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CANADIAN  
BEE JOURNAL

Vol. 19, No. 4.

APRIL 1911

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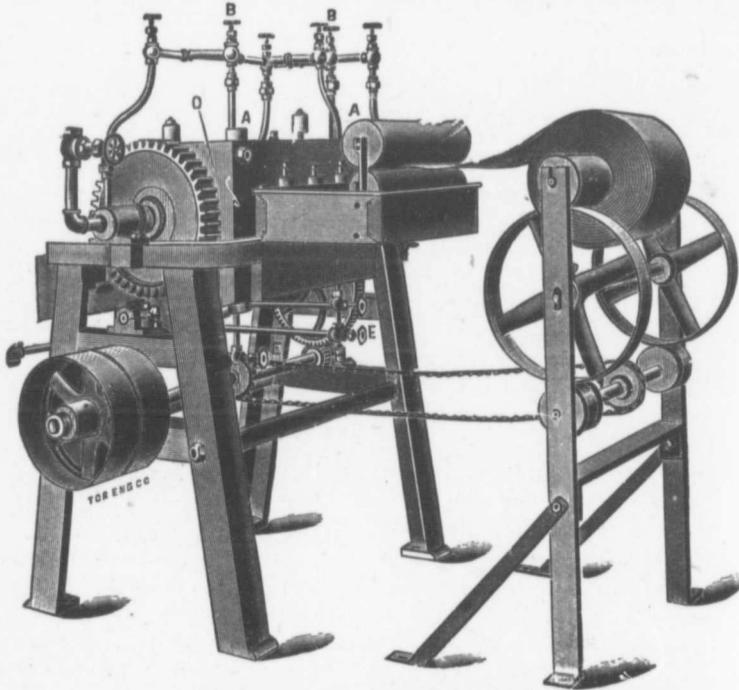
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The Canadian Bee Journal

Brantford, Canada

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Thamesford :: Ontario

## The Canadian Bee Journal

Devoted to the Interests of Bee-Keepers

JAS. J. HURLEY, Editor

Published monthly by  
The HURLEY PRINTING CO.,  
Brantford, Ont.

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# The Canadian Bee Journal

Brantford

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JAS, J. HUI

Vol. 19, No. 4.

Judging from the encouraging in reference to the indications are that the industry is likely to experience a considerable development in the next year or two. The by Dundas Todd for ought to receive a wide

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"Waxcraft," by Cow work on the production apiary. Every bee-keeper a copy. This is a source often overlooked by the keeper. By special arrangement to supply our work.

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We beg to remind our short course for Bee-keepers Ontario Agricultural College commencing Monday, May Inspectors and others diseases should be presented May 4th, and hear Dr Ph.D. This will be an interesting and important course. See program, issue.

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Mr. Morley Pettit, related on the work he throughout the province of county associations splendidly. The entire feeling the stimulus of

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Referring to our station in her notes last son remarks that we are in favor of cheap honey. in favor of cheap honey.

# The Canadian Bee Journal

PUBLISHED MONTHLY

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

Vol. 19, No. 4.

APRIL, 1911

Whole No. 554

Judging from the enquiries we are receiving in reference to British Columbia the indications are that the bee-keeping industry is likely to experience considerable development in the course of the next year or two. The bulletin prepared by Dundas Todd for the Government ought to receive a wide circulation.

\* \* \*

"Waxcraft," by Cowan, is a splendid work on the production of wax from the apiary. Every bee-keeper should possess a copy. This is a source of revenue too often overlooked by the average bee-keeper. By special arrangement we are enabled to supply our readers with this work.

\* \* \*

We beg to remind our readers of the short course for Bee-keepers at the Ontario Agricultural College, Guelph, commencing Monday, May 1st to 6th. All Inspectors and others interested in bee diseases should be present on Thursday, May 4th, and hear Dr. E. F. Phillips, Ph.D. This will be one of the most interesting and important sessions of the course. See program, Page 50, February issue.

\* \* \*

Mr. Morley Pettit, is to be congratulated on the work he is accomplishing throughout the province. The organization of county associations is progressing splendidly. The entire bee industry is feeling the stimulus of his work.

\* \* \*

Referring to our address on Co-operation in her notes last month, Miss Robson remarks that we are evidently not in favor of cheap honey. No, we are not in favor of cheap honey, neither are we

in favor of dear honey. We are in favor of a just return to the producer for his labor; we are in favor of fair prices to the consumer. Justice to the producer constitutes fairness to the consumer. This is what we call social justice. Special privileges to the few to tax the many results in injustice.

\* \* \*

Miss Robson appears to have little faith in the co-operative sale of honey movement. She is, however, enthusiastic in the matter of co-operative advertising. Well, a half a loaf is better than no bread. We sincerely hope that something may be done along the lines she suggests. We fear that too much is looked for from the Government. Our bee-keepers should finance their own enterprises, and learn to help themselves. Self help is the best kind of help. There is a tremendous market for honey in Ontario, if it were properly developed. Syrup made of starch has a big sale, because it is well advertised. Results would be the same with honey.

\* \* \*

In this issue we present a statement of exports and imports of honey for the past five years. A close scrutiny will prove interesting.

\* \* \*

Cold, cold, cold! The weather this spring has been disagreeably cold. Abundance of pollen now, but unfavorable weather for gathering. How unlike last spring it is! Then we had abundance of warm weather for pollen gathering. but cold weather prevented work during fruit bloom. The indications are that we will have good weather a little later on.

J. J. H.

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Reports to hand indicate the rapid progress that is being made in various parts of the Dominion in the work of organizing the bee-keeping industry. On another page we reprint the Foul Brood Bill that has just become law in British Columbia, which, our readers will note, amongst its various provisions, empowers the authorities to quarantine imported bees for nine months, if necessary, or to destroy them should they be found to be diseased. Two Foul Brood Inspectors have been already appointed, E. Leonard Harris, Vernon, B. C., for the eastern half, and Dundas Todd, Victoria, B. C., for the western half of the Province. We understand that, so far, there is not a single undoubted case of Foul Brood in the region, and thus it will be seen that the action of the Department of Agriculture is entirely precautionary.

\* \* \*

Last week something entirely new in bee-keeping educational work in Ontario was carried out in Hastings and Northumberland. Four Bee Institutes were conducted, with afternoon and evening sessions, at the following places: Stirling, Wallbridge, Campbellford and Warkworth. For a beginning, the attendance was good in each place. County Associations have been organized in each of the counties. Last month we referred to the vigorous educational policy that is being carried out by the Ontario Department of Agriculture, through the persons of Messrs. Hodgetts and Morley Pettit. Behind the activities we record from month to month we are certain to find these two gentlemen. On the latter devolves the practical work of organizing, and great success is attending his efforts. During the past few weeks, County Associations have been formed in Wellington, Lincoln and Welland, as well as in Hastings and Northumberland, as previously mentioned. Huron and Leeds have also been organized this year. At the present rate it will soon

be possible to state that half the counties of Ontario are organized for the advancement of bee-keeping.

\* \* \*

There is a great and encouraging demand for apiary demonstrations all through Ontario, and the Provincial apiarist's services are in constant request. Last fall the Simcoe County Association decided to spend the grant on apiary demonstrations during the coming season, and since then most of the other Associations have taken the matter up.

\* \* \*

We learn that the short course for Apiary Instructors to be held May 1st to 6th is also attracting considerable attention. Applications are coming in from as far east as Stormont County in Ontario, and Massachusetts in the States. Indeed it would seem that the gathering promises to be somewhat larger than what the authorities bargained for. The Disease Conference, especially, will be a great and epoch making meeting. We trust every bee-keeper in Ontario who is interested will make an effort to attend. With a view of saving bee-keepers the expense of travelling to Guelph, suggestions have emanated from Essex and Leeds counties that short courses be held in convenient localities. We hope the Department will view this development of the "short course" idea in a favorable light. Anyhow, we imagine that if the demand exists and is sufficiently insistent, we shall find that the requests of the bee-keepers will meet with a favorable and sympathetic response from the Department.

\* \* \*

We learn from Mr. N. E. France that the next convention of the National Bee-keepers' Association will be held at the Court House, Minneapolis, Minn., on August 30-31. This will be during the week preceding that in which the Minnesota State Fair will be held, so that there is a promise of good board and

lodging from 75 cents. The present membership is 4,440.

\* \*

Every bee-keeper should read the new edition of Hutchins' Bee Culture. A great treatise on the great bee man.

\* \*

Our sympathies are for the bee-keeper who desires to modify the instinct of bees. It seems to us we are at issue with the matter, and perhaps we are to state just where we stand. It is that swarming becomes conscious of the bees for its successors which usually takes place in so full of stores that the bees must remain inactive or dormant. Swarming comprises a natural phenomena, apparently common, but not understood. Whilst in perhaps, out of a hundred colonies, only a few are skillful manipulation, perhaps there are the five that their perverseness, no one may do. Doubtless the responding percentage is ninety-five that take the matter and appear anxious to be bee-keepers. In other words, variability in the swarming bee. We have yet, however, the colony that is non-compliant in any circumstances. We are correct in the statement of variability from practice between which the process may operate. What all may be perpetuated; but it will not go beyond a certain level of excellence; how little the swarming influenced by selection, our readers that prior to the modern methods

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April, 1911.

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Every bee-keeper should send for the  
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Bee Culture. A great bee book by a  
great bee man.

