The anadian Bee Journal

Devoted to the Interests of Bee-Keepers

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BRANTFORD, CANADA

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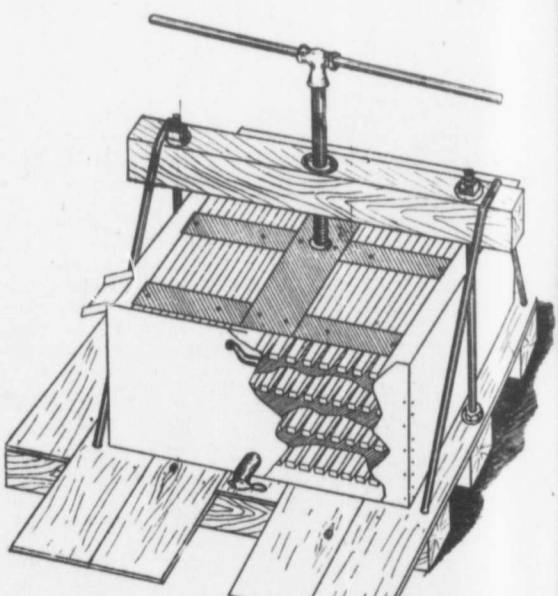

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BRANTFORD, ONTARIO

The Canadian Bee Journal

Devoted to the Interests of Bee-Keepers

JAS. J. HURLEY, Editor

Published monthly by
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Brantford, Ont.

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

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The Canadian Bee Journal

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The Canadian Bee Journal

PUBLISHED MONTHLY

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

Vol. 17, No. 2. FEBRUARY, 1909 Whole No. 528

Mr. J. L. Byer was in attendance at the Brant convention, apparently none the worse for the recent illness in his home. His optimism and cheerfulness registered as high as usual.

* * *

We are delighted to be able to state that the Brant Bee-keepers' convention was a pronounced success. To Mr. Craig, the indefatigable Secretary, is due in large measure the credit for this achievement. The papers were all good and splendidly discussed. Mr. Geo. W. Tibbs, of Hespeler, Ont., added greatly to the entertainment with his stereopticon view-talk.

* * *

To P. W. Hodgetts, Secretary of the Ontario Fruit Growers' Association, much of the credit is due for the manner in which the case against the express companies was presented to the Railway Commission. The work of organizing the deputaion, and arranging for the collection of evidence, largely fell upon him, and the strength of the case presented is proof of how thoroughly the task was performed. Mr. Hodgetts is one of the most modest and at the same time one of the most painstaking and efficient officials in the public service.—Farmers' Sun.

Mr. Hodgetts is also Secretary of the Ontario Bee-keepers' Association, and displays the same tact and ability in this department as above referred to. We were glad to have him with us at the recent Brant Convention. It is an evidence of what the Government is doing, and trying to do, in the interests of the bee-keeping industry.

* * *

Mr. P. W. Hodgetts, when in attendance at the Brant Bee-keepers' convention, announced that the Government contemplated the establishment of an apiculture experimental station at Jordan. The gentleman to be placed in charge is still being sought for. We know of one application that has been sent in, and we trust this applicant will receive the appointment. We are not authorized as yet to mention any names. This station will be a great assistance to the bee industry. The Government is to be commended for its enterprise.

* * *

Dr. Fletcher, of the Dominion Experimental Farm, is dead. He was for twenty-one years connected with the Farm, and was known throughout the length and breadth of Canada by the agricultural class, whose good friend he was. As a naturalist he had few equals. He will be greatly missed.

* * *

We are indebted to Mr. D. A. Watson, druggist, of Thamesville, for the following bit of valuable information re carbon bisulphide. He says:

"In reference to your reply to E. A. Carver, page 32, January C.B.J., re using carbon bisulphide in the house. The vapor will produce headache and dizziness, and if the exposure is continued sufficiently long it induces paralysis, with impairment of sight, hearing and appetite. The temperature of a burning cigar will ignite the vapor—therefore it must be kept away from fire or light. Carbon dioxide is one of the gases produced by burning carbon bisulphide.

* * *

We have no bees for sale from our own stock. The only information we can give regarding the purchase of bees is what appears in our advertising columns. We will be pleased, however, at any time, to bring buyer and seller closer together in any way that either of them may think we can be of use.

In reference to one-armed bee-keepers, Mr. R. T. Whiteside, of Little Britain, writes that reference can be made to Gideon Garnet and Caleb Roach, of Pinedale, both of whom are one-armed bee-keepers. We would like to hear from them.

* * *

A very valuable historical work has recently been issued, entitled "The History of Canadian Journalism." It is not the work of any one man, but a number of the most distinguished journalists of Canada. Those interested in the history of Canada and its political and journalistic development will find this a most fascinating work. The book is beautifully printed and bound with gilt tops in the best of modern fashion, and can be had from Mr. John R. Bone, Secretary of the Canadian Press Association, Star Office, Toronto, Ont. Price, $2.15.

* * *

In another column will be seen the report of the Maritime Bee-keepers' convention. It will be noticed that a motion was made to supply all the members of the Association with Gleanings for another year. This is the kind of support that the Canadian Bee Journal receives from some quarters. News of this kind is not likely to put heart into the Editor. It demonstrates very clearly, however, that if a thing is to be appreciated at home or abroad it must give value for value. The conviction has been forced upon us that something has been wrong in the past, or such a state of affairs would not exist. It is difficult to put new life into an old dog. And then, if you should, by some miracle, accomplish the trick, you are apt to be told that "we have been bit once," etc. Thus we realize the task before us. The C.B.J. came to us as an orphan, or perhaps, to use a more correct metaphor, as a discarded and unloved child. We have hopes, however, that this child will grow to sturdy manhood, and we hope with love, care and perseverance to yet see it stand among its fellows as an equal. We have set our hands to this task, and we are determined to accomplish it, or humiliatingly record our first failure. We must win the confidence of our fellow-citizens in the Maritime Provinces, and others throughout Canada. We trust the friends we have got will give us a helping hand. The Canadian Bee Journal will be a bee journal in every sense of the word for the future—or so long as it remains in our hands. No doubt a number of our friends have it in their power to bring this matter before some of the bee-keepers of the Maritime Provinces. How many of our readers who are pleased with our efforts will secure us one new subscriber?

* * *

We were delighted to have President Couse with us at our recent convention. He can tell a good story. There is a lot of good-natured mischief in him as well as bee lore.

* * *

Mr. John Symington, a farmer about five miles out of Brantford, attended our convention for the first time. He was delighted with it, and is now an enthusiastic bee-keeper. He has big plans for the coming summer.

* * *

That a prophet has no honor in his own country is certainly not true of Mr. M. B. Holmes, of Athens. Mr. Stuart's letter in this issue makes this clear beyond the peradventure of a doubt. His friends won't be satisfied until they have him as inspector again.

* * *

"Isolation" and "Quarantine" were new words heard at the recent convention. If any apiary is known to be diseased, and is situated near a large, clean apiary, and there is danger of the disease spreading through robbing in the early spring, what is the remedy? Ask McEvoy. You can't dodge him. When he pleads with you to "Be honest, now; be honest," he is simply irresistible. Move it away out of the danger zone. Isolate it; quarantine it. Capital idea!

MEMORIAL TO LATE DR. FLETCHER

A memorial number in recognition of the late Dr. Fletcher has been issued by the Ottawa Naturalist, the organ of the Ottawa Field Naturalists' Club. In this number tributes are given by the men who were most closely associated with him to his attainments as a botanist and his great work on behalf of farmers. Several suggestions have been made by a committee of the Naturalists' Club, looking toward some permanent memorial, the most feasible being (a) a fountain at the Central Experimental Farm: (b) a statue to be placed in the grounds of the new Natural History Museum; (c) a bust or portrait to be placed in that building or at the Central Experimental Farm, and (d) to found a bursary at some Canadian university.

Summing up the work of Dr. Fletcher during the twenty-one years of his connection with the Dominion Experimental Farm, the Director, Dr. William Saunders, says: "He carried on a large correspondence with farmers in almost every part of the Dominion. He also attended farmers' meetings in all the different Provinces, where, in his addresses on various topics, he conveyed in a pleasant and forceful manner, and in his own genial way, much valuable information to his hearers. His influence was always exerted for good. He was happy in his work and in the consciousness that through his efforts the condition of tne farmer and fruit-grower was being improved and their employment made more remunerative."

Expressions of appreciation are also given in the Naturalist by Mr. A. E. Attwood, Lieut.-Colonel W. White, Mr. W. H. Harrington, Mr. R. B. Whyte, Mr. Arthur Gibson, Prof. John Macoun, Dr. H. M. Ami, Mr. Frank T. Shutt, the Rev. G. Elfrig, Mr. E. R. Cameron, Mr. T. J. MacLaughlin, Mr. W. J. Topley and Dr. S. B. Sinclair.

Dr. Fletcher will be greatly missed. His was a beautiful and useful life.

MINISTER DUFF REPLIES

Toronto, Feb. 8, 1909.

W. J. Craig, Esq.,
Ham & Nott Co.,
Brantford, Ont.

Dear Sir,—I beg to acknowledge receipt of your letter of the 5th inst., with which you enclose resolution passed by the Brantford Bee-keepers' Association, expressing the appreciation of its members at the interest taken in the bee-keeping industry by the Depar'ment over which I preside. I am glad indeed to know that the efforts of the Department have met with the approval of the bee-keepers of your district. I may say that I trust that the future will witness no lessening of our efforts to encourage this branch of agriculture in our Province.

Yours very truly,

JAS. S. DUFF,
Minister of Agriculture.

PAST SEASON GOOD

The season of 1908 was one of the best I ever knew. I went into winter a year ago with 108 colonies, united a few last spring, commenced the season with ninety-six colonies, took a little over six tons surplus honey, mostly extracted, gathered from wild raspberry, clover and buckwheat; have now 114 colonies, seventy-eight outdoors in chaff hives and thirty-six in the cellar, wintering on solid combs of sealed buckwheat honey.

Alsike clover yielded splendidly, also buckwheat, for the season was prolonged. The Silver Hull variety of buckwheat is sown exclusively here now, for the Japanese is not liked by the farmers, and I think the Silver Hull is best for honey.

ILA MICHENER.

Low Banks, Jan. 12, 1909.

Renew your subscription to the C.B.J. and help along the bee industry. We are endeavoring to give you something that will help you. Your dollar is well invested. It will be returned to you many times over.

Notes and Comments

(By J. L. Byer)

The Editor of this Journal has asked me to comment on those answers to the questions of H. W. Jones, which appear on page 10 of the January issue. Now I am no scientist, and do not pretend to be an authority on foul brood matters, yet what experience I have had convinces me that the use of disinfectants in the treatment of foul brood is unnecessary. Personal experience can always be depended upon, and in my own case one of our apiaries was quite badly affected by my buying some bees from a widow when the estate had to be closed. These bees, by the way, were known to be diseased, and I took them so as to prevent them being sold all over the country, and while it made me a little trouble for the time being, yet in the long run I believe that the move was a good one on my part, as in case I had not bought them the **trouble** would have come in a magnified form at a later stage in the game. Well, to make matters short, the bees in the yard referred to were all attended to without any disinfecting of hives or appurtenances, and at the present time would feel like the Editor, when he says that he would give a five-dollar bill for every foul cell found in the yard. At least for the last two years we have not found a cell of foul brood, and the colonies have been throughly examined quite a few times in that period. Cases like this can be duplicated in many apiaries in the country, and while it is also true that many apiaries have been treated for foul brood, that yet has the disease lingering more or less, I have always been inclined to think that some source of infection had been present **outside** of the hives under treatment. Of course, it is always hard to prove the source of these troubles, and for that reason some, no doubt, will continue to think that disinfection is necessary. One thing certain, if a bee-keeper insists on disinfecting the hives, etc., it will do no **harm**, so personally when on inspection work, if I meet a man so inclined, I never discourage him **too strongly** in the matter, else the disease recurring again, he should reproach me with a "There, I told you so!" It is well to remember that some influential men, as for instance the Roots and others, insist on the disinfecting, and in California nearly all the inspectors there say that the disease is much more virulent in their climate than it is in the more northern and eastern sections, and for that reason the simple treatment that works so well in the latter places is not nearly so efficacious with them.

