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CANADIAN BEE JOURNAL

PUBLISHED MONTHLY.

NEW SERIES
VOL. VI, No. 9.

BRANTFORD, ONT., MAR., 1898.

WHOLE No.
397

During the last moments of the Ontario Bee-Keepers' Convention, at Hamilton, and with the knowledge of its importance, only a limited number, a somewhat important matter to bee-keepers generally came up. It was in connection with establishing and properly running a bee department at the Dominion Experimental Farm, Ottawa. At the Convention Mr. R. McKnight, and another gentleman thought we did not require such a department or such a man. In our estimation bee-keeping, honey, etc., will never be placed in its legitimate and proper light until it receives the recognition that other departments of the farm have. To single out one department such as poultry, fruit-growing and the like, and not another, to favor one department over and above another, will make it appear in the public eye as if it were unworthy. No department of the farm can show stronger claims than bee-keeping. It takes nothing from the fertility of the soil, disposes no other crop upon the farm, can be carried on in districts where the soil is not fit for cultivation is limited. Then it is of great value to the fruit grower. In many places we have one of the best and most wholesome of carbonaceous foods. What could be expected from a department at the Experimental Farm properly equipped? It will take advantage of every opportunity to keep honey before the public, to increase the consumption of the same, and make every effort to open up our domestic and foreign markets. Our United

States friends are shipping honey by the carload to Germany and other European countries. In Canada some seasons one district is overstocked, another has no honey, because no effort has been made to create a market or distribute in a proper way. Then we want that department to carry on experiments in bee-keeping, looking to the cheapening of production and bettering the quality of our honey. By improving the quality we will increase the demand and those producing the poor will no longer pull down the reputation of the honey generally. Then such a department can save money to the country by keeping those out of bee-keeping who will not give it the necessary care and attention, and by helping those who are ready to devote care and attention. We do not wonder that Mr. McKnight should give it opposition, and that he should say the editor of this Journal should never be in charge of the department at Ottawa. Because he opposed the Foul Brood Act, the Spraying Act, the Pure Honey Bill, does not say he is wrong in this matter, but the Ontario Bee-Keeper's Association in open convention and in full meeting, decided unanimously contrary to him the year before. Now this is a matter of vital importance to every man keeping bees or going to keep bees; it is important even to the fruit grower, and to any one likely to consume honey, and of importance to every one interested in the development of the country. Let bee-keepers write, and get anyone else to write who will take

enough interest in the matter, in asking the Government to properly establish an apianian department at Ottawa or not to establish it. Write at once to the Hon. Sydney Fisher, Minister of Agriculture, Ottawa, and to your M. P., no matter what side of politics he is on. In justice to everyone I will add that Mr. McKnight and some of the members of the Oxford Bee-Keeper's Association advocated the appointment of Mr. John Newton, Thamesford. We left the room before the vote took place, so everyone would feel free to vote as he saw fit in our absence, and we are told seven was the total vote for Mr. Newton. There is, of course, the entire Dominion to select from. State if you wish who you think would best serve the interests of bee-keepers in this position, or leave this part of the question out entirely, but act at once in the matter of writing, and induce everyone else you can to write also.

* * *

Thousands and tens of thousands of dollars have directly been lost to the Province of Ontario alone, by Bee-Keeping Requires to be Understood. having had the idea circulated

by certain influential men, that bee-keeping required neither skill, experience, study or time. When we take the Dominion at large, the sum is much increased, and the province of Quebec will furnish a large portion of this. We say nothing of the benefit the fruit grower would have derived from the keeping of bees. Through the non-development of the industry we are allowing other countries to establish themselves in the world's honey markets; another indirect loss. We have had even the Dominion Government against us. The Dominion Experimental farm has been established for many years, and bee-keeping at first received no recognition. Some four or five years ago, however, bees were added to the list of agricultural branches. But how was it done? No experienced apiarist was appointed, but men were put in

charge of it who had absolutely no practical experience as bee-keepers, were known to no one as successful bee-keepers. The bees under their charge were added to their former duties, which were supposed to take their entire time, the one as Dominion Entomologist, the other as farm foreman. It may be argued that these men have done their work well. Prof. Fletcher is known as one of the most competent Entomologists of this continent; he is a gentleman in the highest and truest sense of the word. We believe everyone, irrespective of party believes this. Mr. Fixter may be quite as competent in his department, although in his position he is less known, as he comes less in contact with the public. The fact, however, remains, that past Governments have by their action, been endorsing the statement which has been so injurious, that it requires neither experience nor skill to keep bees. Nay, it has gone even a step farther: it has actually set itself up as believing that these very men can instruct others in the way of keeping bees. That is how the lamentable error crept in the Dominion Experimental Farm reports, of advocating heavy foundation for sections because the least percentage of wax was added. They simply did not see the practical side, that it was of much greater value to get up the reputation of comb honey and not have a heavy piece of wax as a base to the comb. Every industry must largely fight its own battles, and bee-keepers will be no exception. The Dairyman, live stock men, poultry men and the fruit men have fought for a place and development, and are now developing their industries. As far as the Dominion Government is concerned it has, up to the present, done us infinitely more harm than good. Because we require no cold storage to market our produce, is it just that we receive no help? If bee-keepers are satisfied then the value of the honey bee to the fruit grower will be looked on as secondary, and honey is to continue to be looked upon as a luxury,