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Our sympathies are entirely with those  
who desire to modify the swarming in-  
stinct of bees. "It seems, however, that  
we are at issue with some on this mat-  
ter, and perhaps we may be permitted  
to state just where we stand. We take  
it that swarming occurs when a colony  
becomes conscious of having amply pro-  
vided for its successors in the old home,  
which usually takes place when the hive  
is so full of stores that either the bees  
must remain inactive or depart elsewhere.  
Swarming comprises a number of phen-  
omena, apparently co-related, but little  
understood. Whilst in ninety-five cases,  
perhaps, out of a hundred, we may, by  
skillful manipulation, prevent swarming,  
there are the five that will persist in  
their perverseness, no matter what we  
may do. Doubtless there is also a cor-  
responding percentage amongst the  
ninety-five that take things more coolly  
and appear anxious to accommodate the  
bee-keepers. In other words, there is  
variability in the swarming habits of the  
bee. We have yet, however, to learn of  
the colony that is non-swarming under  
any circumstances. We believe we are  
correct in the statement that the limits  
of variability form practically the limits  
between which the process of selection  
may operate. What already exists may  
be perpetuated; but improvement can-  
not go beyond a certain point. Inferior  
strains may be eliminated and the gen-  
eral level of excellence raised. To show  
how little the swarming impulse may be  
influenced by selection, let us remind  
our readers that prior to the advent of  
the modern methods of bee-keeping,

everything was in favor of those colonies  
being perpetuated that showed the great-  
est tendency to swarm. Yet when skip  
bees are transferred into frame hives,  
they are found to be as amenable to the  
desires of the modern bee-keeper in the  
matter of non-swarming as are their  
more aristocratic pedigreed relatives.  
In fact, the swarming instinct is largely  
governed by conditions external to the  
bee, and is not subject, to any great  
extent, to hereditary or variable causes.

\* \* \*

On the same subject, and referring to  
a previous note, Editor York asks us  
why—if in the case of hens, egg-laying  
constitutes reproduction—why, in the  
case of bees, it does not? What we  
actually said in our note was that "It  
is only when queens are hatched and a  
swarm issues that REAL and COM-  
PLETE reproduction takes place in the  
case of the honey bee." The very  
obvious answer to our friend's query is  
that the hen's egg, if fertile, contains  
the germ which ensures the continuance  
of the race, but that in the case of bees,  
the continuance of the race is effected  
only through those eggs, that, as a re-  
sult of the swarming instinct, are per-  
mitted by the bees to result in fully de-  
veloped females.

\* \* \*

How many of us possess the courage  
to make the candid confession "I don't  
know." Our esteemed contributor, F.  
Dundas Todd, tells us in his notes,  
which appear in the present issue, that  
once he had thoroughly drilled into him  
the difference between knowledge and  
belief. It was Confucius who said "To  
know that we know what we know, and  
that we do not know what we do not  
know,—that is knowledge."

\* \* \*

To learn some we must unlearn more.

\* \* \*

The following paragraph has been mak-  
ing the rounds of the newspapers:

### Mysterious Bee Disease

London, March 16.—It is announced that a mysterious disease among bees which has ruined thousands of apiaries on the Continent and in England since 1904, and which has been especially virulent in this country within the last few months, may prove to be a form of the bubonic plague, which has wrought such devastation among human beings.

Dr. Walden, one of the investigators of the Board of Trade, asserts "that he has discovered that the bacillus taken from dead bees is similar to that of the bubonic plague, but that efforts to cultivate have thus far failed."

This paragraph, of course, refers to the epidemic of the "Isle of Wight" disease which is sweeping through England at the present time, and illustrates the methods of the modern journalist who fixes upon anything and everything that is likely to create sensation.

\* \* \*

There is probably not the slightest connection between the Isle of Wight disease and the bubonic plague beyond the fact that the bacillus supposed to be the cause of the new disease closely resembles *B. pestis*, the plague bacillus, in general appearance.

\* \* \*

The British Bee Journal furnishes reading nowadays, and our sympathies go out to our brother bee-keepers in the Old Country. The ravages of Foul Brood are stated to sink into insignificance beside those which follow the attacks of this new foe. Unfortunately, no satisfactory information is forthcoming as to the real causes of the disease. Dr. Malden is of opinion that the Isle of Wight disease is infectious, but he has not hitherto been successful in transmitting it by means of the pestiform bacillus to healthy bees. It is suggested by some that the disease is merely a food trouble, whilst others believe it to be due to poisoning from artificial manures or materials used for spraying,

especially sulphate and Paris green. An instance of the manner in which the disease wipes out an apiary is given by Dr. Malden. A Cambridgeshire bee-keeper of some twenty-eight years' experience, in June 1910 possessed 160 colonies, all apparently strong and ready for the harvest. About the middle of June he noticed that the bees from one of his strongest hives were dropping on the grass in front of it, and were unable to fly off the ground. On opening the hive the brood was plentiful and seemed healthy, and there were plenty of stores. The bees continued to die off rapidly and were all dead by September. In the middle of July, the next hive to the first one affected showed signs of disease; there had been no robbing that he could detect from the first hive. All these bees were dead by September. At the latter end of July, a third hive, situated some distance from the first two, began to be affected, and in a few days a fourth, not very far off. From the middle of August the disease spread rapidly, first affecting the hives nearest to those that were originally infected, and a good deal of robbing now went on, and was impossible to prevent. By the end of October fifty hives were gone, and the disease continued to spread all through the winter, so that now he has less than thirty remaining, and several of these show signs of being affected.

Dr. Malden describes the symptoms of the disease as follows: First, the Brood as well as the queen do not appear to be affected in any way, the disease being confined to the adult worker and drone bees. These show a disinclination to work, and fly about in an aimless way, or sits on the combs or alighting board. The ability to fly soon becomes less and less marked until the insect is unable to fly at all. The abdomen of an affected bee frequently looks swollen and pendulous in consequence of the enor-

April, 1911.

mous distension of the matter. The forager earliest to become infected has thought that the infected hives are tacked.

### HOW TO DISPOSE THE HONEY R CAPPING

Indexed

W. A. C.

In the February Canadian Bee Journal, Ramsey recommends the honey from capping my paper read at the Toronto on "The Disposal I might say that I clear that the honey pings is good, saleal of a flavor that tak public and fetches a

I have had some ex vinegar, and also of don't wish to go into business unless I am a bee-keeping, nor do body can make vinegar other business pay u a proper way, require proper knowledge of instead of taking 1½ c make a gallon of vinegar pounds for a gallon. call good vinegar. If from reliable information time ago, it will take pounds of honey to n vinegar that will stand test.

Keeping a place at nature for six months, September, would cost value of several barrels. Vinegar should not be a honey house.

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mous distension of the colon with fecal matter. The foragers appear to be the earliest to become affected, and many have thought that robbers which enter infected hives are the first to be attacked. W. W.

#### HOW TO DISPOSE PROFITABLY OF THE HONEY REMAINING IN CAPPINGS.

Indexed

W. A. Chrysler.

In the February number of the Canadian Bee Journal, page 51, Mr. John Ramsey recommends making vinegar of the honey from cappings. He refers to my paper read at the O. B. K. A. at Toronto on "The Disposal of Cappings." I might say that I have not made it clear that the honey I obtain from cappings is good, saleable, and palatable, of a flavor that takes well with the public and fetches a fair price.

I have had some experience in making vinegar, and also of marketing it. I don't wish to go into the vinegar business unless I am obliged to give up bee-keeping, nor do I think that any body can make vinegar-making, or any other business pay unless gone into in a proper way, requiring capital and a proper knowledge of the business. Instead of taking 1½ ounces of honey to make a gallon of vinegar it takes 1½ pounds for a gallon of what we might call good vinegar. If I am not mistaken, from reliable information, received some time ago, it will take not less than two pounds of honey to make one gallon of vinegar that will stand a Government test.

Keeping a place at the same temperature for six months, from say 1st of September, would cost as much as the value of several barrels of vinegar. Vinegar should not be made or kept in a honey house.

My experience in selling vinegar to one's grocer has been that while he may value your trade enough to give twenty-five cents a gallon for a barrel or two so that you don't catch on to the price he usually pays.

If you started out to sell to the trade you might find out that thirty or forty cent vinegar was bought nearer fifteen cents per gallon than twenty-five cents, and is subject, if I am not mistaken, to inspection by the Government.

Such being the case, I prefer to sell my capping honey for more money than if made into vinegar, saving cost of barrels and other expenses. Many may have a suitable place for making a small quantity of vinegar to advantage, for their own use, but I could not think of converting forty or fifty dollars worth of honey into vinegar and not making anything out of it.

#### LEEDS CO. BEE-KEEPERS' ASSOCIATION.

The first regular convention of the Leeds County, (Ontario) Bee-keepers' Association was held at Delta, a little place about 30 miles from Brockville, up near the centre of Leeds County, on the 30th of March. It is encouraging to see the live interest that is being taken in bee-keeping in the eastern part of the Province of Ontario. At this convention there were present in the afternoon some twenty-five bee-keepers, whilst in the evening fifty or more persons gathered to hear the lectures and look at the lantern views of bees and their work. The gatherings were addressed by Col. J. B. Checkley, Linden Bank; M. B. Holmes, Athens, and Morley Pettit. The President of the Association is W. A. Coon, Plum Hollow, and the Secretary is H. E. Eyres, Chantry, both of whom we desire to congratulate on the success attending their efforts.

## WOMAN'S DEPARTMENT

CONDUCTED BY

Miss Ethel Robson, Ilderton, Ont.

Up to the present this department has received no letters from our women readers. Better things are hoped for next month. Our women are reminded that this department stands for something more than a discussion of ways and means of bee-keeping. The men can do that 'ad infinitum'; we want it to be an expression of economic endeavor of our Canadian women.

The benefits of protection about the bee-yard are very evident in the spring, when the wind outside is blowing quite a gale it is possible to open and look into a hive in my sheltered, sunny yard, a benefit greatly appreciated this spring when bright days have been so rare; then too, with the trees to break the wind, there is no drifting when the bees come out for their first flight. But during the winter the snow piled up high over some of the packing-cases, over this came a crust of sleet. I loosened up the snow, but found it too hard to remove much of it. Fresh storms filled up the openings again. As they remained closed for some time I felt a little anxious, but now that the snow is gone the bees do not seem to have suffered from their close confinement.