Now as to the starving treatment asked about by Mr. Jones, and to which you reply, I hardly think that a bee that has had an empty stomach so long that it becomes shaky will be such a wreck after being revived again as you picture. In fact, I believe that it would be a good thing if a goodly number of the over-fed human species would be subjected to a treatment of that nature. Jacob Alpaugh is as thorough a bee-keeper as we have in the Province of Ontario, and a man who will not advocate anything unless sure of his ground. True, he is, like other mortals, liable to make mistakes, yet as a rule you will find him "sound as a dollar" on matters apicultural. Knowing that friend Alpaugh had for years made an unqualified success of getting foul colonies in the fall at a nominal figure, and curing them late in the season, the writer made bold to ask him for the method employed. As he never enjoined any secrecy in the matter, I trust he will excuse me when he sees this; as a matter of fact, many bee-keepers are familiar with his system, anyway, as Mr. Alpaugh instructed a number in this late-in-the-fall method of curing the year he was on inspection work. Briefly stated, the infected colonies are left till October, when the brood-rearing has ceased, and then the bees are shook on empty frames and left that way for two days. At the end of that time full sheets of foundation are given, feeders put on and the bees fed as rapidly as possible. This fall a friend o

mine well known to a good many members of our Association had a number of colonies slightly affected with foul brood, and he decided to try this treatment, as circumstances kept him from attending to them earlier in the season. The result was an unqualified success, and my friend said he would not have believed that it was possible for them to draw out the foundation as quickly as they did. Certainly the two days' starving did not appear to hurt the bees any, and as they appeared after treatment clustered on the beautiful new combs I would not pay two cents to insure their wintering. This treatment is not for the summer, as the McEvoy plan, all things considered, cannot, in my opinion, be improved upon, but for the late fall, in case colonies have unavoidably been left without treatment, the shaking on to empty frames is O.K. It might be thought that the bees would swarm out of the hives when only empty frames are given, but such is not the case, as it most surely would be early in the season. The giving of full sealed combs in the fall is sound in theory, and, if everything is all right, should be the same in practice; but for some reason a great many have failed with the plan. One reason is that it is very difficult to get combs with **every** cell sealed, as is recommended, and this may account for some failures. In my own personal experience, while cleaning up the apiary referred to in these notes, to the best of my knowledge I tried the cure faithfully on two diseased stocks in the fall. The following May the disease was found in a few cells in each stock, and, while I do not condemn the system, can honestly say that I do not see where I failed to carry out instructions. As to the matter of bees being affected so adversely by starvation, it is noteworthy that they can stand wonerdful extremes and to all appearances show little after-effects. Some years ago Mr. Doolittle exposed a colony to weather away below zero for a long time, the hive being minus cover or bottom board, and although the hive was suspended in the air all the time of the exposure, after being put back in the cellar the bees were all right, and the next season that stock was one of the best in the apiary. We once had a colony nearly starve in the early part of June; in fact, they were so near gone that when I arrived at the yard the bees were tumbling out of the entrance of the hive. A screen was put over the entrance to prevent robbing, and then a little warm syrup was sprinkled over the top of the frames, and in a couple of hours the bees would defend themselves against all comers, and, barring the fact of all the unsealed brood being dead, they were none the worse for their experience. Of course, this "treatment" is not recommended, and is only given to show that bees have extraordinary powers of recuperation as compared to other forms of life.

While on this matter of foul brood, pardon me, Mr. Editor, for referring to the rather sarcastic remarks of friend Anguish in November C.B.J. As one of the fellows on "the other side of the chair," I feel that a few words of explanation are in order. In the first place, while I have the greatest respect for the opinions of Mr. Wm. McEvoy on matters apicultural, and especially so on foul brood questions, yet if I honestly felt I differed with him I would have no compunction about saying so, and, indeed, things would be at a queer pass if honest differences of opinion could not be indulged in. But what are the facts of the discussion referred to by friend Anguish? I challenge him to refer to one thing in which I opposed Mr. McEvoy when the subject was under discussion, and since the convention Mr. McEvoy has told me twice that he could recollect nothing of that nature. True, I did differ with the view taken by Mr. R. L. Taylor, when the latter said it was safe to use **wet** super combs that have come off foul colonies, and if Mr. Anguish thinks that is differing from Mr. McEvoy's opinion, let him write the latter and be convinced

otherwise. As to the discussion on black brood, Mr. McEvoy thought I painted the picture too black, but in that I fail to see any **crime** on the part of either one of us. I might say that with the exception of the outbreak in the East, not a **single case** of this disease has been reported to the Department, so surely, as the only inspector in Ontario yet called upon to deal with this plague, I was not exceeding my jurisdiction by giving an honest opinion of the matter. Let me say that nearly all the experienced men in New York say that the picture is **not** too black as applied to the disease when it first appears in a locality. However, they all say that after it has raged awhile in a given community that the disease loses a good deal of its virulence. But nearly all of these men tell me that before this stage is reached the original bees of the section are nearly all, as a rule, wiped out of existence. If there is room for much comfort in this, by all means let us avail ourselves of all we can get out of it. What I have said and written about this disease has been done with the best interests of the bee-keepers at heart, and with this I promise not to mention the matter again, unless circumstances not now apparent should present themselves in the future.

In conclusion I would say to friend Anguish that no one welcomes criticism—yes, good sharp criticism, if necessary—more than the writer; but, being human, he does resent insinuations that have not the slightest foundation for being uttered. This would have been dealt with sooner, but for the fact of conditions in the writer's family during nearly two months which caused me to drop all correspondence for the time. This will explain why readers of the C.B.J. were spared from being inflicted upon by the writer of these notes for at least two issues of the C.B.J.

I am pleased, Mr. Editor, for the encouragement you give Mr. Roberts (page 9) as to him being capable of keeping bees, hindered, as he is, by having only one arm. For his further encouragement, let me say that one of our most clever and successful bee-keepers here in Ontario had the misfortune when a boy to lose the use of one arm, and to a great extent, also, the free use of the same side of his body. Yet, althoguh so handicapped, his apiary and fixtures will put to shame the most of us who know no bodily affliction. He has everything reduced to a system, necessary for one in his condition, and really he will do more work in a given time in the apiary than the great majority of those who would deem themselves more fortunate. As an example, the frames are self-spacing and they are made much heavier than the ordinary, and in case one should happen to fall, there would be no danger of it being broken; but do not jump to conclusions and think that this is a common thing for the frames to fall, for it is not likely that such a thing happens more often with him than with any other bee-keeper. The friend I have reference to is well known by a host of bee-keepers, and is a prolific reader of bee literature. This latter fact leads me to think that I have not his permission for this meagre write-up, so will call a halt, lest we should get into serious trouble.

Mr. Shaver (page 6, C.B.J.) is not the only one who likes to have the bee cellar at a lower temperature than what is ordinarily considered orthodox. Mr. J. F. Davison, of Unionville, Ont., is a believer in a cool cellar and proves beyond contention that in his case at least the lower temperature gives best results. He aims to keep the cellar as cool as possible, and does not care if it gets near the freezing point occasionally. He is a veteran in the business and is very successful in wintering his bees, part of the apiary in the cellar and part outdoors. Personally we have thirty-five colonies in a neighbor's cellar, and this year so far the thermometer has not been above 48 or below 42, and the bees are much quieter at the

latter figure than at the former. There is a furnace in the cellar, and the part where the bees are is separated from it by just an inch-board partition. The room is dark and yet windows open in the other part of the cellar give abundant ventilation. Naturally, under these conditions, we would expect a higher temperature to be better, but when the room gets up to 50 or over, as it did last winter, the bees get decidedly uneasy. Clearly there must be a great difference in some way in cellars, as some report quiet bees with a cellar registering well up in the fifties.

DOOLITTLE'S BOOK—QUEENS

Bees here had a partial flight January 23rd and a full flight on the 24th. Some bees were to be seen on damp places, as though they were preparing to feed brood.

I received the Doolittle book of "A Year's Work in an Out-Apiary." I consider it an excellent book for any one running out-apiaries. There is one statement on which I would like to hear some opinions, or discussion. On page 16 Mr. Doolittle says:

"In order that the queen may fly and accompany the swarm on the wing when the first larvæ are about three days old, she begins gradually to cease laying, and almost or entirely stops three days later, or at the time the colony would naturally swarm."

In reading the book through one would naturally conclude that Mr. Doolittle had been using the eight-frame L. hive until a few years ago, and during the time he has been using the ten-frame L. hive he has been experimenting with the shook swarm system, with the idea of working out a plan of non-swarming at out-yards, while running for comb honey, which I am pleased to say he has undoubtedly accomplished.

The question I wish to ask is, Does the queen stop laying naturally, or is it a case of compulsion with a small hive? The latter is my firm belief. Three years ago I ran my bees on the one-swarm system, then destroying all queen cells but one, and in every case I found abundance of eggs. On one occasion I was working close to the yard, so I could keep an eye on the swarming, when one issued. The queen's wings being clipped, and not having the queen cage with me, I picked her up in my hand and ran to the house and put her in the cage. During that time she had deposited six eggs in my hand and then about the same number in the cage before the swarm returned. Now the amount of eggs that were in the hive, and the queen being burdened with eggs when leaving the hive, is a proof to me beyond a doubt that a queen will not only keep up her egg-laying till swarming, but if the hive is big enough she will strain every point to leave every cell with an egg. If the queen mentioned above had been able to fly with the swarm she would likely have dropped those eggs on the wing without any one being the wiser. An eight-frame hive will compel a queen to slacken laying before she lays any eggs in queen cells. Most good queens can keep a ten-frame full. I have had a few that could keep twelve frames occupied with brood. I have not had a swarm in two years, neither at home nor at the out-yard.

Page 63, Gleanings: "As a general thing, bees are not familiar with territory more than a mile and a half distant at the most. Probably a mile will cover 95% of their range of flight.—Ed."

I have always argued that a mile and a quarter is about the limit of a bee's flight, so Mr. Root and I can shake hands on that point. A mile and a quarter each way would be in the neighborhood of 2,500 acres.

ISAAC BALMER.

BOUND VOLUMES OF THE C.B.J.

If any of our readers wish their Bee Journals bound up, we will be very pleased to bind them. The charge will be 50c. We have some of each month of 1908 left over, and will supply these bound for $1.25.

BRANT DISTRICT BEE-KEEPERS' CONVENTION

The annual convention of this Association was held in the County Council Chambers, Brantford, January 28th and 29th. There was a good attendance at all the sessions and a very interesting time throughout. The convention as a whole was conceded to be one of the most helpful and successful in the history of the Association. Mr. William L. Bayless, President of the Brant County Association, presided, and in his opening remarks spoke as follows:

In opening this, our annual meeting, it is with pleasure that the Brant County Bee-keepers welcome you as "friends and bee-keepers." I can assure you that we appreciate the honor of having the best bee men of our land come to our meetings. There are experts here on comb and extracted honey, home yard and out-yard, big hive and little hive, and how to manage your bees winter and summer. I had almost forgotten to mention the best bee doctors in the world to-day. Now, in the presence of such an array of talent I feel doubtful about saying anything about bee-keeping, so will say only a few words on the importance of our industry. Our industry is one of the most important in Canada to-day. I do not mean in the production of honey alone, but in the benefits it bestows on all our people—the farmer, the fruit men, and also the people of our towns and cities. You may ask, what benefit does the farmer derive from the bee? Well, does he not get the seed from his clover altogether, or nearly so, by the aid of the honey bee; and all our agricultural friends know they would be in a poor position without their clover to enrich their soil for their other grain crops and hay and pasture for their fine dairy herds. The fruit man may select a site for his orchard, and plant the best trees of the many fine varieties, and till the ground and spray, prune and do all that the Government professors tell them to do. But the honey bee is their best friend, for without the agency of the bee they would have no crop, or a very poor one, to pay them for their time and outlay. The benefit to the people of the towns and cities is by helping the farmer and fruit men in their efforts to produce different lines and supply our people with the best milk, cheese, butter and fine fruits of all kinds in abundance. Who will say that the little honey bee is not of the greatest importance to all mankind? Is not the product of our apiaries —the delicious honey that the bee works so hard to gather for us—esteemed and sought after more and more every year? It will be thought more of as a necessity than a luxury than it has been in the past. If we will supply only the best to our customers our only trouble will be to produce enough to supply the demand. We thank the Ontario Government for their assistance in this convention, and I think we should also give them credit for the way they have helped the bee-keepers in sending out some of the best men in our ranks to cure the brood diseases that have been so disastrous in the past. If we can show cause why we should have assistance we feel that we will be liberally dealt with and the country well repaid for the money expended. I hope the many splendid papers to be

WM. L. BAYLESS
President, Brant B. K. A.

read will be discussed in a friendly way, so that they will not only forward the industry, but add to the friendly feelings existing among bee-keepers. I again extend a hearty welcome to our visitors, and hope you will spend a pleasant and profitable time at these meetings, so that you may remember with pleasure the Brant County Bee-keepers' convention.