then the bee-keeping industry will become disorganized. One section of the country will be glutted with honey one year, while another has none, and next year vice versa. If we think something could be done to benefit bee-keeping by having the Government recognize it as a branch of agriculture worthy of the attention of an intelligent person, and by appointing someone to look after it, let bee-keepers act as suggested in another editorial. If they think the reasoning of the editor is not correct, let them reason it out for themselves and act accordingly.

On another page appears an illustration of a new hive cover, from which the galvanized sheet on **The Holtermann top** has been removed, **Hive Cover.** also the packing.

For years we have been trying to find a hive cover which would be water tight, fairly heavy, and which would act as a protection from heat and cold. In addition to the above it was necessary to have the cover cheap. This cover should answer the purpose in every respect. It has two end and side pieces. The side pieces have two grooves about half an inch from the lower edge, and into these, boards are slipped which form the bottom of the cover. The one end piece is nailed after the packing has been put in, or the galvanized iron top may be put on after the packing has been put in place. Now as to the packing. We believe the cheapest packing would be fine ashes, sand or loam, with a good sheet of paper below and above the packing. Wool or charcoal is very good, but more expensive. The cover slightly telescopes over the super or hive. There should be a honey board over the frames. These can be painted a dark color and during late spring or early summer, when the sun is shining brightly, the cover can be removed to allow the painted honey board to absorb the rays of the sun. During hot weather the cover can be raised at the back, and an entrance block placed between the honey board and cover. This

cover will be supplied with hives as per the Goold, Shapley & Muir Co., Limited catalogue for 1898.

We have had many enquiries as to what we now think about the no bee way sections. It is unreasonable **No Bee Way** to suppose that the bee **Sections** space, secured through an attachment to the separator instead of the section, would give a better filled section. That part of the argument falls to the ground. If you like to experiment and are willing to have a variety of fixtures about the apiary, and are willing to run the risk of having to throw these fixtures away if they do not suit you, all right, but do not get into odd sizes of sections. We have just about got out of some sizes not square, such as the Richardson and $3\frac{1}{2} \times 4\frac{1}{2}$. In the interests of bee-keepers it is desirable to have uniformity as much as possible. Go slow, you can afford to look on for a season.

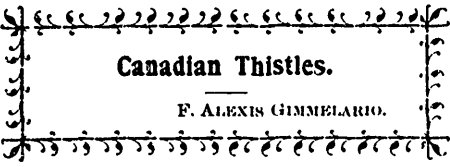
The Pacific Bee Journal for Feb'y is to hand. On the front page it reports the sale of some carloads of **Honey by the Carload.** honey.—“In 1897 seventy-five car-loads of honey were shipped from one county in California alone.” “Fifteen hundred lbs of wax to Germany.” Another shipped a carload of extracted honey to Germany. From Oceanside, Cal., —“Two carloads, one of comb and one of extracted honey, shipped this week.” The California Bee-Keepers Exchange sold since October twenty car-loads of honey.—Would it not be well for us to have a Bee-Keepers' Exchange? A little more system in marketing would give us better returns.

The Goold, Shapley & Muir Co., Limited,
Brantford:

I might say here, that I believe the C. B. J. is one of the best monthly bee-journals that is published.

R. A. MORRISON.

Inverary, Ont., Jan. 29th, 1898,



Canadian Thistles.

F. ALEXIS GIMMELARIO.

ORDER SUPPLIES EARLY.

By the time this number of THE CANADIAN BEE JOURNAL reaches its readers, the first month of what is generally considered spring will have arrived. Apiarists possessing fifty colonies or more, will, or ought to be, making calculations and preparing for what we all hope will be a good season.

A great saving of anxiety, to say nothing of a probable loss of a portion of the crop, will result by timely attention to what may be necessary when the proper time arrives for moving swarms, supplying sections and frames with foundation, etc. The above rule will apply to the small producers with equal force; in fact, very often, they are the ones who send in these orders last, and expect to be served instantly. I do not suppose, however, that the above advice will be accepted any more than it generally is, but I will relieve my conscience by stating, that those who wait until the last moment, are the ones who will suffer most by their negligence.

A MID-WINTER FLIGHT.