On going over my hives this spring, I found two dead from lack of stores. Now there does not seem to me to be any real excuse for a bee-keeper having his bees starve, consequently I felt somewhat disgusted with myself. However, all good bee-keepers take a special pride in getting their bees safely through the winter. When I find my professional pride touched by such a failure, I conclude it to be an encouraging sign that

I am becoming a really practical bee-keeper.

In spite of all that Dr. Miller has to say about the rewards of bee-keeping, my sympathy goes out to a young friend who chafes against staying at home to help his father with the bees. But then Dr. Miller qualifies his statement by "the one that has the proper taste for it." That's just it. Bee-keeping and a bit of philosophy go hand in hand; and a growing boy isn't usually a philosopher. Instead he is keen and eager to try his strength in the great world of action. And much as I love my bees, I'm able to understand the fascination of sleek and shining horses, stables warm with the breath of feeding cattle, fields yellow with ripening grain, and all the joy and glory of subduing and planting the earth.

That feeder described by Mr. McIntyre in the March Bee Journal looks good to me; in fact it would be hard to improve on. Up to the present, I have had no regular feeders, but think it will not be very long before I have some of that style, unless someone will show me something better.

The bees had their first flight this spring on a Monday. Of course the clothes on the line suffered. Isn't it wonderful how often they seem to come out for a cleansing flight on wash day? To-day, April 10th, they are flying again, so mother has been hustling the clothes in.

Here is a little information from our member at Ottawa. For the year ending March 31st, 1910, honey imported

April, 1911.

in the comb or otherwise thereof, is as follows:

Great Britain, 46,562 cents per lb.

Australia, 1,643 lbs., lb.

British West Indies, duty, 2 cents per lb.

Hong Kong, 972 lbs. lb.

New Zealand, 560 lbs. cents per lb.

Austria Hungary, 5 cents per lb.

China, 292 lbs., dut

France, 174 lbs., dut

Hawaii, 2,400 lbs., dut

United States, 156,4 cents per lb.

Total duty collect \$9,296.38.

Exported to Great exported to United S

If reciprocity passes omitted from all these duty.

Co-operation, we are about a great deal lat most unanimous approv At first thought this w the way is practically cessful carrying out < however, sober second that it may be the re tical study of the quest survey of the actual j who would look beneat practical situation is —difficulties which mus before the co-operativ be a success. In this p one main difficulty touc mainly to make my poi of markets. It was gen at the convention that posed arrangement, all were to have a free han much of their crop as from the Association.

in the comb or otherwise, and imitation thereof, is as follows:

Great Britain, 46,567 lbs., pref. duty 2 cents per lb.

Australia, 1,643 lbs., duty, 3 cents per lb.

British West Indies, 112,117 lbs., pref. duty, 2 cents per lb.

Hong Kong, 972 lbs., duty, 3 cents per lb.

New Zealand, 560 lbs., pref. duty, 2 cents per lb.

Austria Hungary, 5,286 lbs., duty, 3 cents per lb.

China, 292 lbs., duty 3 cents per lb.

France, 174 lbs., duty, 3 cents per lb.

Hawaii, 2,400 lbs., duty, 3 cents per lb.

United States, 156,088 lbs., duty, 3 cents per lb.

Total duty collected last year, \$9,296.38.

Exported to Great Britain, 975 lbs.; exported to United States, 4,700 lbs.

If reciprocity passes honey will be admitted from all these countries free of duty.

Co-operation, we are certainly talking about a great deal lately, and what almost unanimous approval it is receiving! At first thought this would suggest that the way is practically clear for the successful carrying out of the scheme; however, sober second thought suggests that it may be the result of a theoretical study of the question rather than a survey of the actual problem. To one who would look beneath the surface the practical situation is full of difficulties

—difficulties which must be fairly faced before the co-operative movement can be a success. In this paper there is only one main difficulty touched on, and this mainly to make my point later on, that of markets. It was generally understood at the convention that under the proposed arrangement, all honey producers were to have a free hand to dispose of as much of their crop as possible apart from the Association. As many of the

leading bee-keepers at present have a ready market at high prices for all their honey they will inevitably continue to sell to their old customers, at least as long as they will continue to buy, thus leaving the Association in the beginning to handle only the lower priced honey, and that of less known men. Now under such conditions the Association would scarcely have very much prestige in the business world. Of course if the duty continues, it would have a fair chance of success, but with free honey it would almost necessarily mean a general lowering of prices; and how many bee-keepers who have a good market will be ready to turn it over to the Association? Not many, I fear, nor would it be just to ask it. By their own exertions they have established a market and a reputation, and naturally they are jealous of both. Likewise their customers know their honey, and prefer to buy it to any other. Personally, although I believe in cooperative selling and think it a good thing to work towards, as a means of cutting down unnecessary profits between producer and consumer, yet I am sure that the bee-keepers of Ontario at present have too little experience of working together to carry it out successfully at present. Nor have I much confidence of any great profit accruing to myself from such a scheme, at least for some time to come, but I have always got good prices for my honey, and as I have a good article I expect to get them.

Now just what is the object of co-operative selling? Is it not to standardize the price of honey? To raise it above our present maximum price will be impossible until prices go up across the line, and the whole situation is complicated by the prospect of free honey. With free honey we shall indeed have to look to our own markets, especially our home market which has been shamefully neglected, and when we

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ally practical bee-

Dr. Miller has to do of bee-keeping, to a young friend staying at home to the bees. But then his statement by the proper taste for Bee-keeping and a hand in hand; and usually a philosopher and eager to try that world of action. My bees, I'm able to ascertain of sleek stables warm with cattle, fields yellow, and all the joy of and planting the

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are handicapped by no long freight haul. And how are markets made in the present day? By advertising, surely. Right here, then is our opportunity for co-operation. No bee-keeper could afford to advertise individually, but if we only join hands we can so increase the general knowledge and the demand for honey that the price will standardize itself.

The general public has only the vaguest ideas about the production of honey, and little knowledge of its food value. Spread this information broadcast, and instead of wondering where you are going to find a good market you will not be able to supply the demand. Then, having learned our first lesson in co-operation, we shall be ready to establish some sort of an exchange, where the honey can be graded and placed in marketable packages, with the seal of the association upon it, thus assuring the purchaser of the quality and against adulteration.

Now for a plan of campaign. Of course the exhibitions offer us our first great opportunity, and with very little expense they can be made the means of spreading information. The Provincial Association might look after the large fairs as has been before suggested, and the County Associations could see to it that the smaller fairs in their own county had an exhibit. Individual exhibits should be encouraged as much as possible, and the Association take charge of a general exhibit of information, such as handling bees, method of extracting, comb-building, queen raising, etc. Now in our county, we have a tradition that if you want to get a crowd together you must give them something to eat, so why not take advantage of this as a means of advertising and give the visitors an opportunity of testing the honey. I have recollections of delectable lunches of honey and graham wafers, eaten at school after 10 o'clock when the lights were supposed

to be out. When we could no longer capture a supply of graham wafers from the pantry, we found them too expensive, and fell back on brown bread, which tasted almost as good. This little reminiscence is just given by way of a hint.

Now, Mr. Editor suggested having leaflets printed, setting forth the food value of honey. Well, there is no reason why we cannot do that now. The W. I. is doing it, and these leaflets could be sent to all grocers handling honey, either at the expense of the Association or of the shippers, as was decided. They could also be made generous use of at the fairs.

If any further efforts were thought necessary at present the newspapers could then be used. At any rate, it would be wise for each Association to appoint a committee to see that all items of interest concerning bees found their way to the local papers. Now, if every bee-keeper will take this matter up heartily we shall soon have an opportunity for finding out, experimentally, the principles of co-operation. Of course it will mean every one putting his hand in his pocket, but it will be money wisely spent. Up to the present the Government seems to paying a large part of the bill for whatever is accomplished by the Associations.

#### MASSACHUSETTS SHORT COURSE.

Throughout the year the Massachusetts Agricultural College has been receiving calls for a course in bee-keeping. To meet the demand, a short course, covering the lines indicated in this circular, has been arranged.

During the past year a regular department of instruction has been established at the College. This consists of an apiary, a museum, and library equipment.

The works as laid out is of the most practical nature, and every attempt will be made to emphasize the points which

are worth while, given by modern methods and kept by beekeepers.

Course limited to those who have had previous experience. Applications are accepted on a limited basis.

The following experts will give the work:

#### FACULTY

Doctor Burton N. Phillips, Professor in Bee-keeping, Experiment Station,

Doctor William P. Mason, the Massachusetts Experiment Station, Amherst,

Doctor George E. Davis, Botany, Massachusetts Agricultural College, Amherst.

Doctor Henry T. Dow, Entomology, Massachusetts College.

Doctor James B. Henshaw, Veterinary Science, Massachusetts Agricultural College.

Other bee experts will give other lectures.

#### COURSES

1. Practical Phases of Bee-keeping. Lectures and demonstrations and individual instruction in handling of bees; rearing bees; construction and use of hives; comb and cell building; increasing of colonies; swarming; the hiving of bees and their treatment; and their treatment known to occur in the State. Doctor Mason will give the instruction.

2. Crops for Honey and Excursions. The production of honey from fruits and forage plants yielding nectar and how to grow them.
3. The Relation of Bee-keeping to the Culture of Plants: The study of the anatomy of flowers and the work of the flower which produce honey and the foods of bees; a micro-

are worth while, giving short cuts and modern methods most helpful to bee-keepers.

**Course limited to 15 students. Registrations are accepted in the order in which they are received.**

The following experts in bee-keeping will give the work:

#### FACULTY

Doctor Burton N. Gates, Assistant Professor in Bee-keeping; Apiarist of Experiment Station, Amherst.

Doctor William P. Brooks, Director of the Massachusetts Agricultural Experiment Station, Amherst.

