample. Edmund J. Berry, Didsbury, Alta. References, Molson's Bank, Calgary, Alta.

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.

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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.

REE

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Diamond Point

FOUNTAIN PEN

Free as a Premium

Nothing is more acceptable as a gift at any season than a good Fountain Pen. The above illustrates a pen that is fully guaranteed to us and that we can therefore warrant to give satisfaction to any one receiving it from us. We are giving it free to all new subscribers to the Canadian Bee Journal who remit us $1.35 for one year; and to all old subscribers who send us a two year renewal for $2.00 in advance.

adian Bee Journal

TFORD, CANADA