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CLANWORTH. CANADIAN BEE JOURNAL

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BRANTFORD, ONT., JAN., 1897.

WHOLE NO.
333

The annual meeting of the Ontario Bee-keepers' Association, held in Toronto during December was the most successful held for years. Profitable discussions took place

which will give bee-keepers a valuable report. Mr. F W. Harrison's report on the Royal Brood Germ bacillus alvei, was heard with deep interest and we hope that another year will throw additional light upon this subject. In the next number of the Canadian Bee Journal we shall have more to say on this subject.

* * *

Those attending the O. B. K. A. convention could not fail to be pleased with the address of the Hon. Sydney E. Fisher, Minister of Agriculture. It is the first time that the convention has been honored with the presence of a Dominion Minister of Agriculture. Mr. Fisher is a practical farmer, paying much attention to dairying and the advantages of dairying, it has not been difficult for him to see that bee-keeping has strong advantages as a branch of Agriculture. A resolution was passed by the Ontario Bee-keepers' Association asking the Dominion Government for bee-keeping what was being done in other branches of agriculture, to have experiments conducted to cheapen the cost of producing honey and improve the average quality put upon the market, to develop the home and Foreign market, and recom-

mending R. F. Holtermann, Brantford, as apiarist at the Dominion Experimental Farm, Ottawa. There is a wide and useful field to any one placed in the position referred to and much good can be done. Everyone present voted for the resolution.

* * *

In another column will be found an article from the Daily Times, St. Thomas.

It has doubtless been inspired by a person not in touch with the bee-keepers and we regret that the Editor of the Times should have allowed, through misrepresentation, his paper to be used in the way it has.

Luck Has Never Helped Any Person.

In replying to the query, "Does not luck sometimes play a goodly part in a man's success?" Edward W. Bok, in the *January Ladies' Home Journal* writes:

"Never. Henry Ward Beecher answered this question once for all when he said: 'No man prospers in this world by luck, unless it be the luck of getting up early, working hard, and maintaining honor and integrity.' What so often seems, to many young men, on the surface, as being luck in a man's career, is nothing more than hard work done at some special time. The idea that luck is a factor in a man's success has ruined thousands: it has never helped a single person. A fortunate chance comes to a young man sometimes just at the right moment. And that some people call luck. But that chance was given him because he had at some time demonstrated the fact that he was the right man for the chance. That is the only luck there is. Work hard, demonstrate your ability, and show to others that if an opportunity comes within your grasp you are able to use it."

Size of Frame Used.

—G. M. DOLITTLE, BORODINO, N. Y.

— I —

A correspondent writes thus: "Were you starting anew in bee-keeping, and wished to work your apiary for both comb and extracted honey, what size and style of frame would you adopt for a northern locality?"

I live in Canada and read the Canadian Bee Journal. In answering the above I would simply give my preference as to frames, now used, etc., and send it to the correspondent privately, but as he says he is a reader of the Canadian Bee Journal I have concluded to give the readers of that paper my views on the subject and tell why I would use and did adopt the styles of frame and hive I use both for comb and extracted honey. This being done, the reader can compare my reasons with those of others using different styles of frames than I do, and thus, after comparison come to a definite conclusion as to what they will adopt, should there be any unsettled in their minds in this matter. Mere assertions never help anyone to correct decision on any matter, but reasons are always helpful. When I first began bee-keeping I used the regular Langstroth frame. With this I soon found that the bees and brood were spread over too much surface for rapid brood-rearing in early spring, in so cold a climate as we have here, consequently I could not get so many bees on the stage of action in time for our early honey harvest, as I could where a more nearly square frame was used, which allowed the bees to cluster in a more compact form, or in a globe shape, as they always do where nature can have its unrestricted way. I next worked with the American frame, which was at that time 12x14 inches, as used about here. This gave a better result in bees, but it also gave so great a depth of comb, that do what I could to prevent it, the bees would always commence to store honey in the tops of the combs before they would enter the honey receptacles, which always, sooner or later resulted in the queen being crowded out of her brooding space. This caused much honey to be stored in the hive which should have been in salable shape for market, and also made the colonies too small for winter from too few bees hatching in the fall. To avoid the two extremes, I next tried the Gallup style of frame, which is 10 $\frac{1}{2}$ x10 $\frac{1}{2}$ inches inside measure. With this I found that the bees would rear brood to the very

best advantage, while the brood in the central frames comes so close to the surplus arrangement that the bees would readily enter the sections, so that crowding of the queens with honey in the combs below did not happen nearly so often as with the American frames. With this hive, I found after trying it side by side with both the other two, that I could obtain nearly one-fourth more surplus comb honey each year than with the other. This hive as used by Mr. Gallup, held twelve frames, which, a little experience proved to me was too many for this locality, for in nearly all years I would have three of the outside combs full of white honey during the first half of the honey flow, and nearly that much too much honey more than was needed to winter upon. Thus I was carrying unnecessarily some \$3.00 worth of honey in the hive each year, while the same could have been turned into cash just as well as not, had it been stored in sections, without damaging the prosperity of the bees in the least. I now reduced the size of the brood chamber to three-fourths of its former size, and again secured results never before obtained by way of honey in fine marketable shape, while the bees as a usual thing had plenty of honey to winter upon, the same being that from fall flowers, which did not sell as well in market. In this way I not only secured a much larger yield in the sections, but this yield was also of the very best quality, so that I obtained a higher price for it in market than before, thus giving me a double profit. Of late years I have used what is termed the "contraction" plan to a greater degree than before, securing pleasing results from the same, and although I have to sometimes feed a little for winter where so few as six frames are used, (that being the number I now give to all new swarms), still the yield in honey is enough greater to pay for the trouble in feeding. Some will say that all this requires too much attention and work, the old plans distancing it altogether along this work line, hence more colonies can be kept by the old plan and a like result be obtained. Admitted, but which is considered the better farmer, the man who employs certain help to work 200 acres of land to secure a certain yield therefrom, or the man who uses the same help on 10 $\frac{1}{2}$ acres, and secures as large if not larger amount than does the other from his 200 acres? The greatest number of colonies kept should not be our ambition but the largest yield from a given number. That the Gallup frame allows of working the smallest number of colonies with a prospect of the greatest success in comb honey, was my reason for adopting

and using this style of frame. For extracted honey, I am as well pleased with the Gallup frames as with any other. and as I use it for comb honey. of course I prefer it for extracting. Were I working for extracted honey exclusively, I should not consider its advantages as great as I do for comb honey. That it can hang in the extractor the same as in the hive, is one reason for preferring it, and that the Langstroth frame cannot so hang in the extractor, is an objection to it, in my opinion. In extracting I use two different plans, one of which is to use the hive two and three stories high, leaving the combs undisturbed until the white honey season is over. The other is to place the combs in what is termed the "long idea hive," which is a hive made of twice the usual length, and extract from them as filled, ripening the honey in a warm room. in open-mouthed vessels, having a cloth over the top to exclude dirt. Each plan has its advantages and disadvantages. By the former it secures a splendid article of honey with but little labor. By the latter we get a larger quantity but it requires more labor, at a time labor is of the greatest value, and the quality of honey is hardly equal to the other.

At What Age Will Bees First Gather Stores?

Will bees ever go out in search of food before being from fourteen to eighteen days old.

On this question authorities are as yet divided. Dr. Miller says yes; Vogel, of Germany, no. Of course, one of the two must be wrong. In the *Bienenzeitung* of 1891 Vogel had a long article in which he showed that bees less than eighteen days old would sooner starve than go out in search of food. I was inclined to think he was right, not knowing the reasons that Dr. Miller arrived at his conclusion; but the more I thought of it the more uncertain I became. Dr. M. would have spoiled his proverbial "I don't know" if he had had conclusive evidence, I concluded; and so I decided to settle the question to my own satisfaction; for it seems although I may read and study the ablest written articles giving the best of proof, nothing convinces us quicker or so thoroughly and singly as what we have seen with our own eyes. Seeing is not only believing, but knowing. I will now tell the reader what I found out.