Doctor George E. Stone, Professor of Botany, Massachusetts Agricultural College, Amherst.

Doctor Henry T. Fernald, Professor of Entomology, Massachusetts Agricultural College.

Doctor James B. Paige, Professor of Veterinary Science, Massachusetts Agricultural College.

Other bee experts will be engaged for other lectures.

#### COURSES OF STUDY

1. Practical Phases of Bee-keeping: Lectures and demonstrations; personal and individual instruction in the handling of bees; rearing of queens; construction and use of different kinds of hives; comb and extracted honey; increasing of colonies; control of swarming; the hiving of bees; especial emphasis will be given to the diseases of bees and their treatment, which are now known to occur in practically all parts of the State. Doctor Gates.

2. Crops for Honey Bees: Lectures and excursions. The relation of bees to fruits and forage plants; a study of the plants yielding nectar; what to grow and how to grow them. Doctor Brooks.

3. The Relation of Bees to the Pollination of Plants: Lectures and laboratory work. A study of the parts of the flower which produce pollen and nectar; foods of bees; a microscopical study will

be made of the character of the grains which compose 'bee bread,' and of the organs which secrete nectar. Doctor Stone.

4. Structure of Bees: The structure of bees as related to their work; how pollen and honey are gathered and carried to the hive; the production of wax; the composition of a colony; the principles of swarming, etc.; three lectures. Doctor H. F. Fernald.

5. Bees, and Bee-keepers' Supplies: The different types of hives, smokers, veils, and other equipment necessary in the successful development of this industry. Doctor Paige.

#### CONVENTION OF BEE-KEEPERS.

JUNE 6 AND 7.

As a closing feature of this short course, a convention of bee-keepers is being planned for the above dates. Features of this convention will be the lectures and demonstrations by some of the leading authorities in this country, who are being especially engaged for this occasion and the exhibits of bee-keepers' supplies and equipment.

Men and women who cannot come for the whole of the course and organizations of bee-keepers are invited to meet at the College on these dates. By correspondence in advance, every effort will be made to make everyone who comes comfortable.

A separate program of this convention will be issued later.

#### EXPENSES OF TAKING THE COURSE

No tuition or fees will be charged. Board can be had at Draper Hall at \$4.00 a week. Rooms in the vicinity of the College cost \$1.50 to \$3.00 a week, depending upon whether the room is occupied by one or two people. Rooms will be reserved for those who write in advance for them. For other information, write

WILLIAM D. HURD,

Director of Extension Work,  
Amherst, Mass.

## FREE TRADE IN HONEY

Indexed

Robert B. Wallace.

In reading over the opinions of some of your contributions, re Reciprocity, it is rather amusing to see the arguments that some bring out as to the way it will effect honey producers in Canada. The letter by Mr. Brunne speaks of Californian honey that would kill a horse, and then goes on to say that he is afraid that it will injure the Canadian honey market. Well, it might if people completely lost their sense of taste, but where could you find a man who would pay even 5 cents a pound for such honey when they could get an article such as he describes later on, at any price within the limits of his purse. It is, of course, a difficult matter to say just how Reciprocity would effect the Canadian bee-keeper, but do we really need protection, and if so, why not carry it out fully? In the last few journals we have seen enquiries from British men wishing to come to this country and engage in bee-keeping. Why not have a law passed prohibiting any one coming to this country to start bee-keeping, to be future competitors with us in the honey market, and what does the Editor mean by encouraging such? And now we have Miss Robson advising the ladies to take up bee-keeping, trying to keep out honey with one hand and giving the other to help someone into the business.

We shall lose our Western market! Well, it begins to look like it when the Manitoba folks are starting in and getting a larger average than the Province of Ontario. Why can't they leave the bee business alone and buy their honey from Ontario?

The Government should only allow a limited number of privileged persons to produce honey, and they should see to it that by subsidy and protection these few were made millionaires. But the Ontario bee-keeper knows, after all, that he

does not need protection. We can produce here honey equal, if not better, than can be produced anywhere.

But as one of your writers has pointed out, we do need protection from the germs of Foul Brood, and it is the duty of the Dominion Government to stand up for the Canadian bee-keeper against the introduction of disease. They do in every department of agriculture, and the bee-keeper has a right to the same protection, and the Provincial Government have a right to expect that no Dominion Legislation shall be the means of bringing in disease which they are spending thousands per annum to eradicate.

If we can keep clear of Foul Brood we can compete with any country in the production of first-class honey. Perhaps we cannot in cheap grades, but that will be a stimulus to us to produce THE BEST. If the facts, as stated by W. Brunne, re Foul Brood in California are correct, and we may take his word for it, and if that honey is allowed to come into Canada without any restriction, then truly the bee industry in this country is ruined. For the bee-keepers are only too well aware how this scourge is spread. A few empty tins or barrels left exposed in which such diseased honey has been, and the trick is done. No business could stand up under such a handicap. But I feel certain that if this matter is brought to the attention of the Dominion Government they will stand by the bee-keeper as they have done by the agriculturist. Here is a matter for our Ontario officers to get after. This letter, if no other use, will do for the Editor to light his pipe with.

D. Anguish, Lambeth.

I have a few thoughts on the proposed reciprocity pact. It seems to me to be discussed altogether on party lines, which to my mind, should not be.

In the first place, who is to be benefited by the change? It is generally ad-

April, 1911.

mitted it will be a farmers, and as the of our country his prosperity to all. My reasons for think to be benefited persons place you are all comb honey produce all my choice honey fancy price for it. opoly of the Toronto are others who find market, as I do, an living close to the b distance of American wealthy as Toronto. to Buffalo, Detroit a some of our American ers claim they get b do (vide National B these cities there is fancy honey, all about from us—or in other hours distance. Few cities would benefit furthermore, a large population of these c our own boys and g glad to get our cho they are now deprive the tariff. Also New with their immense be glad to get a tas honey. They would the same remarks al Californian to our C friend, "have you m If so, pass it this wa

I must tell you I a lows who always buy my goods the cheap er; and also sell v best price. Therefore this change with agr Our choice Ontario h large cities—all as lar all within the same c us, for a market. In are a large number of v

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mitted it will be a great boon to the farmers, and as the farmer is the backbone of our country his prosperity will bring prosperity to all. Now, I will give you my reasons for thinking that I am going to be benefited personally. In the first place you are all aware that I am a comb honey producer, and have to sell all my choice honey in Toronto to get a fancy price for it. But I have no monopoly of the Toronto market, so there are others who find in Toronto their market, as I do, and some of them are living close to the border within a short distance of American cities as large and wealthy as Toronto. I have reference to Buffalo, Detroit and Cleveland, where some of our American brother bee-keepers claim they get better prices than we do (vide National Report). In each of these cities there is a good market for fancy honey, all about the same distance from us—or in other words, about three hours distance. Free Trade with these cities would benefit us greatly. And furthermore, a large percentage of the population of these cities is made up of our own boys and girls, who would be glad to get our choicest honey, which they are now deprived of on account of the tariff. Also New York and Chicago, with their immense populations, would be glad to get a taste of our Canadian honey. They would be likely to pass the same remarks about it as did the Californian to our Canadian bee-keeping friend, "have you more of that honey? If so, pass it this way."

I must tell you I am one of those fellows who always buys where I can get my goods the cheapest—quality considered; and also sell where I can get the best price. Therefore I am looking for this change with agreeable expectations. Our choice Ontario honey will have four large cities—all as large as Toronto—and all within the same distance of most of us, for a market. In these cities there are a large number of wealthy people, who

do not consider price so long as they get a choice article. We have abundance of this kind of honey in Ontario, but we must be careful to put it up in an attractive manner.

We hear a great deal about the West! For my part I cannot see where it is going to make much difference, providing we always send them nothing but first-class honey. We boast of Ontario as having the best honey in the world, and why should we be afraid of honey from the South? A recent writer put it "that it would kill a horse if he ate it!" And more than that, why should we be so selfish as to say "You sons and daughters of ours, out in that vast Western country, must bow to us and take our honey at our price."

Do not let this great question worry you, Mr. Editor. It will work out for the best. Be careful, by all means, to make inquiry before you shoot, for some of these horrid Americans may turn out to be one or more of our own boys and girls, for there are lots of them there. For myself, I have three there; one in Detroit, and two in Chicago, all doing well.

Now in conclusion, I will say that if I took the same view as some writers have taken, I would exclaim, "Oh, horrid reciprocity! If it passes it will be a terrible thing; ruination to two great countries!" I cannot take this view of it, however.

John A. McKinnon.

In your last issue you asked for opinions on the proposed reciprocity agreements, regarding the bee industry. While I know that my opinion would not amount to more than a puff of smoke on a windy day, yet I shall certainly register an X against it if given an opportunity to vote on the question.

The bee-keepers of Ontario have built up a strong market for our native honey, which brings in our market two to

three cents more per pound than our neighbors to the south of us. I fail to see where any advantage is going to be gained by removing the duty. If market conditions were the same it might be otherwise. But that is not the worst feature of the proposition, for I believe if duty on honey is removed our Province need never expect to be rid of Foul Brood diseases. Bees on the outskirts of cities and small towns will in future have every chance to lick up the diseased honey out of kegs, barrels, etc., in the importers back yard, and these now diseased will serve as feeders or hot beds to surrounding apiaries. However, should the proposed agreements come into force, a law should be passed to prevent the import of diseased honey, and every shipment should be covered by an affidavit from the owner and his county inspector that the yard from which said honey was taken was free from disease.

While Foul Brood does little damage to the wide awake bee-keeper who looks after his bees as he should, yet there are hundreds of farmers and others who keep a hive or two, and take no interest in them, and are too small to see the advantage gained in subscribing for one or more bee journals, or buying a bee book. I am not exaggerating, for there are men in my township, who I am told have kept bees, some of them for 40 years, and all they know about bees is that they sting and swarm. Instead of encouraging that class of bee-keeper, he should be told to raise a calf or two more, the proceeds of which would buy his honey. If the one-hive and box-hive apiary men were side tracked for a few years and no diseased honey imported the inspectors would be greatly helped in their work.