The weather for the week ending February 12th, was a marked contrast to the one just preceeding it, giving the bees an excellent opportunity for a mid-winter cleansing flight, which in my locality, was freely indulged in, especially on the 10th inst, to the great delight of the insects.

I must confess that it afforded me pleasure to see the manner in which they availed themselves of the opportunity, as the last sporting spell of any consequence took place on or about the last of November. Of course two and a half months is not too long for bees to be confined to their winter quarters, providing the stores are of good quality and abundant in quantity, as well as the hives having been timely and properly packed. At the same time a good flight is a great aid to colonies having late gathered stores, and a benefit to any colony in normal condition, as brood rearing receives a stimulus which instead of doing injury as in an earlier stage of the winter, results in producing young bees at a time when they will be of

benefit in replacing the older ones as spring approaches.

MACHINE FOR SCRAPING SECTIONS.

Improvements are the order of the day, and we now have illustrations in the American Bee Journal, Gleanings, and the Review, of machines for removing propolis from sections of comb honey, invented by Messrs. Aspinwall and Golden.

Anything to save time and labor is a bonanza now-a-days, and an apparatus for serving such an end is not to be "thrown under the fence" until it has had a fair trial, or the day arrives when we can harvest choice comb honey free from propolis altogether, either by inventing new supers (of which we now have galore), or by rearing a non-propolis gathering race of bees.

It is a well known fact that some colonies, apparently of the same strain, or race, are much worse daubers of the resinous substance than others, and that localities and seasons also differ in respect to the amount utilized. One thing appears certain, that in order to have a minimum of glue we must have a good flow of nectar, and have the sections removed as soon as the harvest is over, if we desire as little work as possible on this line.

FOUL BROOD ONCE MORE.

The December issue of the Review contains on its 10th birthday, two articles relating to foul brood, furnished by Messrs. Taylor and Baldrige, which are worthy of mention, and are certainly worthy of perusal. I cannot, however, agree in toto with Mr. Taylor's statement that it is unnecessary to first place the bees on starters for say 4 days (or less) before allowing them to work out foundation in order to effect a permanent cure.

Now I do not wish to dispute the success that Mr. Taylor has had, but I do know for a fact, to follow such advice in all cases, and under all circumstances, according to my own experience, is not sound or judicious, and I therefore make this statement in order that amateurs may not be led astray.

Mr. Baldrige's way of treating the disease is novel to say the least of it, and although I have never practised his method, still I see no reason why it should not succeed. The fact that Mr. B. says it is a success in his hands ought to be a sufficient guarantee for giving it a fair trial.

I believe, and it is now generally conceded, by those having had ample experience with the disease, that if the affected honey remaining in the diseased colony

can only be got rid of, and the bees transferred to a new clean hive, without utilizing the honey carried away with them for brood rearing, that said colony to all intents and purposes will become a healthy colony. Instead of shaking the bees out of the old hive, or hiving such as swarm naturally onto starters, or sheets of foundation, Mr. B., very ingeniously, decoys the field bees from the old hive into the new one, on the old stand, unbeknowns like, and they have no alternative but to remain where put, until every single bee is transferred to the new abode, and that too with an empty honey sack. There is one beauty about the process, and that is the fact that a good crop of honey can be secured, (with no increase of course), providing the colonies are not too badly affected and there is any nectar to be gathered. The advice given not to lose one's head when a colony is found showing traces of the malady is sound. On the other hand, it is better to be over anxious and on the alert than to be over burdened with apathy and negligence. "A stitch in time saves nine," so the old adage goes.

QUEBEC FRUIT GROWERS.

Annual Winter Meeting of the Society at Lachute

A report of the above society is given in the Family Herald and Weekly Star. The following is a portion:

Mr. Percy H. Selwyn, Ottawa, and Mr. Gilbert Wintle, two experts in apiculture, read interesting papers on bees and bee-keeping. During the discussion which these papers called forth, a motion was passed in favor of legislation similar to that now existing in Ontario to protect bee men from the danger involved in spraying fruit trees during bloom—a practice which is destructive to bee life, and injurious to the fruit trees themselves.

An interesting address was given by Dr. Fletcher, botanist and entomologist of the Experimental Farms, on insects injurious to fruits in 1897. The speaker dwelt on the importance of proper spraying as the only means of preventing the depredations of insects on fruits and fruit trees. He agreed with the resolution of the society that trees should not be sprayed in bloom as it injured the honey bees. He dilated on the advantages of cold storage for fruit, and predicted great profit from it to fruit growers and farmers.

[Some in Ontario are rather inclined to

think that Quebec is behind Ontario in agricultural progress. True, they have no bee-keepers' association at present, but we must congratulate the Fruit Growers upon taking this matter of spraying at the right time, in hand. They evidently recognize that the honey bee is of great benefit to the fruit grower. In connection with this matter, we must not forget the able manner in which Doctor Fletcher and Messrs. Selwyn and Wintle, presented the subject of bees at that convention. Would that more of this were done. -Ed.]