In order to see how young a bee would work in a field I thought it necessary to form a colony out of all just hatching bees. So, on June 4 I took four nice clean combs, all workers size, and gave them to as many different colonies, placing them in the centre of their respective brood nests. On June 25 I collected them again, placing them in a previously and specially-prepared chamber with wire-screen bottom, setting the whole over a very populous colony. quilts and cushion removed. In this way and by means of hot "soap-stones" on top, and wrapping all in blankets, I tried to keep the temperature up to the desired point, so the brood and bees would not suffer either way. When I placed these brood-combs in the above named chamber some bees had already commenced hatching from them. On June 28 quite a number of bees had gathered, forming a regular cluster. I gave them then a new and somewhat isolated location, and for a fly-hole I opened a previously bored $\frac{1}{2}$ in. hole, being about 2 in. above the bottom board. The oldest bees in this little colony were now just three days old, but not one came out, not even peeped out, that afternoon, although the sun shone warm. The next afternoon a very few bees showed themselves; some few spacked up the outside of the hive a very little around the fly-hole but not one attempted to fly off. The next day, at 3 o'clock in the afternoon (June 30), the oldest bees being then just five days old, there was suddenly a commotion, to be noticed from quite a distance. I was at my post in a minute. Quite a number of bees were flying off and kept flying, apparently in for a play, and, judging from the specking the previous day, perhaps for a cleansing flight. This lasted some fifteen or twenty minutes. Then things became quiet again. Then, all at once, I imagined seeing a bee slipping into the entrance-hole, carrying a tiny load of pollen. The bee disappeared from my sight so quickly I could not be certain. While meditating and wondering whether it really could be, another bee struck the little $\frac{1}{2}$ in. entrance but also disappeared quickly. Several more bees came in the same fashion, and, although I was as attentive as I could be, I was still undecided whether there had been pollen in any of their pollen-baskets, the loads they carried being so small—hardly visible—and the bees always going from my sight so quickly.

The next bee that came was loaded just a little heavier. This time there was no mistake—the load of pollen was there. The bee carrying it also hit the little round entrance with infallible accuracy. I mention these observations because some one

might say, "A strange bee strayed accidentally found the hive." Taking into consideration that all my other hives have their entrance on the level with the bottom-board and full width of the hives, it would seem reasonable to suppose any stray bees would drop down on the alighting-board and try to find admittance there; but although I watched quite a few more bees coming in loaded with pollen more or less, every one seemed to know just where the entrance was.

At sundown that day an examination was made. It showed that considerable work had been done to match the combs. Some honey had been changed to different places. The most surprising feature was the presence of unsealed larvae. The small

mental colony sent out its workers as regular as any other colony in the yard, they bringing both honey and pollen. No bee was at this time quite six days old. On examining the colony on the evening of this day much new honey could be seen, which dropped from the combs when held in a horizontal position.

From this time on no marked difference could be noticed between this or any other colony, except, of course, in strength. A queen was now introduced, and I should have liked to make further observations, the bees all being black and the queen an Italian; but, as it happened, she proved a drone-layer, was removed later, and one of Root's tested queens substituted. On July 25 she commenced to lay, and she



HERD OF CATTLE.

Property of HON. S. E. FISHER, Minister of Agriculture.

amount of open brood contained in one of the combs at the time of forming the colony on June 25 had not suffered, but had seemingly been cared for all right. A subsequent experiment along this line did not turn out so well. A colony having cast a prime warm on June 26 was stripped from all its bees July 1. The brood-combs were treated in precisely the same manner as in the other case, and on the third day I found all open brood perished. Why this difference I am not fully prepared to say.

Our basswood honey season opened on the morning of July 1. My little experi-

soon filled the combs nicely. Now some of the bees are about fifteen days old, and many of them may be seen bringing pollen, the honey season being at an end.

It was not only curiosity that prompted me to make my experiment, but I think the question has a bearing upon the practical side of our pursuit. If a bee cannot be induced to go out in search of food before eighteen days of age, then we shall be all the more careful when forming new colonies and nuclei so that enough field bees may be present to conduct the business.—F. GREINER, in Gleanings.

Ontario Bee-keepers' Association.

Of all the organizations brought into existence by the Mowat Government, this one whose annual meeting has just been held in Toronto, stands alone in being unhealthy and unthrifty. It has been a sort of pet with the powers that be, and this may be one reason why it has not flourished better. One thousand dollars or more was spent upon it at the time of the Colonial and Indian Exhibition, to enable it to make a creditable display of Canadian honey, which it did, although it has borne little or no fruit in the way of practical results. The Association has had a grant of \$600 a year, to which \$150 were added a year ago to meet extra expenses connected with its entertainment of the North American Beekeepers annual meeting. Besides this regular subsidy, the Government pays the salary and travelling expenses of the Foul Brood Inspector about \$600 more. But as intimated, the organization does not prosper. Its membership has gone down about one-half during the past two years. The chief cause of this has been loss of interest and confidence on the part of the beekeepers of the Province. A clique has got the management of the Association and is running it to its ruin. The ruling spirits, fond of trips to Ottawa and of lobbying through acts of Parliament conceived in the spirit of the dark ages, have wasted a large amount of money on useless and unconstitutional legislation. They have got acts passed that are bound to be declared *ultra vires* whenever they are tested in the courts. One is called the Sugar Honey Bill, which forbids beekeepers feeding pure honey to their bees for storing in the comb. The same fight has been going on about this matter that has gone on about oleomargarine, and can have only the same result. Oleomargarine is allowed to be manufactured, but must be offered in the market as such, and sold for what it is. It may be wholesome and legitimate manufacture when properly made, but must not be put on the market as butter made from milk. The same ground will have to be taken about sugar honey whenever it is tested in the courts. The manufacture of honey by bees from pure granulated sugar is legitimate and wholesome, and it is legally right to make and sell it for what it is, namely, sugar honey.

Another piece of legislation on which a lot of public money has been thrown away is the Foul Brood law, which gives unheard power to the inspector. He can go on to a man's premises without so much as saying "By your leave" to the owner, and if he

finds any trace of the disease can burn, kill and destroy at his own sweet will. The owner has no appeal and no redress. The Ontario Government has left itself without even interpreting power. If any beekeeper appeals to it in a case of injustice, all it can do, is to say, "Go to the Beekeepers' Association or the law courts" The inspector has carried things with a high hand in some glaring cases, but the clique that runs the association is ready to back him up in anything that he does, and beekeepers are leaving the body rather than get involved in strife and turmoil. The Foul Brood law as administered by this man is a fizzle and a failure. It is bound sooner or later to be declared unconstitutional, but who is going to the expense of fighting the Provincial Government in the law courts to have its legislation corrected? So from these and many other causes there is smouldering discontent and unless there is a speedy change in the management this Association will die out. It had certainly better do so than drag on a painful existence in strife and discord, caused by men whose ignorance and petty ambition have become intolerable to men of intelligent mind and independent spirit.—The St. Thomas Times.

Fun for the Editors.

A Texas editor sends a free paper to the banker of his village, in order that he can tell his friends he is going down to "meet his paper" at the bank.—The Journalist.

Humorist—Sir, I have some paragraphs to submit. Editor (glancing them over)—You have made a mistake—tomestone dealer lives next door. We don't buy epitaphs here.

Dr. Platt mentions an echo at Woodstock park which repeats 17 syllables by day and 20 by night.

Blocks 60 feet long without a break are found quite frequently in the onyx quarries in Lower California.

A dollar loaned for 100 years and compounded at 24 per cent will amount in that time to \$2,551,799,404.