Conditions of Bee-keeping in Brant District

[Opening Paper at Brant Convention, by Secretary W. J. Craig.]

In reporting of the condition of bee-keeping in the district I would merely take the Brant County Association as a basis of my statistics and conclusions. The number of colonies reported in our local Association is somewhat in the neighborhood of twelve hundred and fifty, fall count, almost one-third more than a year ago. These twelve hundred we might estimate as being one-fourth of all the bees in the district—that is, within a radius of, say, twenty-five miles. I do not think we would overestimate the total number of colonies in the district at five thousand.

It would be rather a difficult matter to estimate the value of this property or the income from it, but we must conclude that it would represent quite a considerable sum could definite statistics be secured, as in live stock and other farm products. To estimate value, etc., from reports of our local Association would, of course, be out of the question. We naturally expect and find that the bee-keepers who unite themselves in associations are those who are in the business for what they can get out of it. They endeavor to give it the necessary time and thought and expenditure of money to make it pay them, just as they would any other legitimate business. They are anxious to learn and to put into practice the best ways and means, and for this purpose keep themselves in touch with the best in literature and association. For this reason it should be our object as bee-keepers to nurture local associations and to interest and unite every bee-keeper, whether extensive or limited, the owner of one colony or one hundred, for the education and elevation and best interests of the whole. The third, fourth and under-rate bee-keepers, as in every other business, is rather a detriment to the industry than otherwise..

The Provincial Bee-keepers' Association, by recent by-law, has magnanimously made it possible for members of affiliated local associations to obtain membership in the O.B.K.A. with all its advantages of convention reports, honey crop report, marketing advices, etc., single fee for the combined membership, the idea being to assist and to increase membership in local associations. The local association should really be the working part of the provincial.

Real live local associations would also simplify and reduce the cost of the working of the Foul Brood Act or any other Act that the Government might wish to enforce for the protection of the industry. As matters stand at present, there is too much taken for granted and too much expected from the inspectors. There are probably hundreds of colonies, little clusters of one and two and six and a dozen, scattered here and there throughout the country that we know nothing about. A local association properly organized, with something in the form of a directorate, might keep in touch with all the bee-keepers, large or small, in a county or district, so that an accessible record might be kept.

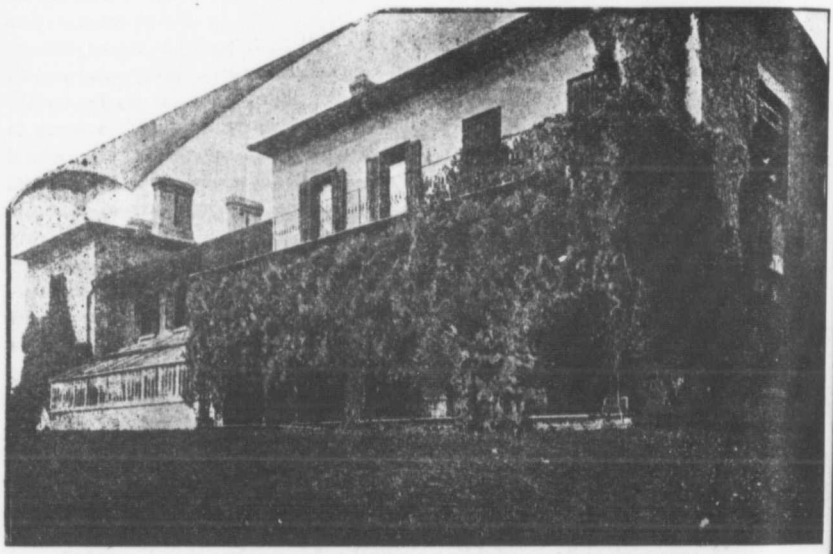
Speaking of the city of Brantford and immediate district, I believe I can safely say that foul brood is practically stamped out, except it might be lurking in one of those isolated cases unknown to us. It is under control in the district, and any cases that there may be are under the supervision of the inspectors.

We cannot speak too highly of the way we have been treated by the Ontario Department of Agriculture. They are assisting us in every way possible,

and we feel it our duty and privilege to work in conjunction with the Department under the direction of an efficient and highly-respected Secretary of our Provincial Association, Mr. P. W. Hodgetts, who has brought us so closely in touch with the Department.

The stereopticon talk, "Bee-keeping in an Industrial Institution," was an exceedingly interesting feature of the program, and was followed with marked appreciation by the evening audience. The Canadian branch of Mrs. Smyly's Home, "The Coombe," Dublin, Ireland, under the superintendency of Mr. George W. Tibbs, at Hespeler, is doing a great work for the orphan boys sent out to it for training and fitting for farm life in the Dominion. Instead of these lads being turned adrift in the rough to the mercy—or, as indeed is sometimes the case, the lack of mercy—of chance employers, and every wind of circumstance, when they reach an age of being able to do for themselves they are here trained in almost every department of agricultural pursuit. Within the last few years Mr. Tibbs has added bee-keeping to the instruction, and now the Hespeler home has its apiary and the boys receive a very practical training in its management. Mr. Tibbs is certainly to be congratulated on its success.

Mr. H. G. Sibbald, Toronto, kindly took charge of the "Demonstrating and Grading of Honey," explaining the different varieties. Grades of comb were exhibited, showing the production of the untrained and unskilled bee-keeper, partly filled, mixed, propolized and travel-stained. And alongside in beautiful contrast the nicely filled, transparent comb of the skilful bee-keeper, with snow-white cappings and clean, polished sections, attractive and inviting, ever in demand and bringing credit to its producer.



"THE COOMBE," HESPELER, ONT.
Canadian Branch Mrs. Smyly's Homes. Mr. Geo. W. Tibbs, Superintendent.

Not the least appreciated feature of the meeting was the genial presence of President Couse of the O.B.K.A. and Secretary Hodgetts from the Department of Agriculture. Mr. Hodgetts, in addressing the convention, congratulated the Brant Association and assured the bee-

keepers of the interest and assistance of the Department in the development of the industry. In connection with Mr. Hodgetts' visit the following resolutions were passed by the convention:

Moved by W. J. Craig, Brantford, and seconded by Edwin Trinder, Simcoe: Resolved—That in the opinion of the bee-keepers present at this Brant District Convention the most satisfactory work can be done by apiary inspectors in the treatment of foul brood in the months between the fifteenth of May and the fifteenth of August, and we would suggest to the Department of Agriculture that in view of this the inspection season be limited to these dates except in exceptional cases and under circumstances that would necessitate and demand earlier or later treatment.—Carried unanimously.

Moved by W. J. Craig, Brantford, and seconded by Christopher Edmondson, Brantford: Resolved—That we as an Association of Bee-keepers appreciate exceedingly the interest taken in the bee-keeping industry by the Ontario Department of Agriculture, and would hereby express our gratitude for the same, and as a District Convention would thank the Department for sending as delegates experts in bee-keeping to address us on special subjects.—Carried.

The various papers read at the convention will be found under their different heads in this issue.

OXFORD DISTRICT BEE-KEEPERS' CONVENTION

The annual meeting of the Oxford Bee-keepers was held in the Council Chambers, Woodstock, February 6th. In the absence of the President, Mr. F. A. Gemmill, the chair was ably filled by the Vice-President, Mr. Bueglass. Election of officers resulted as follows: President, F A. Gemmill, London; Vice-President, Wm. Bueglass, Plattsville; Secretary-Treasurer, John Newton, Thamesford.

The finance report showed that the Society was in a healthy condition. It was moved and seconded that the Oxford Society affiliate with the Ontario Society. Also that the Review in Bee-keeping be given to the members as premium for the year 1909. There was also a resolution carried and sent to the Department of Agriculture recommending the dates of May 15th and August 15th as the proper time to send out the inspectors of apiaries, with the exception of localities where there was later flows of honey, whose bees could be handled with safety, or in extraordinary cases where immediate attention was needed. A paper was then read on "Spring Management" by Wm. Bueglass, of Plattsville, which brought out a good discussion on the subject. Mr. Bueglass' paper was as follows:

"One of the great essential points in spring management is to start at the right time. This is very important to have the work terminate successfully and secure a good crop of honey. Consequently we would say the previous year, at the close of the white honey harvest, is the right time to start spring management, or if the flow is late—or, more properly speaking, a fall flow, say in buckwheat districts—see that the queen is not crowded for room to lay, as it is important to have our hives go into winter quarters well stocked with young bees to successfully manage them in the spring. In localities where the honey flow practically ceases about the first week in August a certain amount of feeding should be carried on through this month to keep the queens laying, so there will be a good hatch of young bees the forepart of September, and if we do not expect any fall flow at this time, feed up rapidly so every hive will have thirty pounds of sealed stores or thereabout to go into winter quarters.

"In localities where we get a buckwheat flow I would advise having a super on each hive, so the queen will have plenty of room to lay and sufficient room left to hold ten to fifteen pounds of sugar syrup, as we much prefer it to having all honey for bees to winter on, and this should be supplied as soon as possible after buckwheat ceases to yield freely, if fall management is to be properly carried out. There will be very little to do with the bees in spring before fine weather sets in in May; a good letting-alone

is about the best management previous to this time. When bees are beginning to get honey from natural sources, so there will be little or no danger of bees killing their queens when disturbed, go through the yard and uncap a comb of honey in each hive; this may be repeated in a few days or a week.

"Should it be found that some hives are short in stores, then feed in some way that will not start robbing, which in all our management should be guarded against at this time of year. All colonies that will take on a super, let it be a super of good brood comb, and let the queen have access to it and fill it with brood; then before the clover flow commences these extra supers of brood can be used to equalize weaker colonies. There is a time between fruit bloom and clover when bees should have close attention, and have all queens do their very best by feeding or uncapping sealed honey in the brood nest, if necessary, which will largely insure us a good harvest of honey and is consequently a very important feature of spring management.

"Another idea worth putting in your hat is to supply the bees with water in some sunny, sheltered corner of the bee yard, for bees must and will have water or die in the attempt to get it. We believe a great many bees perish trying to get water and are branded with spring dwindling, whereas it is largely the fault of the bee-keeper and not that of the bees.

"Then, after all is said and done, we may juggle hives and combs and feed, but if we have not got a good queen in the hive to back up our work we may just as well write "failure" across the whole thing on the start as wait to the finish, for failure would come sure anyway in the absence of a good queen."

After this a Question Box was opened, which brought out many questions and answers. The afternoon closed with a very profitable time on the discussion of the honey bee.

JOHN NEWTON, Sec.-Treas.

MARITIME BEE-KEEPERS CONVENE

The sixth annual meeting of the Maritime Bee-keepers' Association was held in the board room of the Winter Fair Building on the 3rd day of December, 1908. In the absence of Rev. A. E. Burke, President, the Vice-President, I. C. Craig, acted as Chairman. The following bee-keepers were present: R. F. Holtermann, of Ontario; Miss Julia Corbett, W. B. Wallace, George A. Chappell, R Donaldson, I. C. Craig, M. A. McLeod of the Maritime Farmer, Theodore Ross and B. W. Baker.