Testimonials on the New Process.

We have not space in this catalogue to give place to the hundreds of testimonials praising the new-process foundation; we can, therefore, give only a few from prominent bee-keepers; and here they are:

Mr. Thomas Wm. Cowan, editor of the British Bee Journal, and author of the British Bee-Keepers' Guide Book, a work that has had an enormous sale, and been translated into six languages, says:

I have had an opportunity of trying the Weed foundation. I like it very much, and certainly think it is all that is represented.

THOS. WM. COWAN.

Editor British Bee Journal.

Mr. F. Sladen, of Ripple Court, Eng., pays the new Weed process a very high encomium.

Your Weed foundation, despite a strong prejudice in several quarters against it on its introduction, has literally taken the foundation market by storm. It has three great advantages over our home made product: The bees take to it faster; there is more surface to the pound, with less liability to twist, and it is literally cheaper in most cases than English foundation. Its enemies have given it this last pull. There is also another point about it to be noted. It is of uniform quality, and the consumer knows that he is getting genuine beeswax with it.

F. SLADEN.

There is little question but that it pays to use foundation in full sheets in the brood frames and sections, especially the latter.—Testimonials from A. I. Root's Catalogue.

We have many more of our own. -See our 1898 Catalogue and Price List. Wax made up.

Address,

GOULD, SHAPLEY & MUIR Co., Limited,
Brantford, Canada.

Notes and Pickings.

—D. W. HEISE.

When the question as to what premium should be given to the members, was up for consideration at Hamilton, I was deeply moved to offer a suggestion, and was only prevented from doing so by a feeling of extreme nervousness, highly seasoned with modesty. But I am now at home, and the nervousness has somewhat abated, and the modesty, —well, it has taken its flight.

My suggestion would have been that members be supplied with a number of honey leaflets, (honey as food and medicine), equivalent in value to a bee journal. As regards the giving of a journal, I believe in a Canadian Society. A Canadian publication should always have the preference. But is it not a fact that nearly all the members of the O. B. K. A., are also members of some local society, and receive the C. B. J. through that society. Therefore if the O. B. K. A. supplied its members with a liberal number of such leaflets, by their distribution among the public, the consumption of honey, in only a few years, might be increased infinitely more than could be brought about in a lifetime by a bee journal in the hands of bee-keepers only; because you cannot get the public nor bee-keepers to subscribe for an agricultural journal through which they might be educated to the use of honey. What do you say, brethren? Shall we try the experiment of the honey leaflets another year? Hands up, or down? Editor York says, "It's a good thing to talk honey, as well as to eat it." But you'll find that the "eat" will very naturally follow the "talk" on the part of the other fellow. If bee-keepers would constantly carry a few copies of the pamphlet "Honey As Food," and hand it to their friends, or even strangers, we think they would be surprised at the interest it will create in honey, and how soon its readers will want some. We have tried it, and it does the work.

[A Canadian publication can only be secured if Canadian bee-keepers will help in every way to support it. The circulation of the United States journals is so much greater that they can afford to go to greater expense in publishing, and, aside from that, they are patriotic enough to

support the production of their country first. In Canada we have only about one bee-keeper, where the United States has ten. There is no doubt the G. S. M. Co. could make more money by selling the Canadian Bee Journal to a United States publication and the editor is positive that he could make a great deal more by discontinuing the editing of The C. B. J. and devoting half the time it takes, to writing for other bee journals and agricultural papers. If there is anything like a general wish among bee-keepers to discontinue publishing the C. B. J., I know of no one who will stand in the way. If, on the other hand, bee-keepers wish to have a CANADIAN BEE JOURNAL to look after Canadian apicultural interests, let them support it and make it what it should be. Some appear to think to the contrary, but the fact remains that the editor of this journal has never refused publication of any article criticising anything the editor has said. We shall be pleased at any time to have such, with reasons for statement.—ED.]

The Boiler of Beedom quotes from the British Bee Journal, an account of J. McArthur, of Toronto, securing an average of 250 pounds per colony. This large yield may mean anything or nothing. How many colonies were included in this average? Was it 2 or 3 set apart and managed expressly for a boast, or was the entire apiary of say 50 or 75, or even 20 colonies, taken into consideration? In the absence of better data, I think it would be well to take this "dose" with a little salt: it may aid digestion somewhat.

[Yes, statements from such a source had better be taken with a grain of salt. Those of us who have some knowledge of the stories, prefer taking the salt without the "dose."—ED.]