Let us have a good list of spring reports for next issue. How many will be good enough to send us a postal card report of how the bees came through the winter?

### WHAT ABOUT BEEKEEPING? *Indexed*

Morley Pettit, Provincial Apiarist.  
in the O. A. C. Review.

About twenty-five years ago a sixteen-year-old lad got interested in the bees on his father's farm. They were just as busy and attractive as any other bees, but they lived in box hives, and had to pay the penalty of their industry with their lives over the sulphur in the pit in the fall.

For eight years this boy worked on the farm and fussed with bees until at the age of twenty-four he dropped general farming and specialized in bees. About the same time he took unto himself a wife. His apiary was then one hundred colonies in more modern hives and he devoted his attention entirely to them. During the next ten years his number of colonies varied from one hundred to two hundred, and besides making a comfortable living for himself and his growing family he was able to bank \$5,000.00. He is now managing four hundred colonies with a capital investment in the business of less than \$4,000.00. He employs one young man for five summer months, works hard himself for about the same time and in winter does enough to aid digestion. His net income from bees at present is more than \$3,000.00 per annum.

"Yes, but is not this an exceptional case? Could not such men in Ontario be counted on the fingers?"

Yes, and perhaps one hand would do it. But whose fault is it? The man in question has ability which is excellent—but not exceptional. His location is also excellent—but not exceptional, there are hundreds of others as good, not occupied. His colonies are just bees, but he studies them, understands them, controls them, in the same business-like way as the expert in any other line manages his specialty. It is

April, 1911.

an age of specialization the young man with specialty the sooner. Men, and women combining poultry and bees, fruit and bees, and general purpose management his plans and arranging three businesses, instead of experience in the hen



Mr. Pettit

day is of no use to him Tuesday, and the two days lost, so far as concerns garden on Wednesday. hand, if one apiary will busy, let him start one apiaries, then each day's him for the next, and concentrated instead of When asked what business combine with bees, one

**BEEKEEPING?**

Special Apiarist.  
Review.

Years ago a sixteen-year-old boy started in the bees. They were just as common as any other bees, and had to be kept in their industry with a phur in the pit in

the boy worked on with bees until at last he dropped generalizing in bees. He took unto himself a modern hive and his attention entirely to the next ten years varied from one hundred, and besides living for himself he was able to manage a business with a capital of less than one hundred dollars. In six months, works at the same time enough to aid himself to come from bees at an \$3,000.00 per

his an exceptional man in Ontario apiarists?"

One hand would do it? The man by which is excellent. His localities—but not exceptions of others as

His colonies are studied them, under them, in the same the expert in any his speciality. It is

April, 1911.

an age of specializing, and the sooner the young man with ability finds his specialty the sooner he finds success.

Men, and women too, enthuse over combining poultry and fruit, poultry and bees, fruit and bees, or poultry, fruit and bees, and then the poor general purpose manager has to make all his plans and arrangements for two or three businesses, instead of one. His experience in the hen-house on Mon-

keeper said he didn't know unless it was a skating rink.

About one man in a hundred makes a real success of beekeeping. Why not be the hundreth man?

What are the elements of success in beekeeping?

Briefly they are these:

1. A natural disposition which likes bees, and which likes to be a horseman. Tell us that some men are "poison to a



Mr. Pettit's Exhibition Tent at the National, Toronto.

day is of no use to him in the apiary Tuesday, and the two days are entirely lost, so far as concerns the orchard or garden on Wednesday. On the other hand, if one apiary will not keep him busy, let him start one or two more apiaries, then each day's work helps fit him for the next, and his interest is concentrated instead of being divided.

When asked what business would best combine with bees, one successful bee-

keeper said he didn't know unless it was a skating rink. Others take naturally to them, and in their hands the horse thrives and does good work. It is the same with bees.

2. A good location, where climatic and other conditions are favorable to bees and where honey bearing plants bloom in profusion.

3. The right kind of bees to gather the honey and the right kind of hives to keep them in.

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4. With these three the beekeeper must combine energy, industry, self-sacrifice, concentration, system, forethought, and all the other qualities, natural and acquired, which go to make up success in any business.

Opportunities are open on all sides. Every state in the union, every province in the Dominion has its bee industry of greater or lesser importance. In Ontario bees are kept from Glengarry to the Lake of the Woods, and from Point Pelee to the Cobalt.

Last fall I received a letter from a man at White Wood, something like this:

"Mr. M. Pettit:

"Dear Sir—I consider it my duty to give you my experience in beekeeping up here in the Nipissing District, three hundred miles north of Toronto and seventeen miles north of New Liskeard. I got two hives of bees from Old Ontario three years ago. They were shipped by rail to Liskeard, then by boat forty-five miles, then by row boat two miles, then had to be carried a mile and a half to destination. The first season there were three swarms and about fifty pounds of comb honey. I packed the five hives in rough boxes for winter with about ten inches of sawdust. They wintered in fine shape, never saw bees winter better in Old Ontario. The second year wintered seven in fine shape, and increased the third year to twenty-six, which I have just put away for winter. Had six hundred pounds of honey. The honey resources and the amount of honey they can gather is something wonderful. I have leased my farm and am going to devote my time exclusively to beekeeping. A—"

The other day a man passed from this life at the town of Beeton, who in his younger days was called the "Bee King" of Ontario. The town was named after his industry. He travel-

led as far as the Holy Land in the eighties in search of new races of bees and brought back some which have since proved valuable.

A man in Woodstock, now spending his declining years as an invalid, was once called the "Comb Honey King" of Ontario, because he was the pioneer exhibitor of that article which makes such a tasty display in the honey building from year to year at the National Exhibition.

Numbers of others could be mentioned who have become noted and have made comfortable incomes from this industry.

About thirty years ago a number of enthusiastic beekeepers assembled in Toronto and organized the Ontario Beekeepers' Association. The Ontario Government was persuaded to give this association an annual grant of money which has been increased to \$500.00 at the present time, and the membership has grown to over 300 with branch associations in a dozen different counties.

Nearly twenty years ago the Ontario Government passed an Act making it legal to inspect bees for disease, and illegal to keep diseased colonies on the place without making an effort to cure them. One inspector was appointed, but the work grew out of his hands, until now a dozen practical beekeepers and some students of the O. A. College, go about amongst the beekeepers in the summer time, more as instructors than inspectors, showing them how to overcome their worst enemy, American Foul Brood, and his deadly cousin European Foul Brood.

About seven years ago a committee appointed by the Ontario Beekeepers' Association began to collect reports of the honey crop and pass judgment on the situation, deciding what the fortunate consumer of this tasty article of food should be allowed to pay for the

same. The price of honey has been precarious, was 100 per cent. and brought other food products.

In 1910 Apiculture was made a Department of the Agricultural College, and is on a par with the older departments. No building at present quarters at the rear of the Macdonald building is the cause of any special attention to that Institution, but it has happened to be available. The culture office is at the rear of the Agriculture Study Class Room is being equipped where students can learn the art of extracting honey from the bees, in connection with the apiary, situated in the rear, now consists of 200 colonies is growing. It is used for practical work.

Visitors to the extension Courses are finding their questions about beekeeping and about the possibilities of a course in beekeeping.

The place occupied by beekeeping in the curriculum, at present a course of twenty-five weeks in the First Term, a short course is to be given in May, 1911, and the possibility of a four weeks' course in January, 1912.

The bee enthusiasts have organized an Apiculture Society for the study of more advanced beekeeping. This Society, composed of fifty members, present of fifty members, all the years of the student's life are held weekly successful beekeepers' meetings. The beekeepers of Ontario are interested in a great deal of interest. The possibilities of beekeeping

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same. The price of honey which had been precarious was increased 50 per cent. and brought near the price of other food products.

In 1910 Apiculture was established as a Department of the Ontario Agricultural College, and is now dropping into line with the older departments. It has no building at present, but occupies quarters at the rear and in the basement of the Macdonald Institute, not because of any special relationship to that Institution, but because this space happened to be available. The Apiculture office is at the back of the Nature Study Class Room. The basement room is being equipped as a laboratory where students can learn hive construction, the extracting of honey, rendering of beeswax, and all other indoor work in connection with beekeeping. The apiary, situated in the grounds at the rear, now consists of 30 hives or so, and is growing. It is used for experimental and practical work.

Visitors to the excursions and Short Courses are finding the place, and asking questions about bee management and about the possibilities of a Short Course in beekeeping.

The place occupied by bee-keeping on the curriculum, at present consists of a course of twenty-five lectures in the fall term to the First Year students. A short course is to be held the first week in May, 1911, and there is a possibility of a four weeks' Short Course in January, 1912.

The bee enthusiasts among the students have organized an Apiculture Club for the study of more advanced knowledge in beekeeping. This club consists at present of fifty members, belonging to all the years of the student body. Meetings are held weekly and lectures by successful beekeepers from different parts of Ontario are listened to with a great deal of interest. In view of the possibilities of beekeeping as a business

and the fact that other colleges are going into this work quite so extensively, it is difficult to tell to what dimensions this work will grow.

All these steps of progress taken by the individual, the Association, the Department of Agriculture, and the students of the O. A. C., are doing their part in placing beekeeping on the business basis, which it is beginning to occupy in Ontario. It is but a low estimate to say that there are 5,000 beekeepers in Ontario keeping 100,000 hives of bees; that the honey crop for 1910 was five million pounds, worth at lowest market prices one-half million dollars.

Many a business has been kept from financial ruin by the saving of a by-product, formerly wasted. A leakage of no mean proportion on the average Ontario farm is the nectar of flowers. The saving of this by-product, together with the increased yield of fruit and seed, often means the difference between failure and success to the farmer beekeeper. By advancing the interests of Apiculture we have the double satisfaction of causing two blades to grow where one grew before and of saving several extra blades from being wasted.