The minutes of the previous year's meetings were read and approved.

The Treasurer's report was audited, found correct and passed. A balance of $6.44 remains to the credit of the Association.

The action of the committee, in presenting $10 to the Winter Fair Commission, included in the last prize list, was, on motion, approved.

On motion of Messrs. Donaldson and Chappell, it was decided to have Gleanings in Bee Culture sent to each member of the Association for another year.

Moved by B. W. Baker, seconded by George A. Chappell, and carried: That I. C. Craig and R. Donaldson be a committee to draft and present to the Legislatures of New Brunswick, Prince Edward Island and Nova Scotia, resolutions requesting a grant of money to the Maritime Bee-keepers' Association, to be used for the encouragement of the bee-keeping industry in these provinces.

Officers for the year were elected as follows: I. C. Craig, President; R. Donaldson, Vice-President and Director for Nova Scotia; C. A. Fawcett, Director for New Brunswick; Theodore Ross, Director for Prince Edward Island; George A. Chappell, Auditor; B. W. Baker, Secretary-Treasurer.—The Maritime Farmer.

We have much important matter which could not be inserted in this issue.

KEEP YOUNG QUEENS

Never since I have been keeping bees did I notice the value of young queens more than I did during my inspecting trip through the eastern counties last fall. I am satisfied that many thousand pounds of honey go to waste every year that might be gathered if we had every colony headed with a good, young, vigorous queen. These young queens may cost a little on the start, but they will soon bring that back and a great deal besides, so they practically cost nothing.

We do not need to leave our own country to get those queens, for I think we have men in Canada who breed queens to sell that are equal to any that can be had, and I believe it is cheaper to buy than it is to raise our own, unless we have plenty of time and do it right.

In case we raise our own queens, as good a way as I have found is: During the honey flow go to a colony that his proven to be one of the best in the yard and remove a frame out of the centre and replace it with a frame with only a starter in, say about two inches deep. Leave this starter in for two or three days until the queen has started laying nicely in it. Now remove this frame and put it in the centre of a colony that is preparing to swarm, as they can generally be found at this time of year; or even better would be if you had a colony that is superseding their queen, and remove one of the centre frames from it, also cutting out all queen cells that may be started in any part of the hive. Now take this frame with the eggs in it from your best queen, being sure to trim the bottom off first, so as to have eggs in the bottom row of cells, then place in the hive. In ten days you will have a fine row of perfect queen cells on the bottom of this frame, as it seems to be a very convenient place for them to build.

I then form nuclei, consisting of two frames of well-sealed brood, and give one of these cells to each nucleus. They should then be left alone until the queen has had time to hatch and get laying nicely. I then have queens to place where I wish.

After the queens have been taken out those nuclei should be united, say three and four together. Give them one of the young queens and they soon build up and make a fine colony.

The reason I like this way of raising my own queens is because they are from the eggs of the best queen in the yard, and naturally we improve our strain of bees. Also the bees that build those cells are not made queenless and compelled to raise a queen, and therefore they take their time in building those cells, and we are sure of having good queens. To my notion a queen should not be allowed to live more than two seasons.

HOMER W. BURKE.

Highland Creek, Ont.

HOMER BURKE
Highland Creek, Ont.

CHALMERS' OBSERVATIONS

Now that the season of the year is upon us for laying in a stock of new hives for those requiring them, it might be an opportune time for giving my observations on the proper construction of a bee-hive. I do not purpose dictating any particular style, for while acknowledging that Father Langstroth struck it well for a general-purpose hive, yet for this Canada of ours, and more particularly for outdoor wintering, I consider a shorter and deeper hive preferable.

A bee-hive should be detachable from its bottom-board. Early calculators placed its capacity nearly right at 2,000 cubic inches. The entrance is better given in the bottom-board than by an opening in the hive, and should be full width of hive in the honey flow. About three-fourths of the hives of an apiary should have the bottom of the frames come to the level of the bottom of the hive, and about one-fourth with bee-space of one-quarter of an inch or a shade more between bottom of frames and level of bottom of hives, for use immediately above queen-excluder. There should be a full bee-space between top of frames and level of top of all the hives and supers. I advise using a plain sheet of perforated zinc for queen-excluder full size of top of hive, as it is more easily made and easier cleaned than any other style. Before placing it, feel which is its smoothest side, and lay that downwards, as it has been punched from that side, and loaded bees can slip through a little easier than if vice versa. Do not forget to have a piece of tin, say five or six inches long, cut fully one-quarter of an inch wide, and bent to right angles, laid on top of frames before placing excluder; it will prevent the latter from sagging.

Then, last but not least, use honey-boards instead of cloth coverings of any kind, and you will find the top-bars of frames kept much cleaner. It surprises me that so few use honey-boards when everything is in their favor, and, if made

D. CHALMERS
Poole, Ont.

the same as the writer's are, they can be used for bee-escapes independent of Porter or any other escape and do their work in a wholesale way. No chance of clogging, nor danger of robbing, and will clear the bees from a super fairly well in two hours.

Eat Honey.—On page 8, January C. B. J., I observe you, Mr. Editor, are right in with Mr. Wood in having leaflets printed advising people to "eat honey because it is good." I heartily agree with you both, but don't you think there should be advice, too, in those leaflets as to the best mode of serving honey at the table? Much as I love honey when it is **good** and properly handled, yet I always rate it as a dirty thing when out of place. No doubt you have noticed that a great many don't know how to serve honey. They will fill the spoon, lift it and wait a little for the honey to quit streaming, and, seeing there is likely to be no end to it, they make a dash for the nappie, leaving a streak over the mouth of the

bowl. Now, to get things nearly right, should there not be a little advice along this line, with perhaps two cuts, showing the right and the wrong service—one as pictured above, the other with the honey rolled up in the spoon? I have an opinion that this same little trouble counts against the sale of honey.

F. B. Inspectors.—Mr. James Armstrong is right in suggesting a meeting of inspectors, but would it not be better to have that meeting before they start on their work and get to be if possible all of one mind in the treatment of diseased colonies?

A ONE-ARMED BEE-KEEPER

I saw in the Canadian Bee Journal an enquiry about handling bees with one arm. This is very interesting to me, as I lost my left arm and index finger on right hand twenty-two years ago by the explosion of a retort. I have been an apiarist for seven or eight years and selling honey. I have kept some colonies in my nearly 30 years' dental practice. Bee culture is greatly changed to produce lots of first-class honey. The Editor advises him to go into the business, so do I, if he has patience and perseverance. You gave him some good advice. Necessity is the mother of invention. Sure! His box for catching swarms on limbs needs a hook on top to hook on the limbs. It might be of some interest to him and some other similar unfortunates if I gave my success and some failures in this Bee Journal. I purchased the book, "A B C of Bee Culture," and found many strange names to me of hives and their parts and various ways of using them and bees. This book is very valuable, as is also the Canadian Bee Journal. With theory and practice one is more likely to attain success. Get a schooling if possible with some practical and up-to-date apiarist. I will point out many small things as well as some large and beneficial. I purchased twenty-one strong colonies of Italian bees near swarming time to start with, in various kinds of movable frame hives. I found I must adopt one kind and one size to fit all through, so I purchased the kind that is in most use among apiarists. Get Langstroth or Huffman frames in the flat—that is, ready to put together—then nail hives together. To put frames together, get a small iron vise that will clamp to table. Clamp the largest piece of frame in it, then nail end pieces on it, after piercing holes in them for wiring. Put in full sheets of foundation to insure straight combs and give the bees less work to do. Some of the colonies will cast swarms. I concluded to try the dividing, as some recommended. Dividing suits me better than waiting for swarming. I used a veil and glove. A large strong apron with large pocket suits me to hold screw-driver, knife and matches just at hand when needed. A good-sized veil of Brussels net, sewed together at the back, with elastic band to tighten it on the hat. A long elastic band fastened on lower edge and buttoned to the vest or pants will keep the veil tight around the neck and in front even while stooping. Getting the glove on so the bees cannot get in is the most difficult to me without assistance of all the apiary business. I got a loose glove, made of white table oilcloth, that comes well up to the elbow, with elastic band at upper edge and ends of fingers and thumb uncovered. Having glove and veil on right, you can work with more ease and less annoyance to the bees when you have a difficult job on. I had over thirty colonies in good shape for winter and a good supply of extracted honey. I came across a very light, strong and small pair of ice tongs of $\frac{1}{8}$"x$\frac{3}{4}$" steel bars. I got it changed to suit by adding an extra leg to the one side. It has but one hand-hold to operate it, so I can lift any ordinary hive or super without jarring and carry when quite full. To move bottom-board with hive, fasten with wire hook on each side. I wire all my frames. Send and get Ham & Nott Company's bee supply catalogue, Brantford, Ont. I handle only extracted honey. I have sold in the last

three years about three tons per year at 15c per lb. My apiary was quite a distance from my home. I have not had as good success wintering in cellar as desired. I had to depend on others carrying them in and out. I believe a one-armed man without help would do better putting four in a box at apiary, as advocated by some apiarists. I am not as young and supple as I was and am now selling out. Kindly let me know your successes and failures with the bees.

DR. H. McLAREN.

110 Robert St., Toronto.

TRANSFERRING FROM OLD BOX HIVE

Just a few questions for your February number:

1. One of my neighbors have their bees in rough boxes without frames, and have now bought a number of good boxes with frames. Would it be a good plan to put the bees into the new boxes when the apple bloom comes in, or should only the swarms that come off them be put in the good boxes?

2. If diseased with foul brood, could it be treated at that time?

3. If a bee-keeper requires the services of the inspector, who pays for his time—the Government or the bee-keeper?

4. I have read so much about extracting wax that I must tell which way I found to be the best: (1) Boil the old comb till it seems to be all in small bits —about twenty minutes' good boiling. (2) Have a pan with a fine screen bottom which fits partly into another pan, so that there would still be 2½" or 3" space in bottom pan for the wax to run into. Place your pan alongside of the boiling comb and dip some of the boiling comb on to the screen about one inch deep on screen; then place in a hot oven for twenty minutes, and you will find all the wax is run into the bottom pan. Then lift off the top pan, throw the refuse away and run the fluid into some other dish, and then you can fill again. You should add one pint of water to every pail of chopped comb for boiling. I have extracted about eighteen pounds of good wax in this way in one day. After all has been extracted I again heat it and screen through a cloth and run wax into a deep pail. Allow it to cool slowly, and the dirt that is still in the wax will sink to the bottom of the pail.

5. Could Paroid Roofing be used for top of bottom-board, or do you think the bees would not stay in the hive if it were used?

J. A. R. (BEGINNER).

[1. If you prefer to have them swarm, it might be well to wait till they do so. Hive the swarm in a new hive with the frames, each frame having a sheet of foundation. You will then find it easier to transfer the remaining bees and brood to a new hive with frames and foundation. Save all the brood you can by cutting it out and placing it in an empty frame, supporting it with slats or string. If the comb is old you may melt it up after the brood hatches. Do not attempt transferring during apple bloom. Wait for the clover flow. There is often a dangerous space between fruit bloom and clover, during which no nectar can be gathered. Weather conditions are not so favorable in fruit bloom as in the middle of June when clover is on.