Charles Inman, A. B. J. 13, thinks that exposing honey and comb in the bee yard during extracting operations (as I take it after the honey flow has ceased) instead of inducing the bees to rob, rather prevents that mania. He places his comb after having been extracted, close to the hives, for the bees to clean up. He says this diverts their attention from the hives being opened, where they trouble very little. This might produce the very effect Mr.

Inman claims for it; but did anyone ever hear of a more expeditious way of spreading disease through a whole apiary, if any should exist without the knowledge of the apiarist?

Dr. E. Gallup, A. B. J. 20, gives us the lesson that rich soil produces more nectar than poor soil. One year he harrowed in some buckwheat in a hog lot, and it resulted in the production of more nectar to the rod than he ever saw. The perfume could be scented for rods, and it was literally alive with bees. While another patch seeded at the same time, but the land not manured, was visited by scarcely a bee. The same thing, he says applies to white clover. While in Iowa, he seeded a six acre lot, where sheep had been yarded for two years, with white clover, and the way the bees worked on it was a caution; but outside the enclosure, scarcely a bee could be found on that blossom. This is indeed valuable information for those who can and do plant and seed for bee forage. If sweet clover will secrete the nectar, when sown on poor and sandy soil, that it gets credit for doing by those who have experimented with it, what, oh what, would it do if sown on good soil, well manured?

Page 22, A. B. J., Doctor Miller is asked how to make or build an over-shot water wheel. He replies thus: "If you want to know the kind of woman to select for a bee-keeper's wife, I have some good advice on tap, but the matter of over-shot water wheels is beyond me." I want to holler loud enough so the secretary of the York Bee-keepers' Association can hear me, that he had better avail himself of the doctor's fullness re bee-keepers' wives, and make haste to apply his ear and mouth to the tap, lest that valuable commodity in time should ferment and bust the doctor, when all might be wasted. Look sharp, Luc; see?

The nut-crackers, in A. B. J., are again to the front with their answers as to the value of drones in a hive, for the purpose of stimulating a colony in early spring, as well as benefitting it by the extra heat they generate. Five say no; Dadant & Son say no, no, no; five say yes; and four would rather have the same number of workers; three are on the fence; two are—well, I don't know where they are. E. T. Abbott truthfully says, "In a cold, backward spring there would not be any drones." This would surely be the case. Even though an abundance of drone comb should be present, I would rather run my chance by securing all the workers I can in early spring, to keep up the heat, and therefore want very little drone comb in my hives.

Mr. Editor, I want to take back every kind word that I ever said about that Goliath who runs the stew pot for beeedom in the A. B. J. On account of said journal being a weekly, and this one monthly, he is mean enough to take advantage of me by stealing a goodly portion of my very best thunder. It just makes me mad when I have to strike off a lot of matter from my copy, just because some other fellow has rebashed it. I am looking for some way to get even with that pirate.

So Mr. R. C. Aiken thinks there is something wrong with my head. Perhaps so; but I am glad to know that the defects in my head had the wonderful effect of bringing more of the perfections out of his own cranium. It is only fair to Mr. Aiken to say that I had not read his essay, only heard it read at Buffalo, and therefore wrote from memory when I criticised his new scheme for producing extracted honey. I am not sorry that I did offer said criticism, for has it not had the effect of leading him out? And in that reply on page 172, he goes into facts and figures, to prove that his scheme is plausible; and I frankly admit he has largely succeeded in convincing me. If he had gone a little more into details when preparing said essay, there would have been very little room for criticism. There are, however, a few statements in his reply where I think he lays himself open to contradiction, but modesty prevents me from taking them up, because I consider myself away beneath Mr. Aiken in apicultural knowledge. In conclusion, I wish to thank him for that reply to my criticism.

Say, but ain't a few of those big Michi-ganders giving it to the plain section and fence, calling the fence such names as "Glue Traps," and the section as things used 30 years ago and discarded as no good. When anything deserves a kick, it seems to be left to the high-kickers of Michigan to do it.

[Even if they are only Michi-ganders, I believe their head is level, on the plain section and glue trap. At least we can afford to wait a year and see.—Ed.]

Notice of Change in Plans.

By mutual agreement Mr John Newton, Thamesford, Ont., will not be with the Goold, Shapley & Muir Co. Limited, Brantford, Ont., but will continue in business as before. Those having done business with Mr. Newton, and others, can get prices by writing to him.

ADVANTAGES OF EARLY SETTING OUT.

The Condition of the Brood Chamber in Early Spring.

Those who are known as our most advanced and progressive bee-keepers' (and many of the more conservative) have advocated leaving the brood chamber of the hive undisturbed during the cold and changeable weather of spring, even to leaving untouched the sealed quilts thrown on the hive, to prevent as far as possible the escape of the warm air.