The father of Chaucer was a vintner, and the future poet and favorite of royalty spent his youth washing bottles.

There is an old Mexican law which prohibits a ninth marriage. A much married American, in ignorance of the law, violated it and is now in jail in Colima.

The congregation of Fifth Avenue Baptist church, New York, recently subscribed \$30,000 in a single collection in response to the pastor's appeal on behalf of foreign missions.

REPORT OF THE PROCEEDINGS...

of the Twenty-Seventh Annual Convention
of the

North American Bee-Keepers' Association

Held at

Lincoln, Nebraska, October, 7th, and 8th, 1896.

By Dr. A. B. Mason, Secretary.

(Continued)



Although I am a producer of comb honey, I very much prefer extracted honey for my own table use, so we do not have the wax in it. My experience with extracted honey has not been very great. I had some Tunicus which we allowed to build up four stories high. They worked splendidly, every thing indicated a fine return, but when we came to extract the honey, it took so much time that I concluded we could raise comb honey, sell it, and buy extracted honey at a profit.

The President—What was the yield from your tunics; how many pounds to the colony?

Dr. Miller—We got 175 to 180 pounds of comb honey to the colony. I suspect that if some of you who are used to extracting honey, should attempt to raise comb honey you would not have better success than I did with extracted honey. I wish Bro. Whitcomb would tell us the proportion which he got.

At this point President Root introduced the Hon. R. E. Moore, Lieutenant-Governor of Nebraska. He said.

Mr. President, ladies and gentlemen of the North American Bee-Keepers Association: In the absence of the Governor, I bid you a most cordial welcome in behalf of the State of Nebraska, and the city of Lincoln. This meeting of your association is an indication that our people, some of them, at least, have an intelligence for something beside politics. Our governor is necessarily absent this evening. He is out looking after his political fences, "making hay while the sun shines," like a good agriculturist, saving the country and incidentally saving himself.

Although not of the same political party, I can say of Governor Holcomb that I believe he has given satisfaction to his friends, and disappointed his enemies during his administration as governor.

I take pleasure in meeting this association because it proves that we can give attention to something besides politics. Politics is a

good thing and must be looked after, but I think there is too much attention given to it. In the summer and fall we have nominations and elections; then in the winter comes the the legislature, and in the summer nominations again. And then the politicians make such promises to the people that they think wealth and employment can be made for them by law, instead of by exertion on their part. And they long, and wait, for the time when their political party will be in power, and plenty and prosperity will be seen where now is want and distress.

It would be a good thing to impress on the minds of our people that something is necessary besides law. Patient and intelligent effort on the part of the individual is the the only sure way to happiness. While law may have something to do with prosperity, it is by no means all that is required.

Your association has set to work in a field that cannot be regarded as the most wealth producing; but it is a benefit, both to yourselves and the people. The force of the example will be great to the American people. We have two million people now idle. We are passing through a period of commercial depression, and great distress. These people are looking to legislation to afford them labor, but I believe that work would be offered to the people if they would exert themselves to find something to do—some field of employment that has not yet been attempted by others. We import several million dollars worth of goods every year. I believe that many of the articles we import might be produced here with profit both for the producer and the people. The money that is sent abroad might enrich our own nation instead of foreign countries, and if the unemployed people should seek some over-looked—some hitherto neglected field of employment, they might be occupied.

While in Lyons, France, I was impressed by the industry of silk manufacture. The

factories were not very extensive, each one employed not a great number of men, but in the aggregate many millions of people obtained employment from this industry. It brought wealth to their city and their nation.

We imported one hundred million dollars worth of sugar last year, and paid for it with gold, yet we have the land, the climate, the labor, all that is necessary to produce this wealth. We could have retained that money at home and made plenty and peace in many homes that are now in want and despair. I speak these things to show that you have engaged in something that is beneficial to you and to the world; and you are doing much more good than the people who sit on the street corners and talk politics while their wives are waiting at home for the box of blues which they sent them for. (Laughter.)

I trust that your meeting will be enjoyable and profitable to you; and I extend once again a most cordial welcome to this state.

Pres't. Root then introduced George E. McLean, Chancellor of the Nebraska State University, who said: "Hon. President, ladies and gentlemen of the North American Bee-keepers' Association, it is strange that so orthodox a body as this should reverse the standard chorus of the standard hymn, and have us no longer sing "Moore To Follow;" Moore having preceded me. But it seems to be sometimes the case that the less is as important as the "Moore." We see an example in the little busy bee, which is so big when considered in the light of what it does.

I came for the purpose of bidding welcome to your Bee-keepers' Association. In my early days, in my grandfather's garden in Connecticut, I became acquainted with bees. At that time they saw fit to consecrate me for this occasion. A bee stung me on the tongue, and hence you shall have a honeyed tongue to-night, I come then not to flatter, but simply with that tongue which the bee enlarged for me; and so with that honeyed tongue I come to say welcome, in behalf of the University of Nebraska, welcome to the bee-hive of the State. Whence the Governor comes from, they have electric cars which have on them this motto: "Capital, Penitentiary." There is no line from this place to the Penitentiary. The University is the bee-hive of the state. We have here, when there is idleness elsewhere, industry and life. A swarm is almost constantly in this great hive. 1537 students in the University last year. People talk of hard times, but our students are here to give proof that the

hard times are possibly a blessing. These times show that the parents and the children of Nebraska have opinions that look higher than dollars, and the people of the State show what they are made of, in sacrificing as they do to have the boys and girls here. Here, like busy bees, they not only gather honey, but carry it home to the hive.

In welcoming you here in behalf of the University, the bee-hive swarming with that which is most precious in the State—youth—I welcome you, as you see to that which is full of sweetness, even in these times of bitterness; that which is full of promise for the future. In giving you this welcome, I wish following one line, which the governor opened up, to emphasize the importance and the diversity of the various forms of our agricultural pursuits. When in Europe I discovered that interest in bee-keeping prevailed. In looking at these, I wondered how great might be the interest in bee-keeping in the United States. I was surprised to find that there was an interest of at least twenty million dollars, nearly, in the products of the apiary; that there is not less than seven million dollars worth of honey and wax yielded every year. I discovered that there are 300,000 people engaged in bee-keeping work. I was especially delighted to learn of the intelligence attending upon this occupation. There are 114 societies and eight journals especially devoted to bee-keeping; and I rejoice that there is one of these journals in the State of Nebraska. When these statistics are set before us we see the real need of fostering this society.

I perceive that it came upon you to advance the hygienic condition of our people by seeing to it that this honey, so excellent as food, should be furnished to the people pure and unadulterated. [Applause]

Then looking forward, as the estimates have been made by authorities on the subject, I discovered that they could increase the industry, with things as they now are in the United States, ten times, and still find support for your bees. The flora is here to support ten times the colonies of bees that are now flying over our forests and fields. And thus your industry is that industry that is called blessed. It is well that many others, as well as members of your industry have called the bee "The blessed bee." It is this insect that teaches us how we may increase the yield of our fruits and grain. And so with the bee comes manifold blessing to the vegetable environment in which she lives; how important this is to your convention. We should all receive an impulse from it. This University, not represented here to-night as I would like to see it because of the many duties

upon our students, shall receive, is our professions have their will, an impulse from your work.

You lay the sciences under tribute. As they are applied, we learn more and more of the great industries; how to test the products; how to make the bee a blessing as nature intended it to be.

In the welcome that I give you, I am delighted that we welcome some queens among the bee-keepers. England is very proud of the fact that she has one queen, but I perceive that you advertised that you mailed twenty thousand queens a year through the mails of the United States. Over there we read of the one queen's mail—of Her Majesty's mail. But I am thankful that here you not only have bee queens, but every American woman is a queen. Man alone can never carry on any great industry without the help of women side by side with him in the work.