2. If you find foul brood, do not wait for a swarm. As soon as clover flow opens, shake them all in a new hive with starters only—i.e., with about an inch of foundation in the top of each frame. Allow them to remain two days, after which time remove all the frames with starters in and give them frames with full sheets of foundation. Be sure you give them no drawn-out comb. Destroy all comb (and honey) built on the starters, as there may be diseased honey in this which the bees took with them from their old hive. The chief object of this treatment is to get this honey away from the bees before giving them what is to be their permanent home, viz., the frames with full sheets of foundation. As to the shaking of the bees from the old box hive, which has no frames, we would suggest the following course: Start operations in the evening after all the bees have settled down quietly. This is absolutely essential, as there must be no robbing from your old hive, because if there is you will spread the disease over the whole yard. Go at the matter very quietly, so as to disturb only the hive

you are handling. Lift the hive from the old stand and place the new one (with the starters) upon it. Now open up your box hive and get it to pieces as quietly and expeditiously as possible, smoking, shaking and driving the bees into the new hive on the old stand. Having done this, take your old hive and burn it up, and either burn or bury all the old comb, brood and honey. It would be useless to try to save either brood or honey from this old box hive. If, however, it were a good movable frame hive this advice would be different. If you should desire to save the brood and honey, it should be done only under the immediate supervision of an inspector. The least little error here would ruin all your work. Be careful that you leave no honey or pieces of comb on the ground for the bees to clean up in the morning. If there is any danger of this, scatter a few shovelfuls of earth around where you were working. One drop of that diseased honey taken up by a bee and carried into its hive puts the disease into that hive.

3. The services of the inspector costs you absolutely nothing.

4. Your method of extracting wax is crude and wasteful. It is, however, very ingenious for a beginner. See pages 396 and 397, in December C.B.J., 1907. Get also an up-to-date bee book.

5. We think it could be used without objection by the bees. We do not, however, see the necessity of it. A good bottom-board is all that is necessary, and will always be dry if raised from the ground, so that the air passes freely under it. Asphalt roof is a splendid thing for covers, either for hives or winter cases. We would unhesitatingly recommend Brantford Rubber Roofing for this purpose. Write Brantford Roofing Co.

We regret you have requested that your name be not given. There is no reason why it should not. Let us hear from you again.—Ed.]

REPORT OF INSPECTOR SIBBALD

In the year 1908 I visited sixty-seven apiaries, containing in all about 2,866 colonies, and found forty-four clean or free from the disease of foul brood. In the other twenty-three apiaries I found 116 colonies affected with the disease. Only two of these were destroyed, the 114 being treated with a view to curing.

H. G. SIBBALD
Claude, Ont.

Of the apiaries diseased in 1907 and revisited many had made a splendid cure, while a few had failed or more cases had developed in their apiaries. As a rule I found the owners willing and anxious to cure, but want of experience, and in some cases other irons in the fire and carelessness, were the causes of failure.

H. G. SIBBALD.

CELLAR TEMPERATURE FOR WINTERING

Referring to your query respecting Mr. Shaver's cellar wintering. Thermometers may vary. I have wintered in my home cellar from fifty to two hundred colonies for the last twenty years, and try to keep the temperature between 42° and 46°. Bees are quietest at 44°. My observations are when the temperature gets below 40° the bees begin to make a slight hum, as if to warm themselves. If much over 46° the noise starts, as if, it seems to me, they were trying to cool the house. Another experience I might quote. At an out-yard about seventy colonies are

wintered in a first-class stone cellar. The people living in the house never take a light near the bees. I sometimes go and have a look at them during the winter, never more than once. Last fall they were put in the cellar November 3rd, and at this date I have not been to see them. I may say the bees always come out in good order and give better results than the average of other yards.

As for consumption of stores, I always try to give each colony not less than forty pounds of honey, or something as good. Some colonies come out nearly as heavy as they go into winter quarters, and some on the point of starvation. Give us a reason for this, Mr. Editor.

JAS. STORER.

Lindsay, Jan. 20, 1909.

[We are glad to have your experience on this subject, Mr. Storer. We do not, however, quite understand your point when you say that with temperature below 40° they make a slight hum as if to warm up; and again when it reaches 46° the noise starts as if to cool down. We have had no personal experience in this, but imagine a low temperature would tend to make them quiet. In reference to the matter of consumption of food, it does seem inexplicable that one colony will come through winter with abundance of stores, while another colony will be in a condition of starvation. There can be no effect without cause. It does not seem reasonable to suppose that the one has eaten so much more than the other. —Ed.]

THE CRUICKSHANK HONEY STRAINER

I thought I must be in the swim, so I have attempted to invent a honey strainer. Drawing is a little out of my line, but the enclosed drawing may assist you in understanding the device. Take a piece of rather light hoop iron about one and a half inches wide. Make a hoop that will just freely go over the mouth of the store can. Now take three pieces of light hoop iron three-quarters of an inch wide and about two and one-half inches long, and fasten them to the inside of hoop with one rivet in each, so that they will project at right angles from the hoop. Now place the hoop over the can and turn the projections down over the mouth of the can, forming hooks that will hold up the hoop about half an inch below the top of the store can. Now we are ready for the top hoop, which should be of very light material, about three-quarters of an inch wide, with clamps where the hoop meets for the purpose of tightening. Now place the cheesecloth over the can, giving it the proper sag. Now place over the outer hoop and tighten at clamps. This will hold the strainer very secure. If the device is of any use to bee-keepers, I give it to them freely, with the suggestion that it be called the Cruickshank Honey Strainer.

[The device is a very good one. We regret that the drawing, which is done with lead pencil, is not perfect enough to photograph. It could be re-drawn, but it would be necessary to see the strainer to do it perfectly. If Mr. Cruickshank will send us a good pen and ink drawing we will be pleased to make a cut of it.—Ed.]

WHAT SHALL BE DONE WITH FOUL BROOD COLONIES FOUND NEAR VALUABLE APIARIES IN EARLY SPRING?

[Read by Wm. McEvoy at Brant Convention]

This is the most important question that has been brought before any bee-keepers' convention in many years. The most disease is spread from apiary to apiary in early spring through bees robbing diseased colonies. And to attempt to cure early in the spring, so as to prevent the spread of the disease just then, would be too costly. What then? Get all your neighbors' diseased colonies destroyed? Oh my, no! This would not be a neighborly act, and should not be done where people are willing to cure. Well, what then? Allow these diseased colonies to stay there until curing time in the honey season, and let your bees go and rob some of these foul brood colonies and cost you the loss of hundreds of dollars? Would that be right? No,

positively no! Now there is an easy, safe and profitable way out of this state of affairs, and that is, get these colonies inspected early in spring, and if found to be diseased and near fine, sound apiaries, have the inspector help to move these diseased colonies to a place of safe distance from all bees and leave them there until cured. This is in line with Mr. Chalmers' quarantine station, which he suggested at our last Ontario Bee-keepers' Convention, and a very valuable suggestion it was. Inspectors should be appointed before the first of April, so that they can start inspecting before the disease gets spread by bees robbing in early spring.

WHICH—COMB OR EXTRACTED HONEY?

[Read by F. P. Adams at Brant Convention]

The subject given me, viz., "Comb or Extracted Honey—Which is the Most Profitable for the Ordinary Bee-keeper?" I suppose this could be made to read, "Will comb or extracted honey be the most profitable for the man who is engaging in the bee-keeping business only as a side issue?" and in order to take up this matter intelligently it will be necessary to go into the question of management as well as cost, in order to find out which will give the best results for the necessarily limited time that such a man can give to the bees.

There are some well-recognized principles in the production of either comb or extracted honey that cannot afford to be neglected by any bee-keeper, and, named in the order of their importance, I believe stand about as follows: (1) Strong colonies at all seasons. (2) Plenty of good stores for winter. (3) Proper manipulation of the colonies during the honey flow.

Up to the time of putting on supers the management for the production of either comb or extracted honey is the same. The aim being to keep colonies together without any swarming and bringing them up to the honey flow just as strong in bees and brood as possible. In order to do this extra room may be given by the addition of extra supers containing brood combs. Taking up the production of comb honey first. When clover first commences to yield it is necessary to contract the brood chamber down to the actual number of combs that have been filled with brood by the queen by taking off extra supers and using dummies where necessary. The supers containing sections are now given either with or without bait sections, and if colonies are strong and honey comes in freely they will soon be occupied by the bees.

Now is the time that the bees will need attention, and the man who cannot give it stands to lose most of his crop and many of his bees, because the contraction necessary to the production of comb honey induces the bees to swarm, and swarm they will unless carefully and properly handled.

PREPARING BEES FOR HONEY FLOW

[Read at Brant Convention by D. Anguish, Evergreen Park, Lambeth, Ont.]

As this is rather a difficult subject, I will only attempt to give a few outlines. When to prepare bees for honey flow is one of the main points in bee-keeping, especially if you intend to succeed and make any money out of the business. I will give my method practically. I have had good success for a number of years, both in wintering and getting a good honey flow nearly every year. I commence to prepare bees for honey flow for next season as soon as, or before, the honey quits coming in. I examine all of my colonies to see that they have a good queen and that they are all young as near as possible, unless there are some choice ones, which I prize for breeding purposes. About the middle of September I go over all colonies with scales and put the number of pounds needed on every hive to bring them up

to standard weight—that is, nothing less than thirty pounds of stores. I also feed up bees as soon as possible, so they can get their stores well taken care of before cold nights come in the fall. Then I pack them on summer stands four in a clamp right where they stood all summer, causing no mix-up. Then I give them a general letting-alone until the apple trees begin to bloom. Then I take them all out of clamps and pile clamps to one end of the yard. At this time the queen is needing more room, so I put on another super the same size as the one they wintered in, and as the heat always rises so does the queen; then it is not very long before I have two bodies full of brood and bees, and if I see that the queen is needing more room I just add another super. I try and have the bees consume all of the spring honey for brood-rearing. As soon as clover begins to come in bloom I examine all colonies to see if there is any spring honey left. I take it out and sell it to confectioners, as I find if any dark honey is left the bees are apt to move it up in extracting supers, and one pound of dark honey will spoil 100 pounds by discoloring it.

When should honey be extracted? A great many bee-keepers claim as soon as the bees begin to seal it over. Others extract as soon as the bees gather it from the plants, only using one super. Now this is a sad mistake. If any bee-keeper will place a colony of bees on scales and observe closely he will see that when the bees are gathering five pounds a day they will shrink one pound at night through evaporation. I leave all honey on bees until end of season, then begin to extract by taking off top supers of all colonies, and by the time I have got over all, the under supers have time to be ripened up by the bees. Then when we put our honey on the market we know that it is all No. 1, and we can ask a good price for it, knowing that we will get it, for wherever one part goes there is soon more to follow. We sold all of our extracted honey this season in bulk at $11 and $12 a hundred, and what we retailed we got 14 and 15c per lb. in 5 and 10-lb. pails. We had a nice lot, but not near enough to supply the demand. We handle no other honey but our own, either for sale or exhibition purposes, so our customers can rely on us for No. 1 goods.

Aim at getting all dark honey out of brood nest as soon as light honey begins to come in. With us clover begins to yield about the 10th of June, seasons varying a little. I have samples of honey with me all gathered from bee-keepers' products in our own district, and within seven miles of our yards on different sides, and sold to the public and dealers as choice extracted honey. You can see by samples that it all has an amber cast, either by having a little dark honey in or discolored by overheating. There is a great deal of honey spoiled, both in color and flavor, by overheating, and then the public condemns it and complains of adulteration. By overheating you not only spoil the flavor, but you take away the only proof of its purity to the ordinary person, for it will not candy. We have always been advising our customers that all pure honey will candy, and have sold most of our honey this season candied (or granulated, as it is called). Always aim at having a first-class article, both in comb and extracted honey, and you need never fear of over-production. You never need lose any sleep hunting up markets. By producing a first-class article the market will soon be hunting you.

The Book News Monthly

The February Book News Monthly is a literary gem. The death of Donald G. Mitchell makes an "Ik Marvel" number of sweetness and delight. There is also an interesting illustrated article on William Ordway Partridge, sculptor and poet, and another on "Housecleaning in Westminster Abbey."

Try an adlet in the Want and Exchange column.

INTERESTING GERMAN ITEMS

(Translated by Jacob Haberer)

Main Points Out of Practical Hints.

1. Improve the condition of your bee pasture as much as possible and build up your managing system according to it.

2. Provide for strong colonies by speculative feeding, expanding of brood-nest, and by uniting. Speculative feeding has to take place five or six weeks before the honey flow, but too early feeding is not advisable. Sufficient pollen in the hive is most necessary if speculative feeding is to give good results. Therefore reserve combs with pollen in the fall.

3. Prevent swarming by giving sufficient surplus room, and every eight or fourteen days take from the brood-chamber some sealed or hatching brood combs and replace with foundation, or exchange for combs with eggs or unsealed brood from weak colonies.