#### INDEXED LESSONS FOR BEGINNERS

A. Dickson, Lancaster.

My subject is Bee-keeping in General or Lessons for Beginners.

To begin with I would give a little advice with regard to starting into the business; I would say "go slowly and carefully," for the simple reason that you may get a set-back in wintering which would discourage you completely. Buy in the spring, not in the fall, and avoid winter loss. If you are in doubt as to whether you are getting a good colony or not take a good man with you. Let us suppose that spring has come. Down our way, we find that the

nice weather begins about the 16th of April. Make sure that the weather is fine, and the snow all out of the sod, and the grass on the ground is dry. I advise and practise putting the bees out at night, making sure that the following day will be a nice day. When morning comes the bees do not run out. If you put them out in the day time when the sun is shining the bees will rush out all in a jump and tumble. I have reversible bottom boards. In the spring when you put them out your hives require cleaning out. Go out with an assistant early in the morning before the bees have attempted to fly. Pick up your hive; your helper takes the board away and you put a clean one in its place. You go to the next and so on. This saves your bees a lot of cleaning out and gives them a good clean start.

In coming across a hive which feels somewhat light, chalk on it "light." If you come across one that is heavy mark it "H." Then go over the yard, examine and equalize the stores, but do not uncap any honey for fear of robbing. If you have not outside protectors to drop over the colony, take four or five thicknesses of newspaper and slip over. Now you have got all your colonies comfortable. You leave them alone.

In the spring, as a rule in every case the queen starts laying in the centre of the cluster. Now make sure every colony has a queen. If you have got a weak colony and you know the queen is a young queen from last year, laying in good shape, try to build her up by simply taking away whatever surplus comb is there that the bees can't occupy. Crowd them up close and put in a false division, the size and shape exactly of a comb, only slotted. If the colony only occupies about two or three or four combs fill in the dead space with a cushion or something so that there will not be that vacancy. If I find a colony

that is strong, occupying six or seven frames without a queen, I take the weak colony and a good hive and place them side by side and give both a touch of smoke. I take out three combs out of the centre and shake the bees in front and let them run in. Take out the weak colony with a good queen, and put them in there quietly, and after you have got all in there cover them up and give them a little touch of smoke; it disarranges them and destroys the scent of both colonies. Give them, preferably, a little tobacco smoke.

The critical period for beginners, and indeed everybody, is between apple bloom and white clover. Keep the queen breeding right through this period. I practise a system of feeding. If I find that a colony requires an extra supply, that is a comb or so, I give it a comb and put it along side of the cluster, but if I want to do general feeding I adopt outside feeding. An outside feeder that I use is made 30 inches long by two feet wide; the depth is 3-16 of an inch, screened; the idea of which is that your bees gather on the top and can take the honey away home and they will not daub. This is ahead of even a float. I have a tank which holds about 60 lbs., with a faucet; and a rubber tube fits onto the end of it. I fill that up in the morning with water and buckwheat honey or granulated sugar, dissolved in the proportion of one and a half to two. The honey or syrup is let on gradually and it flows all over. You only start a little the first day and the bees get started; then you can regulate your faucet and just simply allow it to flow over enough so that they will take it away. That keeps the queen laying right on.

When the clover flow begins, you must have the workers, but the colony that hasn't honey in the hive is not going to give you the workers. Possibly you may have had a good supply of

soft maple, and when a sudden with simply er through the bro A good queen amount of brood, bees die from s man thinks per foul brood.

We have now If you have got I should advise of foundation. I pays.

If you want to get on your comb don't wait until bloom in the field possibly a week or begins to bloom, a better care of the Put a sheet of paper and then your upper you have got your will perhaps be but you see a swarm or didn't expect any What has happened colony that superced may be an early s queen. I go to the and see what is to find there are a lot and some hatched that has been led of I shake that swarm front, and I leave the I advise the beginner he can of his work hour or so before sun son that he won't be with robbers, and th and more tired at night back with the virgin all the cells. You must in from 10 to 12 days, is laying.

The clover season is want to watch careful

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soft maple, dandelion and other things  
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through the brood that was hatchnig.  
A good queen furnishes an enormous  
amount of brood, but with no honey the  
bees die from starvation and the bee  
man thinks perhaps they died from  
foul brood.

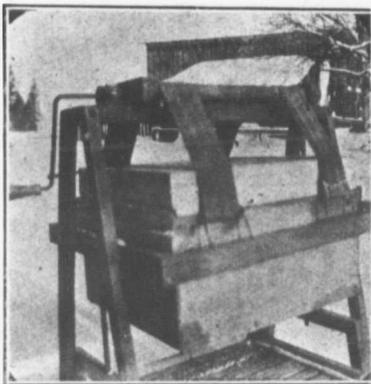
We have now entered upon the flow.  
If you have got no combs to start with  
I should advise you to use full sheets  
of foundation. It is expensive, but it  
pays.

If you want to keep down swarming  
get on your combs as early as possible;  
don't wait until you see your clover in  
bloom in the field. I get my combs on  
possibly a week and a half before clover  
begins to bloom, and the bees will take  
better care of the combs than you can.  
Put a sheet of perforated metal on first  
and then your upper story. Sometimes  
you have got your combs all on and you  
will perhaps be busy in the yard when  
you see a swarm out on the wing. You  
didn't expect any swarming so early.  
What has happened? It was likely a  
colony that superceded its queen. It  
may be an early swarm with the old  
queen. I go to the colony and look in  
and see what is the matter, and if I  
find there are a lot of queen cells there,  
and some hatched out, it is a swarm  
that has been led off by a virgin queen.  
I shake that swarm into the box in  
front, and I leave them in that till night.  
I advise the beginner to do as much as  
he can of his work in the evening, an  
hour or so before sun-down, for the rea-  
son that he won't be bothered so much  
with robbers, and the bees being quiet  
and more tired at night. I put swarm  
back with the virgin queen, tearing out  
all the cells. You must inspect the bees  
in from 10 to 12 days, to see if the queen  
is laying.

The clover season is coming on and you  
want to watch carefully when your

combs get full of honey. I work on what  
is called the tiering system. I want to  
warn beginners when they go to extract  
not to be too eager to get a large quan-  
tity, at the expense of quality, for if  
they do, they will be losers. My advice  
is to wait until the comb is capped from  
1-2 to 2-3 at least.

I will now describe my lifting appar-  
atus. All my hives are exactly similar,



The above cut represents the lifting  
device to which I referred in my address  
to beginners at the recent O.B.K.A.  
meeting. All are free to make it who  
choose—there is no patent. It is very  
simple in construction. I have used it  
for many years. There is still room for  
improvement. Let us have your ideas  
upon the matter; perhaps you can give  
us something better. Show us a cut  
of it and pass a good thing along.—Alex.  
Dickson.

and the apparatus goes right on top and  
lifts the upper story by the turn of a  
crank. I have gone around to 15 or 20  
colonies and never used a touch of  
smoke. The idea of this plan is, that  
the upper story is full, but not cap-  
ped; if you don't raise the super there  
will be a certain amount of time lost,  
and the queen will be crowded below.  
There is no room above. You raise  
this upper story, putting your empty  
one in between, and let it down again,

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and put on your cover, and the bees go straight to work again. They will fill up the empty combs while the upper story is ripening. When the upper story is capped over to the extent already mentioned, take it off, using the bee-escape. I wouldn't do without the bee-escape, if I had to pay \$1.50 or \$2.00 a piece for them. I take off this top story and with the assistance of my helper and a little smoke we slip in the escape. When the morning comes my upper supers are almost entirely free from bees. I carry them into my honey room, and I don't disturb the bees; I use no smoke or brushing. I have an extracting room where the heat gets up to 110 or 115. I don't pretend to extract these combs till after dinner. The temperature is higher than the temperature of the hive. This principle may not be useful to you, but I have no trouble in extracting honey. The system of brushing the bees off the combs is a good one, but the using of a bee-escape is better. If you can make your work easier in the yard do it every time. Whenever clover season is over I go to work and strip the whole yard. If a colony has only got five or ten pounds, I leave it. I strip the whole yard so that I can get off my best white clover before the buckwheat begins.

Keep the last honey you take off from the rest, because it is not as good, being thinner. The buckwheat season now is on, and you only have one story on then as a rule.

Now we come to the close of the season; here is an important duty, the preparing of your colonies for wintering, because your fall preparation means the success of your business for the next summer. Why? For the reason that if your colony is given lots of feed in the fall you certainly have less feeding to do in the spring. The feeder is the exact size of the hive three inches deep; holds 25 pounds. I loosen my story

from my bottom boards; my helper puts the feeder right on the bottom board and puts the hive right on top of the feeder. I have had them take up 25 pounds in one night. You can have a little block there that will just fit in the entrance, and you can close it up so that just one bee can get out and in. All this feeding is done a little before dark. Don't attempt to begin feeding through the day, because there is such a confusion and hurry at what they have found that they begin rushing in and out. This attracts their neighbors. All trouble is avoided if you feed in the evening.

The feeder is fitted with a float, which is of the full width and length, slotted only about 1-4 or 3-8 apart. I never put my colonies in with less than 25 pounds; better have more. I have a set of these little platform scales; I have a hand sleigh, and I can go from hive to hive. If the hive weighs 40 pounds, I add 15 pounds of honey, because I allow 30 pounds for the shell, combs and bees; whatever above 30 pounds is honey. By weighing them there is no guess-work; you know exactly what your colonies possess for wintering upon.