I welcome you, as you know, to a University, in which the women have proved their scholarship equal to that of the men, though there are as yet but one third as many women as men in the University.

By way of proving the sincerity of our welcome you are invited to set an hour for to-morrow, when it will be convenient for you to make an excursion through this beehive and see our bees at work. If you find one that is not at work you may put him or her out of the hive.

Welcome then, and come again as soon as you can. [Applause.]

The song entitled "The Bee-keepers' Reunion Song," was then sung by the Lincoln quartette: Messrs. Cameron, Evans, Congdon and Lansing.

Prest. Root then announced that the Hon. Eugene Secor, the author of the song that had just been sung, was present, and would respond to the address of welcome. Mr. Secor's response was as follows:

We're glad to be invited to the "wild and woolly west."

Where the cowboys run the country with neither coat or vest—

According to the silly claim of many Eastern folk,

Who never seem to comprehend a breezy Western joke—

But some of us have travelled—in fact been here before,

Have felt the grip of Western hand extend at the door;

We don't expect that Indian raids are every day affairs,

Or that the hungry prairie wolf will snap us unawares;

And neither do we look for men in this new prairie state,

Who lack in kindness or in worth because 'twas peopled late.

We know that all of virtue and of hospitable cheer

Are not confined to older states they've taken root out here.

The hearts of these our brethren we should expect to find

Responsive as their generous soil—the richest of its kind.

Boast not, ye Yankee truck raisers pent between the hills,

Of the greenness of your verdure, or the music of your rills,

Here bread and fertile acres wait for millions yet to be—

Wait but the march of Empire West—the bivouac of the free.

These prairies like an ocean vast in billowy grandeur roll,

A blessing in each valley and a promise on each knoll.

There's food enough in this rich soil, stored up long, long ago

For ten times ten the present needs of population's flow.

So if the hive of industry be over-crowded East

There's room for several swarms out here ("priority rights" released.

But from an economic view my mental Kodac shows

No drones need be imported here—the worker is what "goes."

This climate is a little "hard," so I have been informed.

On idlers, and if such migrate they'll wish they'd never swarmed.

I said that none but workers are in demand out here;

Perhaps you bee-men present may think it somewhat queer

That queens are not a vital part of such a colony.

They are my friends, important, but, do you not clearly see

Nebraska queens are just as good—and acclimated too—

As any foreign race or blood, albeit old or new?

So if you've not contracted and you chance to find one here

She's warranted, I'll venture, to be without a peer.

'Tis Eastern blood and Western vim that make the world go round,

In other words, they make things "hum"—to us a cheerful sound.

The greeting which your speaker gives us is prized by us bee-men,

We take most kindly to sweet things—perhaps we'll come again

We'll not, I hope inflict a sting for kindness you have shown,
Such honayed words, such royal cheer, demand our love alone.

We represent a brotherhood whose craft, for ages past,
Has been esteemed a worthy one because their lot is cast
With those who in the field of toil create the world's great wealth,
And at the same time lessen not its pleasures or its health.

The sweets of life we gather in; we garner nature's waste;
We horde the nectar from the flowers to cater to man's taste;

We fructify, with busy elves, the orchard and the field;
The spoils we get is but the fee for making blossoms yield.

Without our winned wizard-priests that marry distant flowers,
This earth might be a desert waste where now are fruitful bowers.

Bespoken we then for these our aids, and keepers too as well,
The word of praise that worth demands—that worth their works do tell.

Notice that you have a bee, quite common every where—

At least in Uncle Sam's domains she is by no means rare—

And like the "busy bee" of song she buzzeth night and day

(in bonnets mostly worn by men) in a most bewitching way.

The "presidential bee is here as vanguard of our host,

With silver bands instead of gold—the marks bee-men prize most.

In this campaign 'twixt yellow and white we look with longing eye

For some bright ray—some star of hope—from out the murky sky.

But, whether gold or silver wins, we want prosperity,

We need the factory's busy hum to stimulate the bee;

For people eat best when they work, and bees increase and thrive

When someone buys the royal food found only in the hive.

The city where now congregate the chosen of our clan

Is named for one immortal in the heart of every man.

Immortal may the friendships be, which on this spot we form

That, like the granite hills of God, shall stand both time and storm.

And may the bond of Union between the West and East

Grow stronger as the years go by and each

returning feast.

Fair city of this western plain the salted sea between,

Gem of mid-continent beauty, of prairie cities queen,

We bid thee prosper and grow strong, and like thy giant name

Whose hallowed sound is Freedom's boast, be ever known to fame.

At the close of Mr. Secor's response another song entitled "Dat Happy Bee-man," was sung; Dr. Miller, the composer of the music, singing the solo and part, and the Lincoln quartette joined in the chorus.

Dr. Miller was then called upon for a song and responded by singing "The Rock that is higher than I."

The Rev. E. G. Abbot, of St. Joseph, Mo., addressed the students and those present as follows:

Mr. President, ladies and gentlemen,—Your chairman has put a handle to my name that would indicate that talking was my profession. It isn't so at present, nor has it been for fifteen years. I simply appear before you as an ordinary every-day man, a common-place bee-keeper. Notwithstanding there is only a small representation of young people here, perhaps what I have to say to them will not be out of place to older people. As we have had such a flow of eloquence, poetry and music, and been carried so high above the ordinary things of life, it is very hard to come down to the every-day practical affairs. After we have been up among the stars, it is very hard for us to again place our feet on the soil and plod along in the mud and rain, the joys, mishaps and sorrows of life. But this is the lot of us all; we sometimes see visions and dreams, and look beyond the practical realities of life, but the most of life is made up of every day affairs. Life is serious, earnest, practical. It means work, it means constant exertion, it means continued effort if we would get the best out of it. In a great University like this, where young men and young women come to fill their minds with the practical wisdom of the ages, and sometimes to investigate new things, and give to the world new wisdom, there is one danger. These young men and women come mostly from the farms, and I apprehend that at least ninety per cent of them are apt to get the idea that the attaining to success happens only in the professions, or in commerce; that, in order to succeed in life, to make their mark and take their place among men of influence, they must lose their respect for rural surroundings; that they must get beyond fathers and mothers, and launch out into new enterprises. If the country at large is

making any serious mistake. It is the tendency away from the farm, away from rural surroundings; the tendency to concentrate itself in cities. In these great avenues, it is true, men succeed and commerce goes on, but at the same time, vice stalks broad at noon-day, and the unwary finds his feet slipping in the downward path, and he has gone the way of despair and lost hope, and his life is blighted. What I would do, if possible, is to impress upon the minds of these young people that it is well to get an education, to learn all you can, to grasp every science, know every language, learn everything that is spread out before you in this University. And while you are learning all that it is well to learn, the characters and lives of these men who teach you day by day. You can learn something in the study of their lives as well as from the book you study.

At the same time I would advise you to keep near to rural scenes. Don't forget the "Old Oaken Bucket," the orchard and the meadow. Don't forget the home where mother uttered her last "God Bless You," when she said, "Go my boy and prepare yourself for life." Don't forget that sacred home, the glorious spot where your eyes first saw the light of day, and your feet first learned to tread the pathway of life. Don't forget the rural scenes. Don't get the idea that all the glory, all the wealth, all the pain and success of life is within the walls of a city. A citizen of your place said well upon one occasion, and I am saying nothing about the political principles which he advocates. He said, "you may destroy your cities and agriculture will raise prouder cities; but destroy agriculture and grass will grow in the streets of every city in this land." That is true; all the wealth rests upon agriculture; all the success of this world is dependent on the success of the plain, plodding, practical farmer that tills the soil day by day. [Applause.]

Because of the fact that a man is a farmer, it does not follow that he should be ignorant and uneducated. The theory is that any fool can farm. It is true that any fool can stay on a farm, but a fool cannot make two blades of grass grow where there is one now.