With great reluctance we decided during the past spring to make a series of extensive experiments as to the effect certain conditions would have upon the amount of brood reared in the hive. The first bees were set out on the eleventh of March; and the remainder at varying intervals during the next three weeks. The results from the various settings out showed a very marked difference—so much of a difference, in fact, that, in almost every case, after examining the brood chamber, we could tell the date of setting out. Upon examination of the colonies when first placed on their summer stands, brood was found in only one or two hives, and these showed indications of imperfect wintering. The inspection at that time went to show that in healthy cells wintering there is no brood rearing. The day the bees were set out they had an exciting and cleansing fly, after which the queen began to deposit eggs and kept this up for a day or two, unless followed by weather unsuitable for flying. During the past spring, owing either to continuous low temperature or wet weather, the bees were confined for as long as a week at a time. The different stages of brood in the hive, upon inspection, gave indication just when the bees were ready to fly, the stimulus from flight, aided probably by the increased temperature, having a marked effect. Some colonies were fed diluted honey by means of a feeder above the brood chamber; the results were very beneficial, and the brood chamber under this condition was enlarged by the bees. Great care, however, should be taken not to overestimate the value of one season's work.

The spring of 1897 was exceptional; the weather was too wet and cold to allow the

bees to fly, and yet not cold enough to make it likely that the brood would chill in the hive. Another season, with more frequent opportunities to fly and greater extremes of temperature, with feeding added, there might be the danger of enlarging the brood chamber to such an extent that, during cold days and nights, a portion of the brood might chill to the great injury of the colony.—Ontario Experimental Apiary Report for 1897.

Mistaken Identity.

Editor E. R. Root, of Gleanings, some thought at the Buffalo convention resembled another member of that meeting, Mr. D. W. Heise, of Canada, or vice versa. After referring to this, and the comment we made thereon in these columns some time ago, Editor Root says this in Gleanings for Dec. 15:

"By the way, this is not the only instance of mistaken identity at the Buffalo convention. Two men, of about the same size and height, who attended, looked decidedly alike; when the two sat near each other it was almost impossible to tell which from t'other. One was a quiet, genial, pleasant man; the other was always bobbing to his feet, and making himself notoriously disagreeable—always throwing out objections, and never harmonizing with the discussion. I said to the first-mentioned person, after I had learned to distinguish one from the other, 'Why, you look almost alike——.'

"I am not flattered," said he. 'I have no sympathy with his ways of doing. Such men are always a bore to a convention, and a drag to good discussion.'

Yes, and we were also remarking about the resemblance to that "quiet, genial, pleasant man," when he said he felt like going home long before the convention closed, as soon as he learned that he was being mistaken for the one "making himself notoriously disagreeable." And we didn't blame the first gentleman for wanting to get as far away as he could from his disagreeable "double." Perhaps it was kind for the convention to endure as much as it did from the disturber, but it certainly was not justice to those who had come a long way to listen to helpful discussions. We hope that hereafter there may be no more disturbing elements present.—American Bee Journal.

[The editor of the Canadian Bee Journal wishes the disagreeable person mentioned in the above had been named.]

THE PLAIN SECTION.

S. T. PETTIT.

I hope our bee keepers may not loose their heads and run after that silly fad—the plain section.

If the bees are crowded, as I usually do mine in order to get well finished sections, the cappings, in many cases, would be fastened to the fence. A one inch projection on the sides of the sections is the proper thing. This talk about less peep holes and better finished sections is a' nonsense.

A tall section may look a little better but there will be no more money in it in the end. In a tall section, the foundation is more liable to sag and curl out of shape than in a square one. That plain section is a delusion and a snare, in every count; if it is lighter, then you must put in more honey to make it up. It takes less space in shipping-cases, but it is more exposed to injury in many ways, and more than that the vaneer will make up in cost. So after all, the gain to the poor bee-keeper is only imaginary and round. But of course every change makes business you see.

Belmont, Ont., Feb. 21st, 1898.

[We dread the thought of bee-keepers' adopting this style of taking comb honey because it will be a disappointment, and they will loose money, but if they are determined to try these sections we can supply them at the same price as others.—Ed.]

Chaff Hives.

Editor Canadian Bee Journal.

Please let us know in your next issue, what hive is considered best for wintering bees out doors, in this part of Ontario. Is there anything better than the original A. I. Root chaff hive. Also, is it better to use paper and the thin strips underneath sections in the shipping crates, when shipping honey.

Yours Truly,
H. A. MICHENER.

Low Banks, Dec. 29, 1897.