My cellar has an all-cemented floor and outside walls. It is under the house, 24 x 36, and I allow not another thing in that cellar but the bees. Some say their bees winter well along side of vegetables, etc. I don't approve of it. I have had as many as 350 colonies in the cellar. I don't go in as extensively as I used to. I put my bees in with nothing but the cotton over the frames or a cushion or blanket. The bottom board is turned up side down for the winter, and it gives them a space in depth of about 1 3-8 inches; they are all on a stand close; I never touch them the whole winter.

Mr. Timbers: Providing the bee cellar is not mouse-proof, how would you

April, 1911.

prevent a mouse on that system?

Mr. Dickson: Nine and traps; but not bothered with depends on the bee whether they can side.

Miss Trevorrow: hive lifting apparatus for the hive?

Mr. Dickson: You have something on. The machine tended to sit on the

Miss Trevorrow: into those hand positions?

Mr. Dickson: Yes.

McEvoy: How do you use?

Mr. Dickson: I have as four.

Mr. Evoy: This stakes and windlass?

Mr. Dickson: Yes, my work. I also run the cellar on a track.

Mr. Pettit: Mr.

member he has no four I would advise stropping honey at all.

Mr. Dickson: Before plan of feeding I have filled my combs right gave them to the bee strainer 8 inches long and two inches deep, not too finely perforated holes with a shoe-maker can get one, and that to drip down in fine streams won't touch the stream. Simply take it back and forward.

Mr. Atkinson: What claim the feeder is by the hive than above?

my helper puts bottom board and top of the feeder. up 25 pounds in a little block in the entrance, so that just one

All this feeding dark. Don't at- through the day, a confusion and e found that they ut. This attracts trouble is avoided ing.

with a float, which nd length, slotted apart. I never with less than 25 more. I have a platform scales; I nd I can go from e hive weighs 40 inds of honey, be- nds for the shell, atever above 30 By weighing them rk; you know ex- onies possess for

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roviding the bee rel- oof, how would you

prevent a mouse getting into the hive on that system?

Mr. Dickson: I have used strychnine and traps; but in my cellar I am not bothered with mice at all. It all depends on the build of your cellar whether they can get in from the outside.

Miss Trevorrow: Could you use the hive lifting apparatus on the Langstroth hive?

Mr. Dickson: You could, providing you have something you could rest it on. The machine I have could be extended to sit on the ground.

Miss Trevorrow: Could you put it into those hand poles?

Mr. Dickson: Yes.

McEvoy: How many supers do you use?

Mr. Dickson: I have had on as many as four.

Mr. Evoy: This apparatus would be stakes and windlass?

Mr. Dickson: Yes. It saves a lot of my work. I also run all my bees into the cellar on a track.

Mr. Pettit: Mr. Dickson must remember he has no foul brood down there. I would advise strongly against feeding honey at all.

Mr. Dickson: Before I started on this plan of feeding I had another way. I filled my combs right in the shop and gave them to the bees. I have a strainer 8 inches long, two inches wide and two inches deep, made out of tin not too finely perforated. I open the holes with a shoe-makers' awl, if I can get one, and that allows the honey to drip down in fine streams so that the streams won't touch one another, because if they do it all comes in a big stream. Simply take a comb and pass it back and forward under the streams.

Mr. Atkinson: What better do you claim the feeder is by having it under the hive than above?

Mr. Dickson: The bees take it up quicker and the fumes of whatever you are feeding go right up into the the cluster.

Mr. Chrysler: Allow me to suggest something in the feeder line. I have a bottom board with two side pieces three inches and a half wide and the exact length of the hive. I have two bottoms, one bottom is at the bottom



Mr. Alex. Dickson, Lancaster, Ont.

edge of those four inch sides; there is an entrance of 2 1-4 inches wide or deep the full width of the hive into it about four inches from the front of the hive. I have a 3-4 x 7-8 inch entrance. Near the centre of the hive I leave another crack 3-8 of an inch and the back is just the same, except I have a slide that slides right in at the back, and these bees can go right down in there and feed. I take paroid roofing, one ply, and fold it up so that it will fit

nically on the inside, and tack it around, and you have there a perfectly water-tight feeder, needing no paint on the wood to shrink or anything; slide that under the hive and they are there right under the cluster. Take it in the spring of the year, you like a small entrance, and when it gets warmer you want a larger one, and it is an awful task to change all these bottom boards, and you will gradually dispense with it if you possibly can.

### CHALMER'S OBSERVATIONS

*Indexed*

Women's Department. Talk of "making a hit!" Without question, Mr. Editor, you have "made a hit" in having a women's department started in your valuable journal, and made no mistake in securing Miss Ethel Robson of Ilderton, Ont., to conduct it. The one and only trouble that looms up before me is the difficulty we men will likely have in keeping up our end. She says "they don't propose putting men out of business," but methinks some of us contributors will be put in the shade at any rate, if not totally eclipsed.

Miss Robson's introductory in March Canadian Bee Journal is certainly an able contribution, and I trust the lady readers will not be slack in venting their troubles in this new department, and let me say to those concerned, that we gentlemen, one and all, wish the ladies' department long life, with success at every turn.

Inventions. In February Canadian Bee Journal, Mr. H. D. McIntyre describes a system he devised of having queen bees matured and mated with little or no loss to a colony, and we might say with no forming of nuclei. If there is any trouble with this idea it will only be in the event of examining to see whether the queen has started to lay or not, but she could be kept in by slip-

ping a small pane of glass down between the nursery and the side of the hive and holding it on to the face of the tin box until replacing the comb. I suppose it is intended to leave it strictly alone until the queen is mated. I have much more faith in this project for what it is intended than in Mr. McIntyre's hive weighing scale, which he illustrates and describes in March Canadian Bee Journal. Like Dr. Miller, I consider if the end of the hive with most honey is next the scale it will not weigh as much as if it was in the far end of the hive from the scale. I know from what I have seen of devices got out by Mr. McIntyre that he is a genius, and rate him as one of our greatest inventors, but must say that I have some little doubt as to accurate weighing being done by arranging the scale in this way.

Wintering Case. Mr. E. T. Bainard, in February Bee Journal objects to what he calls a collapsible wintering case, but because a case is made of bottom, sides and roof separately, it can hardly be termed collapsible. I have a good many cases made in that way which have stood the racket for 20 years, and are good for several years yet, with the exception of the roofs, which are giving out through the action of the weather. Mr. B. objects too to the bottom of the case being left for platform for hive. I haven't done so yet, but such is my intention as soon as I can get cement platforms made. Would not advise setting the hives flat on them but on two half inch strips of lumber. This is not in accord with Mr. Byer's idea for a hive stand, as I notice by a late Gleanings that he wants a high hive stand to save the bee-keeper's back. That, of course, is quite a plea, but it sends the supers up too. My impression is, that the nearer earth bees can be kept, the cooler they will be, i. e. cooler than with a hot air rushing through under the hive.

April, 1911.

My latest idea made of inch lumber right, cut shanty and bottom to stre of this is nailed ha inch lumber place beveled on edges There is an entran three-eighth deep w inches of the botto ed by means of ti class of lumber is t only one-third at th the upper two-thir cleats and hooks s be removed at -tir The roof is made s can be left with th not, takes up less r where else, makes where the hives sta can be tilted forwa remove the bottom all accumulations, an board. I feel certa platform, which wo thick would be no o ing about the hive, e removed.

D  
Poole, April 7th, 1911

### HISTORICAL

*Indexed*

W. H.

I noticed in the J the Canadian Bee Jour mentions the "Thor hive as patented, was one in the early sixti It was gotten up by of Brooklyn, at that a village about five m by and nine miles n town. There were fo them engaged in bees and the other two in believe they were the Italian bees in Canada

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My latest idea in a wintering case is made of inch lumber for sides, stood upright, cut shanty roofed and cleated up and bottom to strengthen. On the front of this is nailed half-inch or three-eighth inch lumber placed horizontally and beveled on edges to run the rain off. There is an entrance 12 inches wide by three-eighth deep within one and one-half inches of the bottom, which is contracted by means of tin slides. The same class of lumber is used in the back, but only one-third at the bottom nailed fast, the upper two-thirds being secured by cleats and hooks so that that part can be removed at times for convenience. The roof is made separately. This case can be left with the bees right along or not, takes up less room there than anywhere else, makes a good sun shade where the hives stand in the open, and can be tilted forward in the spring to remove the bottom board of hive, with all accumulations, and replaced by a clean board. I feel certain that the cement platform, which would do two inches thick would be no objection when working about the hive, even if the case were removed.

DAVID CHALMERS.

Poole, April 7th, 1911.

### HISTORICAL

Indexed

W. H. Kirby.

I noticed in the January number of the Canadian Bee Journal, Mr. Sackville mentions the "Thomas Hive." This hive as patented, was considered a good one in the early sixties of last century. It was gotten up by the Thomas Bros. of Brooklyn, at that time. Brooklyn is a village about five miles north of Whitby and nine miles north-west of this town. There were four brothers, two of them engaged in bees and fancy poultry, and the other two in store-keeping. I believe they were the first to winter Italian bees in Canada. I well recollect

them exhibiting and extolling the Italian bees as being superior to others, at the Oshawa and Whitby fall fairs, and taking some orders for colonies and queens. They charged \$5.00 for a queen. They also exhibited at the Provincial fair, held at Toronto, and the other cities where it was held in those days. The regular Industrial at Toronto had not been established annually at that early date. The Provincial being held in rotation at Toronto, London, Kingston and Ottawa. I never used one of these hives but have seen them. They were about 18 inches long, 12 to 14 inches deep and about as wide. The frames run crosswise the hive. Some of them had frames shallower at the back end than the front. I suppose made this way on account of some colonies that did not get enough to fill the hives out full in the back end. Honey in those days was all taken from the top in 10 or 15 pound boxes, the bees going up and building their own sweet way. The brothers gave up the bee business about 1867 or 1868, and the other two sold their store and all removed to Virginia, U. S., and engaged in fruit growing, particularly peaches, which were very profitable at that time.