4. Contract the brood-nest moderately with a queen-excluder during the main honey flow.—Hacker-Schlebusch, in Rh. B. Zeitung.

Good results were obtained in Denmark with the American methods of McEvoy in curing foul brood. Only to strong colonies can this method be applied, and it should be carried out by an expert.—Lux. B. Zeitung.

Different Kinds of Honey in Austria.

Fruit Bloom Honey—Yellow to yellow brown; thin; fine, mild flavor.

Grape Honey—Yellow color; strong aromatic flavor; granulates quickly; not suitable for winter store.

Maple Honey—Light yellow; very fine; aromatic; one of the best kinds.

Locust Honey—Water-white to gold yellow; agreeable, mild taste; granulates very solid.

Sainfoin Honey—High yellow; peculiar flavor; when granulated resembles tallow; a good yielder next to buckwheat.

White Clover—Water-white to gold yellow; agreeable, fine flavor; granulates nearly snow-white and stone-hard; grain very fine.

Basswood or Linden—Light green to dark green; pleasing scent and flavor; candied, it has sometimes a greenish color.

Horse Chestnut—A little rare; water-white; mild flavor; very much like locust.

Chestnut Honey—Brownish color; poor flavor.

Cornflower—Brownish color; strong aroma.

Meadow Honey—Yellow to dark brown; flavor good.

Forest Honey (from evergreen)—Dark color; peculiar, pitch-like taste; coarse grain when granulated.

Buckwheat Honey—Light brown to dark brown; sharp flavor; a good table honey, well adapted for making mead; granulates soft.

Heather Honey—Light red; extremely pleasant flavor; strong aroma; tough when liquid; well adapted to mixing with other kinds of honey.

Stachys Recta Honey—Very thin; nearly water-white, a little greenish; flat flavor; much produced in Hungary, and is quite an export honey.

Alp Honey—The best kind Austria is producing; it is water-white to gold yellow, with an excellent fine flavor.—A. Alphonsus.

Wintering a Number of Queens in the Same Hive.

Since 1900 I made it a point to solve the problem of wintering more than one queen in a colony. After many failures I succeeded at last. In 1903 I wintered three queens in the same colony, but failed again with another colony. In 1904 I tried with six. One was dead in the spring of 1905, but the other five started to lay nicely. In 1905-06 I put ten queens in one hive. In the spring of 1906 three of them were dead, but the rest were all right. Now in the fall of 1908 I put twenty queens in one hive, and I am sure, if not a few are lost by sickness, they will peacefully start to lay in the spring of 1909. A peculiar incident in the

summer of 1903 led me to the present method. To-day the matter is simpler to me than ever before, but I was intentionally silent about the matter; only to Mr. Nicola of Waldwiene, Luthringer, I wrote confidentially about the secret. I am positively convinced that a lot of queens can be wintered in the same colony, and the main thing is that they are moving freely about and that they are not caged, and in the spring they can all start to lay. I will give a further report in the spring.—Fr. Wilhelm, of Alexheim, Brunswick, in Pr. Wegweiser.

FROM KRAIN.

Nowhere in the world has bee-keeping reached such an importance as with us, and not only because we have the most industrious, prolific and gentlest race of bees, but also as our bee has a world-wide reputation for her qualities, and has been sent all over the world for the last fifty years. But circumstances with us have been such that the trade could not prosper well, and conditions existed that have done more harm than good to the reputation of our bee. To work up a proper business in this line, and to obtain the recognition for the excellent qualities of our bees in other countries, we have formed the undersigned Association to offer and sell these bees and their produce, also supplies for bee-keepers. They have secured the famous model bee stand of Anton Zuidersic, of Feistritz, where the Central Bee-keepers' Association used to have their yearly courses. The Association intends to enlarge the business extensively. Their aim is to support the sale of Krainische bees and to supply foreign bee-keepers who have learned the value of our bees, or that want to make a trial with them. Descriptive catalogue free on application. We hope that bee-keepers will support our business, which was established for the welfare of the bee industry, with numerous orders.—Krainish Bee Culture Association, in Illyrisch Feistritz, Germany.

write for catalog

F. W. JONES, Bedford, Que.
Vice-President B. K. A., Quebec.

MR. F. ADAMS ON QUEEN-REARING

(Continued from January Journal)

In order that the queen-rearing branch of the work may be done at a profit, it will be necessary to see that it does not interfere to any great extent with the honey production of the yard. We are about to utilize the resources of some of our best colonies for starting and finishing queen cells, and also for the purpose of caring for the young queens until they are mated and laying. The honey that these colonies will produce amounts to quite an item when we take into consideration the fact that the strong colonies are really the money-makers of the yard.

The apparatus for queen-rearing consists of a swarm box, cell bars, holding frames for the cell bars, and either prepared cell cups or sticks for making them artificially after the Doolittle plan. The artificial cell cups or sticks for making them can be obtained from The A. I.

Root Co. of Medina, Ohio. The holding frames are ordinary brood frames used in the apiary. The top bar is cut through on a bevel in two places about an inch inside each side bar. The bevel is cut in such a way that the removed portion will rest upon the two ends left attached to the side bars when the frame is hung in the hive. A false top bar is then nailed across from side to side about two inches down from the top. The stick with the bevelled ends which has been sawed out of the top bar is used for attaching the prepared queen cells to. In order to make the frame perfectly rigid, corner blocks are glued into the corners beneath the supporting ends of the top bar, and also in the lower corners of the frame.

The swarm box is made to hold three regular-sized brood frames spaced in the same way that they are in the hives, with one inch bee space beneath. The ends are $\frac{7}{8}$-inch stuff, rabbited out at the top to hold the frames, and the sides are $\frac{3}{8}$-inch. The bottom is covered with wire cloth, and cleats are nailed beneath to hold the bottom up from the ground and give ventilation to the bees while they are confined to the box. The cover is made of $\frac{7}{8}$-inch stuff of such a size that it comes flush with the outside edges, and strips are nailed all the way around to telescope over the sides and ends. A slot is cut in the cover directly in the centre, which is just large enough to admit the cell holding bar.

This is about all the apparatus required to commence queen-rearing operations, unless we add the nucleus hives. These are not required if a full hive can be spared for each nucleus, but if the supply is limited, then two or more nuclei can be put into each hive by fitting same with perfectly bee-tight division boards, dividing the space up so that at least three frames will go into each section. The entrances for each section should be arranged on different sides of the hive, and each section should be provided with a separate quilt to prevent the bees from mixing.

The first thing to be done is to prepare the swarm box. A frame containing fresh honey and pollen is placed in it to one side, and another frame containing water is placed on the side opposite. The space in the middle under the seat in the cover is left vacant.

The strongest hive of those that have brood in the upper storeys is chosen for cell building. If there are several frames of brood and lots of bees in the super above the excluder all that is necessary is to shake the bees from these combs into the swarm box after the hive has been smoked at the entrance and jarred on the outside to make the bees fill themselves with honey.

Be sure that the bees in the swarm box are shaken from brood combs, and that there are plenty of them. The box is now covered up and set away in a cool place for from five to seven hours. It will be noted that these bees are put away without any brood, but with plenty of fresh honey, pollen and water, and the wire cloth bottom insures ample ventilation in the box.

The next step is to transfer the larvæ into the prepared cell cups, and this is accomplished by cutting out a piece of comb, from a frame containing larvæ not over twenty-four hours old, selected from the brood of the breeding queen. The cells are shaved off with a sharp knife, slightly warmed, to within a quarter inch of the septum of the comb, and then with a quill toothpick the young grubs are carefully lifted out and placed in the prepared cells. If a queen cell containing fresh royal jelly can be found in the yard, a small drop of this jelly placed in the bottom of each queen cell before the larvæ are transferred will insure their better acceptance by the bees, but if this jelly cannot be procured the first batch may be started without it, and after three or four days the jelly from an artificial cell will be available for succeeding batches. From twelve to fifteen cells may be prepared in this way and attached to the cell stick. This stick of prepared cells is now given to the bees in the

swarm box by placing it carefully in the slot made in the cover of the box. Before the cells are given to the queenless bees it is a good plan to jar the box slightly in order to break up the cluster, otherwise the cells are apt to be neglected through the bees not knowing they are within reach.

The cells are now left with the bees for about a day, and by that time those which have been accepted will have been fed liberally. At the end of this time the stick of cells is transferred to the upper storey of the hive from which the bees were taken, and at the same time the bees are shaken back into their hive.

The arrangement of the colony is now as follows: The lower storey is occupied by the queen and several frames of brood in the centre of the hive, the outside combs being empty. Above is a queen-excluder, and over this a super with the cell-holding frame containing the cells in the centre. On each side of this frame are brood combs containing unsealed larvæ, with possibly two or three other combs of hatching bees, and outside of these again are empty combs.

The work of the colony has not been checked except for the short time during which part of the bees were withdrawn for starting the cells. The empty combs below prevent overcrowding in the brood nest, while those above furnish ample room for storage, and the prepared queen cells are in a position where they will receive the warmth and attention so necessary to their proper development.

F. P. ADAMS.

(To be continued)

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THE MAN WHO KNOWS IT ALL

[I. Balmer, Burlington]

It is rather amusing the incidents that bee-keepers are apt to meet with sometimes. The writer met a so-called bee-keeper (I have been acquainted with him a long time, and I don't wish to give his full name) about three years this fall. Of course, he knows all about bees. He thinks he is one of the principal bee-keepers in Canada. The C.B.J. would be of no use to him, because he is unable to read. I asked him how he had got along with his bees during the summer. "Oh," says he, "I have got some of them in an awful mess and have foul brood in others." "Well," I said, "I would notify the inspector in the spring; it is too late now to do anything this fall. Are you sure it is foul brood?" "Oh, yes. I consulted Mr. W—— over there that used to keep bees for years" (about four or five colonies!)—"and he said it was foul brood, and the only way to cure it was to burn it up, so I burned up hive and all contents—about sixty pounds of honey in it." I told him it could be cured without destroying anything. I did not see Mr. M—— again till near spring, when I told him I would soon send the inspector word about his bees, but I should like to have a look at them before I wrote, so could he give me any idea what it looked like. "Oh, yes," and he measured off about an inch on the end of his finger and said there were maggots about that length and a whole mass of webs. On being told they were moths, off he went, saying he would have to look after them better.

I met Mr. M—— again this fall, and asked him what sort of a season he had with his bees. "Oh, good! My bees have done well this summer; most of them swarmed three times!" Well, I said I could do the best with mine when they didn't swarm at all. Then he told me about getting two good queens from the United States that he paid $3 each for; the one he lost and the other was all right. I was invited to go over and have

a look at them. Of course, I knew what to look out for; I had no veil with me, and his bees were all black and hybrids and handled without smoke. So we reached his bee yard a little out of the village. Says he, "This is my Italian queen," and I could not see anything but black bees going in and out. I informed him they were not Italians. "But," says he, "I'll let you have a good look at them," and at the same time his knuckles rapped a couple of times on each side the hive. Well, black bees never came out of a hive much faster in swarming time. I was standing slightly in front, and before I could reach the corn patch close by they were striking my straw hat like hailstones on a housetop. By the time I had reached a berry packing house on the other side of the corn patch I had baffled my pursuers. Soon Mr. M—— came along, asking about my welfare, remarking that they never stung him. At the same time I could see three in his white locks behind his ear and two in his white beard fighting like little bulldogs trying to get at his feelings.

I then asked how he introduced that Italian queen. He said there was a little swarm came out at that time, and he knew that they had no queen, and in hiving them he let the new queen run in with the swarm. I told him they would not have stayed in a cluster without a queen, and that his queen was killed as soon as she entered the hive.

But he knows all about bee-keeping!