There was a time when the responsibility was all on the soil. Now the farmer must go back and learn the first principles, and come in contact with the soil in an intelligent way. He should have the knowledge of chemistry; should know something of entomology, what insects are helpful, and what destructive to the products of his farm. Thus a great wide field is open to the farmer.

It is a grand thing to study the science of

astronomy. But there are just as many wonders under our feet when we tread the soil of our farms, with our grass, spiders and bees, as there are in the air with all the constellations that glitter and sparkle in the heavens.

In conclusion let me say again, keep near to rural scenes; keep in touch with the tiller of the soil; don't be afraid that you will soil your hands, or degrade your body by coming into contact with the native soil; stand near to the creator of all things; stand for right, justice, truth; stand for intelligent agriculture. [Applause.]

CHANCELLOR MCLEAN—Mr. President, I see that you have next on your programme an address to the students by Dr. Miller. The students are not here tonight, but they will be here to-morrow at chapel time, and I would suggest that the Doctor hold his fire until then.

DR. MILLER—I am willing, if I don't burn up in the meantime.

CHANCELLOR MCLEAN—Allow me to suggest that the Association make provision to give us time for an excursion through the University, buildings and grounds at two o'clock to-morrow.

MR. YORK—Mr. President, I move that the suggestion of the Chancellor be adopted. I suppose one hour will be sufficient.

CHANCELLOR MCLEAN—Yes sir, we are in the West; we can put you through the University in one hour.

The motion of Mr. York was carried.

PREST, ROOT—To accommodate those of us who must leave to-morrow afternoon, our trip through the city will be made at eleven to-morrow if there is no objection.

It being 9 o'clock the Association adjourned to meet at 8:30 to-morrow morning.

THURSDAY MORNING SESSION.

The convention was called to order by Pres Root at 8:30 o'clock.

Pres. Root—Since our speakers are not all here, we will devote some time to the discussion of questions. The following question has been handed in:

SECTIONS AND SEPARATORS.

"Are one-pound sections scalloped out enough to allow bees to pass with ease when we use separators?"

L. O. Westcott, Swanton, Nebr.—I am not a very old bee-keeper, and I have only about 30 colonies; but recently I have used separators, and find that some of my sections have been entirely filled up with comb by the bees, and there was no honey in them; the bees did not have enough room. The section should be cut out 1-6 of an

inch, so that when the separator is put in the bees can pass up and down more readily.

Mr. Stilson—What kind of separators do you use, straight or scalloped?

Mr. Westcott—I use scalloped sections.

Pres. Root—I should hardly think that there is any trouble about these being made shallow enough. They have been made deeper and shallower. Was the section capped over and no honey in it?

Mr. Westcott—No, it was not capped over. The space between it and the separator was closed. I have also read in the bee papers articles complaining of this same thing.

Mr. Whitcomb—The question arose last night about extracted and comb honey. My experience is that bees always store honey in the sections in one way or the other. I produce comb and extracted honey, but the best colonies produce comb honey. Yet I get twice as much extracted honey from a colony as I do of comb honey. But it is always under protest, especially in that part of the country where the honey is not abundant, where we have not the linden and white clover; it is where the honey-flows are moderate.

Pres. Root—My opinion is that separators are always a hindrance, more or less. At one time I was strongly inclined to discard separators entirely.

Mr. Masters—I think these protests come on account of the bees. Some bees work readily into sections, while others refuse.

Mr. Stewart—That brings in a little hobby of mine on the size and shape of the entrance into the sections; it sprang from a statement of Mr. Heddon, that he preferred 4-piece sections because it gave a wider entrance into the sections. I used mucilage with them, but it was too much work; I did not like them, so I had sections made to order. It does not cost more than 25 cents thousand. It gives an entrance of the same width clear across the section; that is a great improvement in the section. We can take a 24 pound case and shake nearly every bee out of it, while with the ordinary section we cannot shake them all out. They also fill up more space in the corners.

Mr. Whitcomb—I want to make a protest against Mr. Masters' remark. He lives in the best part of the country; he has the linden and white clover. Here are his bees protesting so strongly that they go outside the hive in the Missouri fashion. I thought that we had got far beyond shaking bees out of the hive.

Mr. Abbott—Will Mr. Whitcomb explain what he means by "Missouri style?" I am from Missouri.

Mr. Whitcomb—I was down in Missouri a little way below Mr. Abbott's, and there the bees put their honey out side of the hive.

Mr. Kretchmer—Mr. Stewart does not understand the question. I understand that the question is, the size of the notch in the side of the section.

Mr. Masters—Mr. Whitcomb misrepresents me; the colony that built the comb on the outside built some of the nicest sections I ever saw. So I want to correct his idea that my bees do not build in the sections.

Pres. Root—We will now listen to a paper by Mrs. J. N. Heater, of Columbus, Nebr. [Applause.]

THE PAST AND FUTURE OF BEE-KEEPING.

From time prehistoric bees have been kept with varying degrees of scientific intelligence and corresponding success. The Bible mentions honey in many places, though it leaves us entirely in the dark as to the methods of obtaining it in those times; but we fear no challenge to the assertion that they lived in the primitive way in rocks and cliffs, and the honey was secured either by strategy or nerve, and possibly the method would furnish a valuable suggestion to intelligent scientists of to-day. We read, not long since, of recent discoveries in Pompeii, of jugs of well preserved honey, having been found in the ruins of the buried city, during official excavations; giving evidence to us 1800 years later that honey was an article of commerce at that time, though that of itself gives us no idea of their methods of producing it.

We are indebted to the Old World scholars for our first treatises on this interesting study, but "they builded better than they knew," in that they awakened an interest on the subject in the minds of thinking men on our shores, who, combining their own research and experiments with the delving of the foreign masters, have given to the world some of the most valuable and practical knowledge of our time.

In the "good old days" of our grandfathers' time, men contentedly plodded along with their ox-teams, their crude farming implements, and their native black bees in log gums or straw skeps. "Work never ending work," was their watchword, and, the dear old souls, by frugal economy and patient industry succeeded in accumulating wealth. But their sons, whom we may style "our fathers," came upon the field of action with a new watchword, for

on every hand was heard the cry of "Progress." One invention succeeded another; the people themselves were astonished at their own achievements. The ox was sent to the stock-yards and the horse given his place in the fields to operate the wonderful new machinery. Bee-keepers were making a mighty effort to keep up in the race, and it is with interest we follow the progress of thought and experiment and see the first attempt to domesticate the native bees in the original log gum, being but a section sawed out of the tree in which they were found.

Next we see them transferred to the rude straw skep. Genius saw the possibility of further achievement, and the old box-hive was evolved: but it was reserved for our beloved Langstroth to improve upon all former efforts, and give to the bee-keeping fraternity the most practical movable-frame hive the world has ever seen, and which to the present time remains standard. Naturally this gave a strong impetus to bee-keeping as a business, but at that time no bees had ever been imported into this country, and every experiment had the disadvantage of having to be practiced upon the little black native.

In 1848 our German brothers introduced the Italian bees into their country, and in 1859 they were shipped into England. During the same year our brother across the line imported the first Italian bees to the shores of America. Then began a period of experiments, development and improvement in bees and bee-culture such as we have never had a record of before or since. America, we are proud to note, took the lead of all nations in expensive research in foreign fields. Bees from all the countries of the East, including many of the islands where distinct races were found, were sent to us for inspection or experiment, then was scientific work begun in earnest. The specialist bred for size, he bred for color, he bred for trait, till the poor thing hardly knew what it ought to be when it did emerge from the cell. The surprising thing was, that the workers being of the feminine gender, they were even bred for length of tongue, and those found with the longest tongue, and the greatest activity of the same, were the ones most sought after. Happy bees!