In answer to the above I would say that I do not favor the chaff hive. Throughout Ontario, outer cases are used by our best bee-keepers (at least the majority) in preference to these hives. To begin with the outer cases cost less: when not necessary, they can be removed, making the hive more convenient for handling. I prefer for packing, dry forest leaves, and

have enlarged the entrance during the swarming season, by means of the wedges at the sides; the impossibility of doing this with the chaff hive would alone prevent me from using them. Any man who keeps abreast of the times must change his methods and views, and the Roots have not been at a standstill. I believe they prefer the single walled hive with outer cases. As to the shipping crates for comb honey it is decidedly better to use the crates having the paper tray and strips of wood underneath the sections to keep them out of any dirt that may be caught on the paper. We cannot be too particular about getting comb honey up in a nice shape for market. Leaky section crates give a bad impression.—Ed.]

Bees Pay the Rent.

The most hopeful fact of the movement in Ireland is the success of Congested Districts Board. Its fixed income is only \$206,000, and it works "for love," yet already it has managed to redeem parts of Ireland from destitution, is improving the quality of potatoes and introducing industries, like bee-keeping. Farmers in some places actually are paying for their holding with the proceeds, the honey bee thus replacing the pig as the rent-payer.

[The above is going the rounds of the Canadian Press.—Ed.]

Loveland, Col., January 26th, 1898

Mr. R. F. Holtermann:

I want to tell you that the matter of selling honey in the candied state is being made a success in this state. At least two of us in different localities worked out the matter and made a success of it. Now if we can get a cheap retail package that poor people can afford to buy with their honey we will have gone a long way toward making a staple sweet of extracted honey.

R. C. ARKIN.

[Our new package will answer the purpose in the above respect.—Ed.]

I subscribed to the CANADIAN BEE JOURNAL before you were its editor, and ever since, and I am very well pleased with the CANADIAN BEE JOURNAL now. Your extracts of the proceedings in convention I find especially well made up and interesting.

IVAR DIESLANDERE,
Editor Swedish Bee Journal,
Yonkoping, Sweden.

Dec. 29th, 1897.

Eighteenth Annual Meeting

OF THE **ONTARIO BEE-KEEPERS'**
ASSOCIATION



Continued.

Mr. Dickenson—The plan I adopted is to draw a plan and mark the number of hives, 1, 2, 3, etc., and put them in the cellar in that shape, and the plan will direct where the hives should go. With regard to spring packing, I like to have a large outside case to put over the hive.

Mr. Hall—Try a few next spring, and let the sun get at them.

Mr. Dickenson—The expense is just in once getting the cases. I have got two cases; one black, it is double; I have got another just simply a rough board case which goes over the hive in the spring. I would like to discard that system of spring packing but I find that when I have any surplus honey that is not saleable I would like to feed it back at the proper time. I like to have them nice and comfortable on top, and therefore I find the spring case, or at least, what I use, comes very acceptable. One cover is just made of rough boards and the other is a little more expensive, but there is one feature about it, that there is only the one expense, divide that up into ten years and the expense is small, and the case is as good at the end of ten years as the first year, and I think there is quite a benefit from spring packing.

Mr. Gemmell—Why don't you pack in the fall?

Mr. Dickenson—I have tried it but I think I am more successful in the method I have adopted. I think likely that there are men who follow the business who are very successful at out-door wintering, but I fail to have been successful. I am very successful with cellar wintering and therefore I follow what I am most successful with.

Mr. Sparling—My observation would lead me to believe that the empty case put over, as you speak of it, in the spring, would be worse than useless.

Mr. Dickenson—We all know there are little features in connection with the business all through that a live man will be equal to. I simply go along on a nice sunny day and I take off the cover and let

the sunshine in. They are kept covered when the thermometer drops so low that I think there is nothing beneficial to the colony to have it face that. Sometimes in the spring we will have a week of extra warm weather, surprisingly warm weather, and breeding is going on and sometime after that we again have a low temperature, and it is to provide against that I have the spring packing.

Mr. A. Picket—As our friend here said, after all, the spring has much to do with the management of bees. I would ask what time in the fall do you usually put them in? I have learned from some bee-keepers that they have just recently put theirs in, and I would like to know whether any of you leave them out late, say to within a week of the present time, or put them in earlier?

Mr. Sparling—Mine have not been in a week; they have only been in since last Thursday.

Mr. Picket—How does Mr. Sparling cover them to prevent the escape of heat in the fall?

The President—Mr. Dickenson, how have you managed your bees for the last two months in taking care of the heating and preparing for putting away in the winter?

Mr. Dickenson—I put them in the cellar the 1st November and they have been very quiet ever since.

Mr. Picket—It was Mr. Sparling I asked the question of.

Mr. Sparling—At this time of the year there is no brood in the hives, the bees cluster together closely and there is no danger of the brood being chilled and they require very little protection.

Mr. Frith—What latitude are you in, Mr. Sparling, north of this or south?

Mr. Sparling—I am a little north of this.

Mr. Frith—Are you south or north of this Mr. Dickenson?

Mr. Dickenson—South.