EXPERIMENTS WITH SULPHUR VAPOR

[Translated by Jacob Haberer]

Fred. Dickel, of Darmstadt, Germany, made some experiments last season to find to what extent bees will lose their memory if treated with sulphur vapor, and whether practical use could be obtained therefrom. It is said that after this treatment they will not remember their old place any more. Dickel put a lot of these stunned bees on empty combs with a little food, but without queen or brood, and after three hours nearly all the bees had returned to their old stand. The next time he placed one comb with brood and bees in the hive between the empty combs and then put a lot of stunned bees in it, but about four-fifths of them returned again. The next time he took a young fertile queen with brood and comb and bees from mating nuclei; then he took bees from four strong colonies, treated (stunned) them and put them in the prepared hive. This was at 7 o'clock in the morning. At 10 o'clock they had settled nicely on the combs. About 200 dead bees dropped to the bottom; only a few did fly. Now he filled a comb with syrup and hung it near the occupied combs (hives?). Soon a lively flight started. The entrances of the colonies from which the bees were taken were now closely watched. Some bees flew towards the nuclei where the brood and untreated bees and queen came from, and although the flight of the new colony increased, no increased flight was noticed towards the old colonies. The following few days the flight of the new colony was regular, the same as the other colonies. A little fighting was done, as there was not much of a honey flow. Again a few days later the examination showed a good strong colony with six sheets of brood. This experiment with a young queen and superfluous bees from overstrong colonies gave him at once a good colony in a way practically never made use of before. Further trials in this line will surely result beneficially to our bee practice. To fumigate the bees, take some pieces of old sacks about five inches square, soak them in a solution of saltpetre and let them dry. Make a box with a strip of wire cloth on bottom and a piece of tin across the centre to keep off the flame of the lighted rag. Set a fire under the box, and it will take only a few seconds until they are stunned. They will fall on the bottom dead quiet. Let the vapor draw off, and in about

three minutes the bees commence to crawl again.—Leipziger B. Zeitung.

[We do not think much of this method. In the first instance it is stated that the stunned bees returned. In the second brood was given, and about four-fifths returned. Clearly the brood held the other fifth. In the third instance, with queen and brood, the bees remained. We are inclined to think that the queen and the brood did more to anchor the bees than the "stunning." Practically the same results can be obtained at any time, without the fussy and cruel saltpetre treatment, if the manipulation is done in the evening.—Ed.]

WINTERING OF BEES

[By E. D. Townsend, Remus, Mich.]

Owing to the unavoidable absence of Mr. Townsend at the recent Brant Convention, the following paper was read by the Secretary:

There are five principal ways of wintering bees in the Northern States and Canada—cellar wintering, protected hives made permanent, or hives protected with winter cases that are removable during summer; the third is in clamps, or buried, as we call it; some with no protection at all; a few papered.

There may be other methods of wintering that do not come to my mind at present. This is immaterial, as I have had experience with only the first four mentioned ways of wintering, and what I have to say in this paper will bear on these methods.

I presume there is no one in this Convention who expects to hear anything new on this old, worn subject, and if some hint is dropped that helps some one along over the rough road of wintering of our bees in this northern climate, the object of this paper will be attained.

Having wintered bees at thirty or forty different out-yards during the third of a century that I have been in the business, these yards being scattered over an area of 200 miles, north and south, in the north part of this lower peninsula of Michigan. The weather conditions are somewhat different at these extreme locations, the soil being all the way from the almost floor level damp clay composition to the very lightest friable sandy soil obtainable. Then the conclusions arrived at that will be enumerated in this paper, are not all my own, much of the credit belonging to my good neighbors, who are always ready to impart to me their experiences, whether success or failure, and the conclusions arrived at from these experiences. It would be egotism in me to claim that I, individually, had acquired all this experience that I will try and impart to you in this paper.

We have found in our out-yard work that the soil where the individual yard is located has everything to do with the method of wintering that is best to adopt at that particular yard.

In this paper I will write of soil, and the best method of wintering on the varied soils found in most bee ranges of Michigan, and will, without a doubt, apply as well to your soils in Canada; then each individual bee-keeper present can compare this thought to his own experience and compare results.

The most unfortunate bee-keeper will be considered first, from a wintering-of-bees standpoint. He is in a low, level, clay sub-soil location, that may be the very best bee pasture when his bees are well wintered to take advantage of the harvest that is sure to come, but his "bone of content" is wintering; especially will he have a hard time of it if he tries to winter in a cellar in this heavy, damp, clay soil. Some, after a long experience, may learn to winter fairly successfully in such a cellar, but his colonies at the best will be diminished in numbers at the opening of the harvest season unless his success is much better than some of my neighbors, who have had a hard pull trying to winter in such a cellar, whether built under a building, or built out of doors as a root cellar, or one built mostly above ground. If some one in this convention can tell the members how to successfully winter bees in such a cellar he will confer a great favor on bee-keepers

located on such soil, for some may not want to adopt the method I shall recommend further along for wintering on this kind of soil.

If one has at his command a dry, friable or sandy knoll to build a cellar in, good results will be secured with cellar wintering. Many, especially at out-yards on rented ground, where the location may not be long occupied with bees, build their cellar too shamy, much of it above ground. If of the root cellar pattern, as most cellars are at out-yards, that portion near the eaves of the gable roof is without sufficient protection; some are not protected at the front, at or near the door, as they should be, so each change in temperature outside is registered inside, and the results in wintering are not as good as if more of the cellar was built under ground.

Our Charlevoix Co. cellar is built, as we prefer, for 300 colonies. It is dug into the side of a sand hill, is 14 feet wide, 32 feet long and 8 feet high, inside, and is practically all underground. The covering over the top is 22 inches thick and extends out over the eaves, so there is no point but has as much protection as 22 inches.

The front end of the cellar, where the hatchway doors are, is protected as much, if not more than, the top; the top covering is composed of two layers of sawdust and two of sand; over all is a gable roof, that is four feet wider on each side and end than the cellar. It is shingled and does not leak. Surface drains are dug around the cellar to carry off any water that might otherwise soak into the cellar and cause dampness. The hatchway has two doors. Between the doors of the hatchway, near the inner door, a double partition is built of boards one foot apart, and is filled in between with straw during winter. Through these two doors and this foot of loosely-packed straw percolates all the air that passes in and out of the cellar during winter, for there is no ventilator in the cellar. A cellar constructed all underground as this is does not apepar to need any ventilation. When the bees were removed the first part of April the thermometer stood at 44° and the bees were as quiet as when put in the fall before. The main requisite in building a cellar is to have it roomy and well underground.

It sometimes happens that we establish a bee yard where, for some reason or other, we do not care to build a cellar to winter the bees in. In this case we place the yard near some very dry sandy knoll, for we will clamp or bury the bees in this case. If we can find a very porous hillside, bees winter equally as well this way as in the best cellar.

The disadvantage of burying bees is the extra work required, which is likely three times as much as to cellar them. The modus operandi of burying bees is to dig a trench, preferably up and down a moderately steep hill; this is for better drainage. The trench accommodates two hives wide and one deep. The trench to work to best advantage is 15 inches deep and four or five inches wider than the two rows of hives to be buried; this additional width of the pit is for convenience in putting in and taking out of the hives. The pits hold twenty to thirty-two colonies, although as many as forty have been wintered in one pit with good results. A neighbor took ninety-four live swarms from a pit of ninety-five colonies, so the number that may be successfully wintered in a single pit may be unlimited.

A small pit is more desirable when removing bees in spring than the larger, as they can be placed upon their respective summer stands, with less bees flying from the pit.

If you are weather prophet enough to know that the next day will be a desirable day to remove the bees from the pit, remove the dirt from the pits the night before, so late that the bees will not leave their hives; the next morning they will be clustered close and can be put out with hardly a single bee flying; this is our practice when advisable. After the pit is cleaned out in good shape, so that

it is made level on the bottom, etc., four two-by-fours are laid in the bottom of the pit lengthwise, to set the swarms on, two two-by-fours for each row of hives. The bees are placed in the pit as they are on the summer stands, with sealed covers or raised up for ventilation, as you choose; with or without bottom-boards; ⅜ or ⅞-inch entrance, there is no difference, **when away from fresh air**, for there is no ventilation used in these pits. When the hives are arranged in the pits as described put eighteen inches of loose straw on top of the hives and shovel on all the earth you have taken from the trench; yes, and more, too, for they must be below the frost-line when covered, the same as if one was burying potatoes, etc.

It is necessary in the Northern States and Canada that bees have more protection in winter than a single thickness of board hive. I at one stage of my bee-keeping experience left forty swarms of bees in their single-walled hive over winter; the result was that half of them were dead the next spring, and the other half so weak in number and vitality that they did not amount to much the next season. The fact was, there was not to exceed six swarms that were strong and ready for the surplus season the next June.

Some of my neighbors winter their bees in singlewalled hives; that is, they winter them as long as they last and do not winter-kill. About two winters out of each three some bees will winter in single-walled hives, then comes one of the "real old thing," and the unprotected yard dwindles back to the commencing point. No modern bee-keeper will undertake to winter his bees without some protection other than their summer hive.

There is a way that bees can be wintered, regardless of soil conditions; that is, the packing of bees on their summer stands in absorbants.

This is the way I would recommend the wintering of bees, where one's yard is located on low, damp, clay soil, as they will winter much better this way than inside of a cellar constructed in this soil. I have seen so many failures in wintering bees in damp clay cellars that I would almost as soon trust my bees to winter in their summer hives as to risk them in one of these kind of cellars.

The ordinary chaff hive, as manufactured to-day, has too little packing material, the walls being only about half as thick and warm as they should be for best results in wintering. There are three very successful bee-kepers here in Michigan who winter their bees in packing material—Mr. A. H. Guernsey, Mr. Ira D. Bartlett and Mr. Floyd Palmer. These three gentlemen winter most every colony put into winter quarters. They use about six inches of packing around the sides of their hives, three inches under, and from six to ten inches on top.

They all three use packing cases for wintering, and remove their bees from the case during the warm season. Mr. Bartlett uses a case very similar to the Messrs. Alpaugh-Sibbald case, where four swarms are wintered in one case, thus conserving heat and making the case less expensive per colony wintered.

Wheat, oat and clover chaff is the material mostly used for packing. Mr. Bartlett and others use sawdust and planer shavings mixed for packing material with good results.

The main point in winter packing seems to be quantity, rather than kind, and the quantity mentioned in this paper seems to be about right.

For winter stores good early white honey or sugar syrup seems to give best results, although buckwheat honey may do. Avoid aster or late fall honey for winter stores.

Outside protection from the prevailing winds should be provided for out-of-door wintering, also for spring protection of bees, regardless of mode of wintering.

Bees wintered in repositories, in summer hives, with sealed covers, may not need protection, other than the hive affords during spring. If for any reason the covers are broken loose, wrap in building paper for best results.

Feb. 1909

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FOR SALE—About 60 hives of bees and a number of supers and combs, comprising the apiary of the late Samuel Wood; the hives (Jones make) contain ten frames. Also about 15 cwt. of Buckwheat Honey. Also a number of empty Hives and some Bee Fixings. MRS. WALTER SCOTT, Nottawa, Ont.

FOR SALE—Farm and bees sold. To sell yet, at a snap, 33 Langstroth, two-storey, 8-frame Hives, painted and frames wired; foundation in part. 1 Extractor, new, 4-frame, reversible, with large honey can and strainer between the two; 23 Queen Excluders; 5 Alexander Feeders, but larger; 1 Uncapping Knife; 1 Tin Comb Bucket; 1 Smoker, No. 3; 1 A B C Book on Bees; 1 Hive Carrier Tongs. DR. H. McLAREN, 110 Robert St., Toronto.

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A VOICE FROM THE EAST

This is the time of year when the producer of honey lays his plans for the coming summer, while our pets, the busy little bees, are taking their winter rest. We of these eastern counties have been moving in this direction by asking the Department of Agriculture to confirm and make permanent the appointment, made in 1907, of M. B. Holmes of Athens as inspector of apiaries under the Foul Brood Act. To properly accomplish this we have made our request known in a petition, signed by a large number of bee-keepers in the Counties of Renfrew, Carleton, Lanark, Frontenac, Leeds, Prescott and Russell, and the Cities of Kingston and Ottawa, a number at least five-sixths as large as the total membership of the whole Province, as shown in membership list of annual report of O.B.K.A. showing members for 1907, and I presume the Executive of the O.B.K.A. would have signed it, too, if they had had a chance.