Truly scientific bee-keeping, then, we may say, dates back not more than 40 or 50 years, yet what gigantic proportions it has assumed, representing millions of dollars in the annual production of honey alone, to say nothing of the capital represented in stock, factories, etc., and, not least of all,

we as a body are recognized in the commercial world.

We see, then, that the past has but fitted us for the future of our work, and we feel that while we have appliances so admirably adapted to their uses, our attention in the future should be given more to the practical management of bees, to reduce the labor and expense to the minimum, and the more the work is simplified, the more we shall feel we are advancing. We believe that "mixed farming," so to speak, in the apiary will prevail in the near future. Better results are obtained from working for both comb and extracted honey, and even a queenless nucleus can be made to care for a extra queen cells. If the manipulation of bees shall be as much improved upon in the next half century as the general knowledge and appliances have for the same length of time in the past, we can but wonder what we, as bee-keepers, will be doing 50 years hence.

Time has brought us the comb foundation, the extractor, the smoker, and many other appliances which we could not dispense with; but shall we feel that our calling has reached its zenith, and be content with what we have and what we know? So far we have kept pace with the other agricultural pursuits; but we look about us, and, behold! in many places the horse is driven from the field by the traction engine, and again we see a monster machine cutting, threshing and sacking the grain at one operation; and we ask ourselves, what are we bee-keepers going to do to keep up in the race? Are our geniuses sleeping, or are they thinking out some marvelous thing in silence with which to surprise us?

Is it reserved for one present with us today to make his life a blessing to humanity, and his name immortal, by telling us for a certainty how to secure satisfactory crops of honey without increase of bees? how to keep extracted combs from one season to the next, safe from the ravages of the moth? and how to gain the best general results with the least expense and labor? for since we of the present day have taken for our watchword "Protection and Reciprocity," we have no fears but we shall receive reasonable prices for our product if put upon the market in proper condition.

Mrs. J. N. HEITER.

President Root—Our time is rather short. Is there anything to be said on this excellent paper?

Dr. Miller—Mrs. Heiter asks how to keep a set of extracting-combs from one season to another. I would like to ask what is the trouble in keeping combs over?

(Continued in the next issue.)

Seventeenth Annual Meeting

of the

Ontario Bee-Keepers' Association

Held in the Council Chamber of the City Hall at the City of Toronto,
December 8th, 9th and 10th, 1896.

TUESDAY, DECEMBER 8TH, 2 O'CLOCK P. M.

The president, Mr. R. F. Holtermann, in the chair, called the meeting to order.

The Secretary, Mr. Wm. Couse read the minutes of the last Annual Meeting which were confirmed.

Owing to the illness of the Secretary's sister, Mr. Couse was unable to present the Secretary's report and it was left over until a later stage in the proceedings.

MR. HOLTERMANN—I am pleased to be able to tell you that we have the Hon. Mr. Fisher, The Dominion Minister of Agriculture with us. He is on his way to Guelph and has to leave on the 5:30 train and I am sorry he cannot be with us at a later stage when we would have more of the members of the Association present but I am sure you will all bear me out in the statement that we are very much pleased to have the Dominion Minister of Agriculture for the first time at our meeting. I now introduce the Hon. Mr. Fisher and will ask him to say a few words to us. (Applause.)

THE HON. SYDNEY E. SMITH.

Mr. President and Gentleman: I responded to the invitation of Mr. Holtermann to come here this afternoon because I was anxious to meet those who were interested in this branch of agriculture. I think I may call it a branch of agriculture although perhaps very few would be disposed to consider it such. I am on my way, as Mr. Holtermann, said, to attend the meeting at Guelph of the stock men of the Province of Ontario and I suppose perhaps I might also consider you, gentlemen, as another branch of stock keepers, although bees perhaps are hardly included in the general term of stock.

They are however an important branch of industry and from what I read I can quite understand that they may be made of still more importance than they have yet attained to. I must tell you frankly how-

ever that I know very little about bees or bee-keeping; I am not myself a bee-keeper and anything I know about them is simply the little I have learned from reading, seeing some of your exhibits at the different exhibitions, and enjoying some of the sweets of the industry.

Mr. Holtermann has been to see me once or twice and has talked to me as to what might be done to aid and encourage bee-keeping and the industry in this country. I have been very much interested indeed with what has been laid before me, but from what I must confess to be my lack of knowledge and experience I cannot pretend to have come to any conclusions at all. I feel I must leave it till such time as you are prepared to lay before me some suggestions as to what might be within the scope of the Minister of Agriculture of the Dominion to aid and assist your particular industry. I confess I am not in a position to advise you. I am not in a position to elaborate any scheme which might aid you, but I shall be very glad indeed to receive any suggestions from you and any information which might lead me to see what would be of assistance to you. The duty of the Minister of Agriculture I conceive to be to try and take an interest in, and aid and assist every industry which is connected with the tilling of the soil of the country. The actual keeping of bees perhaps is not connected with the tilling of the soil of the country, but you are by the keeping of bees making use of the fruits of certain products of our land and therefore you are intimately connected with the agriculture of the country. If our crude crops can be turned into something of value at not too great an expense, something of small bulk at the same time comparatively great value I conceive it to be one of the best parts of our industry of agriculture. Just as the turning of crops into butter or into cheese is a high development in farming so I believe turn-

ing the sweets of our clover and our various flowers in the country into honey is the development of a higher class of agricultural industry, and this being the case I feel I ought to take an interest in it and encourage its study so that the people may not only improve the industry but themselves. I believe it is one of the essentials of the agriculture of this country that our people should not simply be the drudges who have to till the soil and work out the crude products of the soil, but that they should also be the manufacturers of those crude products by turning them into the most compact and highly valuable products that they can possibly make them. By doing this they show their skill, they improve their own individual capacities, and I think benefit our country in just so far as they succeed and make progress in this direction.

I have come here not to tell you anything about your industry, for I frankly admit I know nothing about it, but I trust Mr. President, you will allow the proceedings of this afternoon to go on and I may be able to learn a little in the short time at my disposal. (Applause.)

Mr. J. D. Evans—We are glad to have the Hon. Mr. Fisher with us. We all realize how difficult it is for him to get away from his pressing duties to be with us, and therefore we are the more thankful that he has thought it worth while to come and see the bee-keepers. Although not very numerous we represent a vast amount of sweetness. I am very glad also, to say he is following a very good precedent, and I think it is a very good omen for him. Last year at Brantford we had the Hon. Mr. Hardy to give us an address and since then he has become Premier of Ontario, and we do not know what may happen within the next year.

I think about all we can ask from the Government is that they will endeavor to keep us honest. We simply go there for pure honey bills that we may persuade the people of this country that every pound of honey is pure honey. We have to thank the different governments and parliaments for what they have done for us; we are thankful for the bill that has been given us with regard to spraying trees. We have had from the Parliament the pure honey bill. I have therefore great pleasure in moving a hearty vote of thanks to the Hon. Mr. Fisher for his presence here to-day.

Rev. W. F. Clarke—I have much pleasure in seconding the motion.

The President put the motion which was carried amid applause.

Mr. Fisher acknowledged the vote of thanks.

Moved by Mr. B. Holmes, seconded by Mr. J. K. Darling that "Whereas the Ontario Bee-Keepers' Association has, since its meeting in Convention, lost an honorable and respected officer by the death of Allan Pringle, of Selby, and whereas the organization of this Association and its incorporation by act of parliament was in a very considerable measure due to his clever assistance and shrewd management, and whereas during the many years in which he has served in official capacity, (occupying at times the highest posts of honor in the gift of the association) he has, by his genial and friendly manner, won the love of all who knew him, while at the same time his mature judgement and keen foresight in matters pertaining to our industry has commanded respect, even those who in some points differed with him being unconsciously drawn towards him, and whereas the bee-keeping world bow their head in sorrow at the announcement of his death, therefore be it resolved that the Ontario Bee-Keepers' Association take this, the first opportunity of giving a united expression of regret that we shall see Allan Pringle no more in our assemblies, nor feel the warm grasp of his hand in friendly greeting on the shores of time, and that we, his colleagues, extend to the widow and family of our late friend and co-worker our heartfelt sympathy and condolence in this their great trial, and that we trust that through the blinding mist of tears they may be able to see the hand of the Great Architect of the Universe and to hear his sweet voice, saying: "Fear not, I will never leave thee nor forsake thee."