After they gave up the bee business, Mr. Albert Henry of Port Oshawa took it up for two or three years, and not finding it very profitable, he gave it up and took to preaching, going to Michigan for a number of years. Returning to Canada, he accepted the charge of a Christian church at Little Brittain, retiring from the ministry a few years ago. He is now living at or near Manilla, having obtained a few colonies of bees and got rid of them again. He was visiting his brother here a few weeks ago. In a talk I had with him, he told me he exhibited bees in Montreal, Port Hope, London, and I recollect him showing here in the late sixties.

Oshawa, Ont.

## CANADIAN IMPORTS AND EXPORTS OF HONEY.

Honey and Imitations thereof	1906		1907		1908		1909		1910	
	Quan. Lbs.	Value	Quan. Lbs.	Value	Quan. Lbs.	Value	Quan. Lbs.	Value	Quan. Lbs.	Value
<b>Imports for Consumption—</b>										
Great Britain .....	4699	\$ 131	8,031	\$ 290	20,426	\$ 1,160	96,480	\$ 3,830	40,619	\$ 1,629
Australia .....	2368	113			2,895	186	1,979	156	1,643	137
British Indies .....	20657	552	124,017	3,932	315,193	10,105	65,345	2,371	164,033	6,494
Hong Kong .....	1759	49	248	5	886	25	719	20	972	27
New Zealand .....							2,480	234	1,280	142
Austria-Hungary .....							5,298	217	5,286	216
China .....	491	12	738	18	502	15	811	23	292	9
France .....									152	35
Greece .....	144	40								
Hawaii .....			1,200	72	3,360	168			2,400	95
Japan .....					60	2				
United States .....	54436	6,592	182,264	15,745	261,722	22,658	91,577	13,048	160,322	20,615
<b>Total .....</b>	<b>84,554</b>	<b>\$ 7,459</b>	<b>316,498</b>	<b>\$ 20,062</b>	<b>605,049</b>	<b>\$ 34,319</b>	<b>264,689</b>	<b>\$ 19,899</b>	<b>376,999</b>	<b>\$ 29,399</b>
<b>Exports (Canadian) Produce—</b>										
Great Britain .....	26987	2,424	650	7	1,794	337	1,965	234	957	115
Australia .....							5,859	508		
British Africa .....			24	4						
Newfoundland .....	730	99	30	4	50	11	50	28		
Bermuda .....					10	1				
France .....	9	1								
United States .....	11759	1,128	2,921	296	3,225	396	3,516	418	4,700	506
<b>Total .....</b>	<b>39485</b>	<b>\$ 3,552</b>	<b>3,625</b>	<b>\$ 375</b>	<b>5,079</b>	<b>\$ 745</b>	<b>11,390</b>	<b>\$ 1,188</b>	<b>5,657</b>	<b>\$ 621</b>

April, 1911.

QU

Will you be kind following through

1. In forming a result putting frames, as to el

2. When is the hives that have been I for my part w eration for the sal trial shape and wir success.

1. We do not to result, provided after the hatching.

2. Early spring. it done now the b Thank you for y operation. If more would speak out, feel greatly encoura

## FOUL BROOD

## Box Hives

Bees-keepers who have had foul brood should be particularly robbing during the now and summer. A have died must be from all possible r enough to close the will often gain an e expected. All entrain should be made quit where the bees are w Use every precaut ness to prevent robbi any circumstances lea out for the bees to cle you have is likely to c would scatter disea colonies. On account disease is unexpected the province it is nev honey to bees, and



ought to be a good membership. It was decided to become affiliated with the O. B. K. A. Messrs. Morley Pettit, James Armstrong and Orel Hershiser addressed the meeting. An invitation was accepted from Mr. J. T. Romp of Fonthill to hold a field meeting at his apiary early in June. The election of officers resulted as follows: President, J. F. Dunn, Ridgeway; Vice-President, Louis Minor, Smithville; Secretary-Treasurer, Wilfred B. Bowen, Niagara Falls, Ont.; Directors, Bert Miller, Bridgeburg; A. D. Harkness, Jordan

Harbor; M. Niles, Merritton; Horace Haines, Port Robinson; and Wm. Hipple, Port Dalhousie.

#### MIDDLESEX SPRING MEETING.

Middlesex Bee-keepers' Association's spring meeting will be held in the City Hall, London, on Saturday, May 6th, 1911, commencing at 10.30 a.m. A good programme has been arranged. Come and enjoy the meeting with us.  
Moses Pierce, President  
E. T. Bainard, Secretary, Lambeth.

## Carniolan Gray-Banded Alpine Bees

**Queen select, tested**, March, April, May, \$5.00; June, July, \$3.50; August, September, October, \$3.00. **Queen, select, untested**, June, July, August, \$2.00. **Virgin Queen, select**, June, July August, \$1.50. **Nucleus**, with select, tested queen, and one pound of bees, March, April, May, \$6.00; June, \$5.00; July, August, September, October, \$4.50. **Mobil Hive**—10 half frames of German, Standard size, March, April, May, \$9.00. **Carniolan Original Hive**—Select, tested queen, brood, honey; will produce 2 to 3 swarms, March, April, May, June, \$9.00; August, September, October, \$8.00.

**By orders amounting**, \$50.00, ten; from \$50.00 to \$75.00, fifteen; from \$75.00 upwards, twenty per cent. discount.

Safe arrival of queens, nuclei and hives guaranteed. International postal money order with every order. Give correct and plain address. Mailed postage free—queens and nuclei; postage or freight paid by receiver for shipments of hives. Eventual dead queens or dead stock replaced, if returned in 24 hours after arrival in a postpaid package. Orders, to be effected at other times than the months above stated, will be filled, provided weather and other conditions make it possible.

Write for the booklet: "The Carniolan Alpine Bee." References respecting financial and commercial responsibility of the undersigned association can be had at every Imperial and Royal Austro-Hungarian consulate in the United States of America.

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Ljubljana, Carniola (Krain) Austria

### Want and Ex

Advertisements for received at the rate of words, each additional word, each additional amount strictly kept. Payments are too small to keep. Write copy sheet from any other side of the paper or many times ad. is to must reach us not in each month.

**SITUATION WANTED**—A man who has succeeded in raising bees and practical work in Ontario Agricultural College, Guelph, Ontario, desiring help of this of 1911, kindly correspond with Mr. J. T. Pettit, Provincial Agricultural College, Guelph, Ontario.

**WANTED**—Bees for sale this spring. Know of any for sale, with Drawer A, Can Brantford, Canada.

**FOR SALE**—50 of zinger Comb Honey cloth separators; 3,000 and 2,000 Root one-plain) 4 $\frac{1}{4}$ x4 $\frac{1}{4}$ ; one Extractor with legs machine extracted 6,7 by hand-power. (I am also supply gasoline for bees, bees-wax or cash dress R. F. Holtermannario.

**BEE WAX WANTED** at all times. Will pay cash, according to quality. W. A. Chrysler

**FOR SALE**—50 eight hive bodies, no covers or and used about four years. Offer refused. Write for information. E. T. Bainard

**FOR SALE**—About 4 Langstroth eight-frame All fittings and supplies D. McFarlane, Tillsonburg

**WAX WANTED**—High Price list of supplies, ready. E. Grainger & Co. Canadian agents for A. I. F.

**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.

**SITUATION WANTED**—By a young man who has successfully passed examination after taking course of lectures and practical work in Apiculture at the Ontario Agricultural College. Anyone desiring help of this kind for the season of 1911, kindly correspond with Morley Pettit, Provincial Apiarist, Ontario Agricultural College, Guelph, Canada.

**WANTED**—Bees — Will those having bees for sale this spring, or those who know of any for sale, please communicate with Drawer A, Canadian Bee Journal, Brantford, Canada.

**FOR SALE**—50 of the celebrated Betzinger Comb Honey Supers, with wire cloth separators; 3,000 four piece poplar and 2,000 Root one-piece sections (all plain)  $4\frac{1}{4} \times 4\frac{1}{4}$ ; one 6-frame Reversible Extractor with legs and strainer; this machine extracted 6,700 lbs. in one day by hand-power. (I am getting a larger machine). 100 lbs. comb foundation. Can also supply gasoline engine. Will take bees, bees-wax or cash in payment. Address R. F. Holtermann, Brantford, Ontario.

**BEES WAX WANTED**—Will buy wax at all times. Will pay 30c. to 35c. per lb. cash, according to quality for early shipments. W. A. Chrysler, Chatham, Ont.

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**FOR SALE**—About 40 colonies of bees, Langstroth eight-frame—all new combs. All fittings and supplies to go with them. D. McFarlane, Tillsonburg, Ont.

**WAX WANTED**—Highest prices paid. Price list of supplies, Root's make, now ready. E. Grainger & Co., Toronto, Canadian agents for A. I. Root. Write now.

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**ITALIAN QUEENS** from my Jamaica, B.W.I., yard, mailed any month in the year after May 1st from my Yonkers yard, untested 75c., tested \$1.50; breeders, \$3.00; Carniolan, Cyprian, Caucasian and Banats, 25c. extra. Honey packages and supplies. W. C. Morris, Yonkers, N.Y., U.S.A.

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meeting with us.  
E. T. Bainard,  
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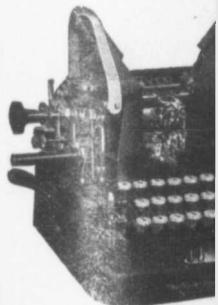
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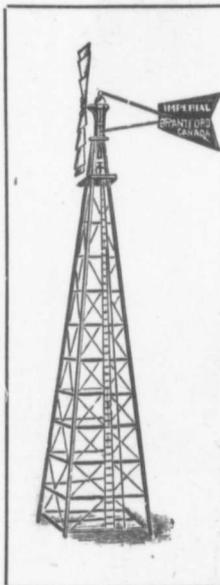
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