The promoters of this petition, and the great majority who signed it, were Conservatives, the first signer and the last one Conservatives life-long. It also had letters of hearty endorsation attached by a number of Conservative members of the Legislature from these Eastern counties.

The petition was carried to the Department of Agriculture by life-long Conservatves (your correspondent being one of the delegation), and our claims for recognition were pressed and our reasons for centering our claim upon Mr. Holmes were presented before Hon. Mr. Duff in terms modest but strictly to the point and intelligible, for the Minister admitted that he believed Mr. Holmes was a good man and well qualified for the position. Mr. Duff also said that he did not believe in the spoils system, but if any Conservative wanted this new office, he supposed the desire of that **individual** would have to be considered. This, of course, sounded like a joke, but we called the Minister's attention to the **fact** that this was not the

creation of a new office, as Mr. Holmes was appointed by Mr. Monteith, and the petitioners were only asking a continuation of the appointment. And now, Mr. Editor, in view of all the facts which I have here rehearsed, Mr. Holmes should, and no doubt will, be asked to accept the continuation of office as inspector, for I submit that the history of bee-keeping in this province shows no greater compliment, no greater tribute of respect, no greater display of public confidence, than that given Mr. M. B. Holmes in the petition presented to Hon. J. S. Duff in the Department of Agriculture on February 3rd, 1909.

Pardon me, Mr. Editor, for having taken so much of your valuable space.

J. C. STUART.

Dalmeny, Ont., Feb. 16, 1909.

McEVOY'S ADVICE

Apalachicola, Fla., Jan. 22, 1909.

Mr. Wm. McEvoy,

Woodburn, Ont., Canada:

Dear Sir,—Having heard much of you as a bee disease expert, and being in some trouble with foul brood, I would appreciate a few lines of advice.

I have quite a number of cases of foul brood originating in a large apiary, not recognizing the disease till bees had commenced to rob two infected colonies about Jan. 1. I am now overhauling the entire apiary to find infected colonies, and, finding them, adopt all precaution by doing quickly, and then screen up at night and carry to a place isolated from any apiary, and also protect the wild bees by making such colonies secure from robbers. This refers only to the slightly affected. The worst are destroyed after night and burned or buried.

I propose to use your new treatment on all lightly affected colonies. Now by going over the main apiary every ten days or two weeks, can I finally get out all infected colonies? And by keeping out all robbers from infected colonies and moving to a place on an air line 2 or 2½ miles from any apiary for treatment, can I keep the most of 340 colonies free?

One overhauling about ten days to three weeks from any exposure has showed about twelve slightly affected colonies, and the exposure of ten days, I am satisfied, was confined to not over three colonies.

So you can give me intelligent information, I will say the swarming season is about four to six weeks off and bees have hatching brood now in from two to four combs. There should be a honey flow sufficient for comb building in about three weeks. Of course, of the diseased colonies I would shake two or even three in one hive at that time.

Do you think three close overhaulings, ten days or two weeks apart, should show the extent of the disease? I would think from the way it is showing up there would be about twenty diseased colonies from present exposures.

After it is checked by the destruction of all diseased colonies and combs, do you think the remainder of the apiary would be safe?

Would it be safe to feed the honey from infected colonies (brood combs burned) after boiling, say, two hours?

Thanking you in advance for any information you can give, and in return if I can serve you in any way I will take pleasure in so doing.

Yours respectfully,

R. L. TUCKER.

Mr. McEvoy's Reply

To inspect 340 colonies in one apiary, and to do this two or three times when the weather is warm and the bees are not gathering honey and not get any robbing started, is quite an undertaking in such a large apiary. But it can be successfully done in this or any apiary by driving a little smoke into the entrance of every colony before opening any hive, and doing all inspecting in the evenings.

This Florida bee-keeper is doing a wise thing in moving his diseased colonies out of that large apiary to a place a safe distance away from all bees. By doing this he will have no risks to run, and by the way he is working he will soon weed the diseased colonies out of his apiary. When treating these diseased colonies away in another apiary by themselves, it won't do any harm if some of the bees do get mixed up and enter wrong hives because all have to be treated.

I am opposed to having anything to do with diseased honey, and advise a deep burial of such stuff.

In a second letter which I received from this bee-keeper he reports that he has "on hand 5,000 sections started last summer and all the way from just started to full comb," and is a little afraid to risk these for fear that some of them may have been taken off diseased colonies. Five thousand sections with more or less comb in are worth a good deal of money

and none of these should be destroyed, because all sections with clean dry comb in are perfectly safe to use, no matter if they were all taken off foul brood colonies. If a little honey is found in any of these sections, get the bees in the diseased colonies to clean them out, put a cloth over the brood chamber and turn the corner of the cloth back a little and then put on the super with the sections that has a little honey in, and if no honey is being gathered the bees will rush up and rob these out until they are clean and dry, and after this is done these sections can be used on any colony.

Another question asked in the second letter is: "Could these diseased colonies be utilized by uniting after being freed from disease with queenless colonies, for even a queen here at this time of the year means a colony, for there is more or less superseding going on all the time, and out of eight colonies trying to supersede in January only one made a success?"

Yes, every one of the diseased colonies can be used for any purpose after they have been cleansed of the diseased honey.

WM. McEVOY.

Woodburn, Feb. 17, 1909.

IN WINTER WHY ARE ENTRANCES CONTRACTED?

[Translated by Burton N. Gates, Worcester, Mass.]

During the winter the activity of the bees is decreased. Their condition approaches a state of hibernation, and the longer this lasts the better is their health and condition. One of the greatest problems of the bee-keeper is to keep them undisturbed and in this condition. In an attempt to accomplish this he closes down the entrance with a flap, a shutter, or by a cloth or storm mat hanging before the entrance. Bees prefer a dark chamber and seek to contract a large entrance by propolis (Kittwachs). Their instinct says to them, Where such light penetrates, there also can enter many enemies. Of these disturbers of the peace there are many kinds, as for instance the shrew-mouse (Spitzmäuse), which can crawl through very small cracks. . . The woodpecker and the titmouse peck on the hive, whereupon bees are attracted out, only to be snapped up by the birds. . .

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The contraction of the entrance is thus a necessity, in order for the bees to maintain an uninterrupted winter rest. The pains bestowed are not without their reward; the bees winter well and begin their work in the spring strong and with new courage.—E. Schicketanze, of Zinna, Province of Sachsen, in Praktischer Wegweiser für Bienenzüchter, Vol 14, No. 1, January, 1909, page 8.

[This is a rather anthropomorphic view of the cause of contracting the entrance, but it is suggestive and has some merit. —B.N.G.]

"Netarin," which might be translated "nectarine," is advertised in the January number of the Praktischer Wegweiser für Bienenzüchter. "It needs only to be diluted with water," without cooking, which avoids a scum or dross. It is safe bee food, according to this statement, to winter and to raise brood upon.

J, Breiden, Eschweiler, in Notes From Abroad, speaks of Egyptian bee-keeping, which he quotes from an unspecified number of Bulletin de l'Apiculture. Bee-keeping in Pharaoh's land is in full bloom. There is a poem which expresses how the bee accomplishes her work. This seems to have a proverbial meaning similar to our proverb, "Busy as a bee," or the German, "Fleisig wie line Biene." Honey is employed as a means of healing, and also is used as a sacred drink at religious festivals. They also use it for preserving fruits, for making wine, for embalming the dead and for many other purposes. Wax is used for making candles, for sealing of vessels, for modelling and preparing small figures, as well as for death-masks. On the Egyptian monuments and in ancient writings, a modern investigator says, we see more symbolic bees than we see living to-day in all the land. This indicates the fondness of the historic Egyptians for bees and bee-keeping.—Rheinische Bienenzeitung, Vol. 60, 1909, No. 1, pp. 17-18.

ALL who are in any way interested in Bee-Keeping, especially beginners, should subscribe for the C.B.J. It will pay you.

ONTARIO DEPARTMENT OF AGRICULTURE

Field Crops of 1908

The following give the areas and yields of the principal field crops of Ontario for 1908. The areas have been compiled from individual returns of farmers and the yields by a special staff of correspondents in each township:

Fall Wheat—679,642 acres yielded 16,430,476 bu., or 24.2 bu. per acre, as compared with 15,545,491 and 23.0 in 1907.

Spring Wheat—142,124 acres yielded 2,197,716 bu., or 15.5 bu. per acre, as compared with 2,473,651 and 17.1 in 1907.

Barley—734,029 acres yielded 20,888,569 bu., or 28.5 bu. per acre, as compared with 21,718,332 and 28.3 in 1907.

Oats—2,774,259 acres yielded 96,626,419 bu., or 34.8 bu. per acre, as compared with 83,524,301 and 28.5 in 1907. The average yield for 26 years, 1882-1907, was 35.8 bu. per acre.

Rye—87,908 acres yielded 1,453,816 bu., or 16.5 bu. per acre, as compared with 1,039,021 and 15.5 in 1907.

Buckwheat—140,605 acres yielded 3,323,568 bu., or 23.6 bu. per acre, as compared with 2,546,468 and 22.5 in 1907.

Peas—396,642 acres yielded 7,401,336 bu., or 18.7 bu. per acre, as compared with 7,365,036 and 21.6 in 1907.

Beans—46,385 acres yielded 783,757 bu., or 16.9 bu. per acre, as compared with 790,269 and 16.6 in 1907.

Potatoes—166,974 acres yielded 18,517,642 bu., or 111 bu. per acre, as compared with 20,057,675 and 113 in 1907.

Mangels—68,685 acres yielded 29,870,966 bu., or 435 per acre.

Carrots—4,080 acres yielded 1,120,145 bu., or 275 per acre.

Sugar Beets—17,453 acres yielded 7,004,748 bu., or 401 per acre.

Turnips—120,920 acres yielded 41,210,189 bu., or 341 bu. per acre, as compared with 48,205,605 and 392 in 1907.

Mixed Grains—456,049 acres yielded 15,354,350 bu., or 33.7 bu. per acre, as compared with 14,202,511 and 32.1 in 1907.

Corn for Husking—299,690 acres yielded 23,601,122 bu. (in the ear), or 78.8 bu. per acre, as compared with 21,899,466 and 64.7 in 1907.

Corn for Silo—233,753 acres yielded 2,729,265 tons (green), or 11.68 tons per acre, as compared with 2,029,457 and 10.13 in 1907.

Hay and Clover—3,253,141 acres yielded 4,635,287 tons, or 1.42 tons per acre, as compared with 3,891,863 and 1.18 in 1907. The average of 26 years was 1.47 tons per acre.

There are 3,336,169 acres of cleared land devoted to pasture, 326,550 acres in orchard and small fruits, and 11,675 acres in vineyard.

Statistics of Live Stock

The number of live stock on hand on July 1, 1908, were as follows:

Horses—726,471, against 725,666 in 1907.

Milch Cows—1,113,374, against 1,152,071 in 1907.

Other Cattle—1,711,485, against 1,774,165 in 1907.

Sheep and Lambs—1,143,898, against 1,106,083 in 1907.

Swine—1,818,763, against 2,049,666 in 1907.

Poultry—12,285,613, against 13,428,676 in 1907.

The numbers of live stock sold or slaughtered in the year ending June 30, 1908, were as follows:

Horses, 71,214; cattle, 798,062; sheep, 545,320; swine, 2,129,944; poultry, 4,108,750.

Wool—The clip of wool was 4,150,510 lbs. from 635,528 fleeces, or 6.53 lbs. per fleece.

Bees—Apiaries on Ontario farms are valued at $1,028,599, there being 179,688 hives.

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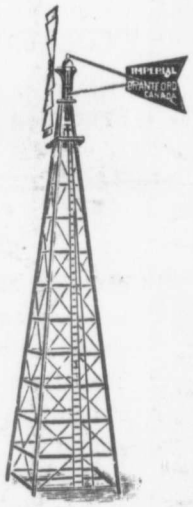

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