And be it further resolved that this resolution be recorded in the minutes and an engrossed copy signed by the President and Secretary be sent to the widow of the late Allan Pringle. Carried by a rising vote.

Mr. Pettit—Is it advisable and proper to have supers in two parts or in one I mean a super sufficiently large to cover the top of the hive?

It is the practice of some bee-keepers to have it in two parts; it is also a general practice to have it in one part, of course tying up as the occasion may require. I believe this question of having the super in two parts is not a very old one.

Mr. F. A. Gemmill—I can't say that I have tried the two part supers very extensively. Mr. Hall has been in the habit of putting a small piece of board at each end of the super. The bees generally start to work at the side of the super nearest the brood nest. You can by this means pre-

your sections better fed in starting. I can't say that I would advocate using them altogether but in the forepart of the season my experience has been that it is better to use them; you get the bees to work earlier and you can by means of reversing them and turning the inside to the outside get the sections in the corners better fed. There is this trouble, when you go to tier up you have two cases to deal with instead of one.

Mr. McKnight—I think the two part super is only used to a very limited extent.

In order to divert your attention from the sugar to some other subject I would ask this question; Why is it that an old queen lays more drone eggs than a young queen? And does a queen ever deposit worker eggs

make clear to them they will find an improvement over the two small supers. Bear in mind, first of all, that you must have your stocks strong; that is an important point. Having the bees strong and the honey flow on hand I raise the front part of the hive about an inch higher than the ordinary entrance which is three eighths of an inch. The honey season begins, the warm weather sets in and the two operate in such a way as to create what we call the swarming fever. We all know if we give the bees plenty of air it has the effect of holding back that swarming fever. Now, I raise the front edge of the hive. When I first started I simply used a square block about an inch square under the front



HON. SYDNEY E. FISHER, Minister of Agriculture.

corners cells?

Mr. Pettit—In regard to the remarks made by Mr. Gemmel, it seems to me that the bees are not prepared for the super; that is to say, the honey may be present but the bees are too weak and it is no use attempting to do very much in weak hives. Right in the start let us double the quantity of bees and we could get lots of honey and good quality. With regard to the bees on the outside and the corners, and the necessity for turning the super around I remember the time was when I was a good beekeeper, but I have a way that has puzzled myself, but I have a way that has proved to my own satisfaction and I think my brother bee-keepers will follow me and try the plan I shall try to

corners which gave plenty of elevation but there were losses connected with it because when swarming came on the queen would be liable to run out the side, drop down on the grass and be lost and you would be a long time finding her, but by raising the front end of the hive so that it compels the queen to go out at the entrance you know where to look for her. I will show you how I raise the hive; I have two wedges about an inch square at one end and at the other end running down to a feather edge. I raise up the front end of the hive and slip one of these wedges under each side; that closes up the side; this compels the queen to go out at the entrance and it gives the bees that come in climbers

to go up the side. Ordinarily the bees enter the entrance at pretty nearly the centre and the hive being low they catch and go right in and fill the centre of the super while the outsides and corners are only partially filled. If the hive is so raised that the bees on coming in do not so readily catch on and go up but get the habit of going this side and that side, the point gained is that they fill the supers at the outside just as readily as the centre. That is a point worth recollecting and worth while trying. I have experimented on it for a number of years till I am satisfied there is a great deal in it. I am not going to say there may not be possible advantages in having two supers, but for me it would be inconvenient; I didn't like it at all; I had too many traps around and too much tinkering to do. By the process I use the bees seem to manage the whole thing themselves.

Mr. McEvoy--You may put the bees on as strong as you please but where there are only the starters it is so high for the bees to reach that they do not catch and run up like they do where the sections are filled with foundation.

Mr. Pettit--I fill the sections with foundation.

Mr. McEvoy--It pays to fill the sections full. Mr. Gemmell spoke about Mr. Hall putting on these supers. It is a short box he puts on and if the bees are not very strong they will take possession of the smaller space, but if you give them a larger space they do not make as good a job.

Mr. Shaver--Will Mr. Pettit's supers be level when he puts his wedges under?

Mr. Pettit--They may if I choose to have them so. I like to have them very nearly level. When I set my hive out in the spring I set the hinder part of the hive about an inch higher than the front and when I put in the wedges it brings it very nearly level. It is not absolutely necessary to have the front and rear ends of the hive exactly level but they should be level the other way. After the discussion on this question was ended Mr. McKnight's question was taken up.

Mr. Gemmell--There is one way you can find out that the old queen will lay more than the young queen. If you are working for comb honey have your bees on starters and you will find that the comb is filled with drone eggs. If you have a swarm with a young queen on say five starters you will get very little drone comb. You can take and hive them with an old queen under the same circumstances and you will find a great deal more drone comb, and you will find eggs in every bit of it.

Is it the bees that are the cause of this

drone comb being built? Do they see that the old queen is failing and they require more drones in order to fertilize the young queens?

Mr. Evans--Might not the reason be that as the queen is only impregnated once in her lifetime and to produce drones it requires nothing of that kind that she is dying out and becomes incapable and lays drone eggs without fertilization?

Mr. McEvoy--There is a way out of it. Don't keep queens beyond two years, as a rule, and in all cases fill the sections full of foundation.

Mr. McKnight--Why do you advise not keeping the queens longer than two years?

Mr. McEvoy--The summer the queen is raised she is pretty good, in the next year she is in her prime and often lays very well, too, but as a rule she is not so good; you don't get so many bees, you don't get so much honey and you get less money. It pays to do away with them in two years. It paid me.

Mr. Pettit--What would you think of advising a man who has good cows to butcher them off when they are in their prime. I am free to admit there are queens in every apiary that ought to be turned over to the butcher but there are others that in my opinion, it would simply be a shame to do it with. This year when I started out I hadn't a very large apiary, and this spring I found five young queens, all the rest were more than one year old; I kept a record of them and quite a number--I can't give the exact proportion--were two years old and a number three years old and quite a sprinkling of them four years old and I don't believe there is a bee-keeper present that has obtained more comb honey according to the number of bees, and better filled sections and more complete work than I got from those old queens.

Mr. Gemmell--That doesn't prove anything because the locality may have everything to do with the difference.

Mr. Pettit--I live in a locality where there are lots of bee-keepers all around and they have the same privileges.

Mr. Gemmell--Do you know for a fact whether the management the other bee-keepers gave their bees, was the same as you gave yours in the spring? Do you think they had their colonies in just as good shape? Did they come out of winter quarters in just as good shape?

Mr. Pettit--I would not like to press the point that the advantage I gained was by the old queens. But, I would like to press the point that there are queens two, three and four years old that are equally as good as young queens.

Mr. McEvoy--There is many a good horse

at seventeen, many a good man at seventy but there are more good horses at seven than seventeen and more good men at forty than seventy. I have had good queens at three years but I have been tricked so often in the spring that I take no chances.

Mr. Darling—I might answer Mr. McKnight's question by asking another: Why is it that poultrymen find that their old hens are the best cluckers? I think there is a scientific reason for it; they are getting old and there must be something to take their place or soon the variety would run out.

I believe what Mr. Pettit has said is correct but it is also the fact, as Mr. McEvoy has said, that after two years queens begin to fail and as a general rule fail rapidly. I have had good queens at three years old. I don't know that I have had what I would call a good queen at four, while it is possible for a queen to live five years. I have tried it so many times that I have about come to Mr. McEvoy's conclusion, that a person is not safe in keeping them over two years. I think the reason why an old queen deposits more drone eggs than the young queen is just as I have stated, she is failing, but I think there are perhaps two reasons; there is the one spoken of by Mr. Matheson, that fertilization has failed, partly. It has been admitted for some time that if a person wishes to have worker comb built she puts in a young queen.

Mr. Heise—How does Mr. Darling know that the queen, when she is failing, will deposit a drone egg in a worker's cell?

Mr. Darling— I have had it time after time.

Mr. McEvoy—So have I.

Mr. McKnight—I confess I have not gotten very much information yet with reference to the question I put. It is a fact that old queens lay more drone eggs than young queens when they come to a certain stage of their existence and there is a very good reason for it, but in order to comprehend and appreciate that reason one must know something at least of the physiology of the queen.

A queen bee, like most female creatures, has in her organization what is known as ovaries, egg vessels, in which the embryo egg lies; and all the embryo eggs lie there for the opportunity of development during the lifetime of the female; there is a tube reaching down from these ovaries which is scientifically known as the falliopian tube. As has been stated a drone mates with a queen once in her life and at the junction of the falliopian tube in the organization of the bee there is a little sack-like aperture to one side and when a drone meets with a bee the male principle is deposited in that cell and there it

remains as long as it has any vitality, during the queen's lifetime, or what is left of it. When the queen sends an egg down one of the falliopian tubes she can by the power of her own will either bring it in contact with that male principle or pass it by untouched. Every egg that comes in contact with the male principle becomes impregnated and the result is a worker bee. When the queen wishes to deposit drone eggs she passes the egg on without it coming in contact with the male principle, the result is a drone bee. When a queen gets old and tens of thousands of eggs have passed down these tubes and come in contact with that male principle, it becomes exhausted, its vitality is gone, and the eggs may come in contact with it and not be impregnated with it. That is the reason why old queens lay more drone eggs than young queens. The old queen, following her instinct, whether the egg is impregnated or not, deposits the egg in a worker's cell. That is my reason why an old queen lays more drone eggs than a young queen and why drone eggs are sometimes deposited in worker cells.

Rev. Mr. Clarke—I think one of the mistakes of modern bee keeping is the disposition on the part of bee-keepers to think that their knowledge is better than the instinct of the bee. I think the instinct of the bee teaches her when it is time to supersede an old queen more correctly than we can find out when it is to be done. My experience agrees with Mr. Pettit's in regard to the very great vitality of some queen bees. I have had queen bees three and four years of age, as he has said, better than any one year old queen and yet we have got eminent bee keepers who make a point of superseding every queen at two years old.

Mr. Matheson or Hutchinson of Michigan every year sells a batch of two years old bees because he wants to put in younger ones.

Mr. Gemmell—Are not the queens that he sells over one year old? He got queens from the south in the spring and sells them at one year old.

Rev. Mr. Clarke—It is the queen's second year of service.

He sells those queens just when they may nicely be expected to be entering upon their best stage of usefulness; that is the point; I don't care how old they are. He sells them and subjects them to all the check that there is by shipping; after they have been sold and shipped they are not anything like so good as when he shipped them because they have had a very great check,

Mr. Gemmell—I would like to correct Mr. Clarke in regard to the queens. The reason Mr. Matheson gets those queens

from the south in the spring is because he hives his swarms on starters and with a young queen he gets less drone comb; another reason is he does not get nearly so much swarming with the young queens; that is his object in getting rid of the old queens.

REPORT OF COMMITTEE ON BY-LAWS.

Moved by Mr. Darling, seconded by Mr. Clarke that the Association go into committee of the whole and discuss the by-laws clause by clause.

ASSOCIATION IN COMMITTEE OF THE WHOLE.

Mr. Evans in the chair.

Mr. Darling read the by-laws clause by clause. Clauses 1, 2 and 3 adopted as read.

Mr. McKnight moved in amendment to By-Law No. 4 that "The board of directors shall consist of nine members who shall be elected at each annual meeting by a majority ballot vote of the members present. Any officer or member may be elected a director." Amendment lost.

Clauses No. 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, and 21. Adopted as read.

Mr. McKnight moved that clause, No. 22, be struck out. Carried.

Clauses Nos. 23 and 24 adopted as read.

Mr. McKnight moved, seconded by Mr. McEvoy that the committee rise and report progress. Carried.

The Committee of the Whole rose.

The President in the chair.

Chairman Mr. Evans reported the adoption of the by-laws as read, with the exception of by-law originally numbered 22 which was struck out.

Mr. McKnight moved, seconded by Mr. Evans, that the report as amended be adopted. Carried.

REPORT OF COMMITTEE ON HONEY LEGISLATION

presented and read by Mr. S. T. Pettit, chairman of the committee, and referred back for the purpose of striking out certain objectionable clauses contained therein.

Convention adjourned to meet again at 8 p. m.

EVENING MEETING.

8 p. m. the president in the chair called the meeting to order.

PRESIDENT'S ADDRESS.

A presential address is generally brief, but there is so much of importance to be said to those who make bee-keeping a calling, and it is gentlemen of this class, to a large extent, which comprise the membership of the Ontario Bee-keepers' Assn., the largest and most influential organization of its kind in the Dominion, that I cannot

resist the temptation to occupy your attention for some time.

The recognition of the dignity and importance of a calling is largely dependant upon what those who engage in it make of it. Some are still looking upon bee-keeping in the same manner in which it was regarded in the dark ages: they concede that the natural history of the bee is a fascinating study; that honey is an article of food for the table of the Gods and occasionally for ordinary mortals. If these people keep bees they do so in the old fashioned way which does not consider that care, skill, and experience are necessary factors in success. The great all-absorbing question with them is, shall luck be with or against us? Then there are those who are adopting modern methods and modern appliances. By this I mean the movable frame hive, the honey extractor, and similar improvements, but who forget to arm themselves with the information necessary to the use of these appliances to the best advantage.

Many more, in fact the majority of our Bee-keepers, are resting peacefully content with the information which they at present possess. True, very few think that they know all about the management of bees but they consider it impossible to solve questions of this nature, and, with very few exceptions, they fold their hands in silent inactivity content to grope their way in comparative darkness when with a little exertion valuable light may be thrown on their pathway.

Ladies, and Gentlemen, as we draw aside the veil of the future it is no utopian dream to see in the future of bee-keeping: advancement far exceeding that which the past has brought forth. The hastening of this time rests largely upon the wider recognition of its possibilities and upon our showing by aggressive work our faith in them. Some will claim that honey should form as important and extensive an article of food as butter and cheese, and further that it is only the lack of education, the need of having the attention of the public drawn to honey, which prevents it being used three times a day upon the tables of the various homes of our Dominion. There is no doubt but that if the attention of manufactures of such articles as confectionery, vinegar, liquors and tobacco were drawn to the usefulness of honey it would lead to a hundred fold increase in consumption.

Dairying in Canada not many years ago was looked upon as insignificant, meriting no great support, and with no future of consequence before it. As dairymen have triumphed, so may we, if we only

(Continued in the next issue.)

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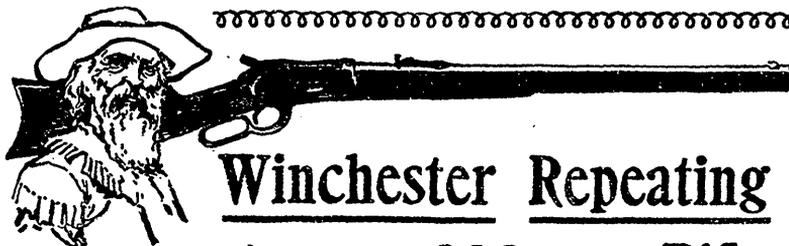


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