Mr. Frith—Take the parallel of Toronto, and you have a great many more sunny days north of that than you have south of it. South of this we only average

about three sun-shiny days out of twenty. North of it, in proportion to the distance, you average a great deal more, and the same with regard to the spring. It makes a great deal of difference.

Mr. Dickenson—There is one feature in connection with the latitude that appears in our journals. I think some men will get wrong views unless the locality is mentioned. The difference in locality has a great deal to do with it. One man might have success in one locality on one system and another man may fail; in a different locality he may have to adopt a different system to succeed; that is the way I look upon it.

Mr. J. D. Evans—What is the reason attributed to the benefit of putting the bees out early? Do they breed quicker?

Mr. Hall—Winter bees in the cellar and open them in the spring and you find they generally have no brood. There are exceptions to the rule. When they come out for a fly they get a drink, and when they get a drink they thin the honey, and when they thin the honey they feed the queen and she deposits eggs and when the larvae comes to maturity it is bees. By putting them out on the first of March, the eggs are laid and they are kept in there for three weeks and they cannot fly anymore, and by that time there is a race of young bees, ready to take the place of those that fly, and they gather water and feed, and the colony goes on prospering, and that is why I told you that at the commencement of the honey flow they will be two or three weeks ahead of those that are kept in three weeks longer.

Mr. Holtermann—This spring we did something which I never like to do, as Mr. Hall says. I examined the colonies, the brood chamber, from time to time during the spring. With regard to early setting out, year after year and year after year, we have set out earlier and earlier, and I am an advocate of setting the bees out just as quickly as they can get a good safe fly. We kept examining; we set out so many colonies in March 1st; we set out so many a little later, so many a little later still, and so on, and when we went through those colonies without looking to see the dates they were set out, we could tell by the condition of the brood chamber just when they were set out. For instance, on the 1st of March, say, we set out ten colonies, they had a good fly and either through activity or getting water, whichever you like, or whatever the truth may be, the queen began depositing eggs and then if they did not have a fly for a whole week

she ceased brood rearing, she ceased producing eggs, and then when another sun-shiny day came they had another fly and she began laying again, and so on until the brood chamber was extended. I am not prepared to say as to whether spring packing is a good thing or not. I do not know but I am inclined to believe that by giving top protection and not side protection the colony is more likely to be stimulated and rise into activity more quickly than if there is much spring packing, but I do not know whether that is the case or not.

Mr. McEvoy—What about these that are out all the time? In this part of Ontario, south of this line, I think they ought to be out all the time. Now, for my part, I like the bees south of this line packed on summer stands, they come into spring stronger and they will give a large yield of honey, taken on the whole if properly done.

Mr. Holtermann—I am not prepared to say whether that is correct or not. Mr. Pettit used to winter outside and Mr. Pettit winters inside now, and I have no hesitancy in saying that there is no one who can beat him in wintering bees any way, and he says he gets better results from the inside wintering than from the outside. In regard to the outside wintering, very early in the season when we dare not set our bees out, the sunshine comes to arouse the bees and they begin brood rearing much earlier.

Mr. McEvoy—We have a man here that I know for a fact winters his bees on summer stands and from forty colonies he took eight thousand pounds of honey and increased to sixty-two colonies; if there are any here who can beat that let us hear from them.

Mr. Dickenson—You save five pounds of honey on every colony by wintering inside. If I was going to winter out doors I would simply require my colonies to weigh five pounds more than what I can risk them safely at by putting them in the cellar. That is, at eight cents a pound, \$40 on a hundred colonies.

Mr. McEvoy—Take it as a general thing Mr. Dickenson is right, but you can pack these bees, you can put them into order, going through the winter, by giving them sealed stores and actually use just a little, if not less, than if wintered in the cellar.

Mr. Holtermann—A great many put their bees out of the cellar too late as a rule, and it is not fair to compare that kind of wintering with outside wintering.

Mr. McEvoy—As a rule, 'yes, you are right.

Mr. Dickenson—I don't find the spring case gives much trouble, my man and myself can go over one hundred colonies in a very short time. I explained I had two kinds of cases.

Mr. Gemmell—Try some without any case at all.

Mr. C. W. Post—I believe it is possible to pack a colony of bees in the spring and make a perfect little refrigerator of the hive and it can be done intelligently and I believe it is a good thing. I think your packing requires to be about two inches or three inches thick and put on very solid and allowed to touch the top of the hive, and have the top lid painted red or some dark color, and it will store the heat of the sun and retain it through the night. I like for top packing, to use dry forest leaves packed very tightly and at the bottom old woollen cast off clothing or something of that kind, and I think when packed in that shape it is away ahead of not packing them at all, or packing them loosely.

Mr. Hall—Are these cellar wintered?

Mr. Post—Or outside, either. I have a three inch cushion on mine that I winter outside and the packing comes tight against the top of the lid, and the lids are painted red.

Mr. Hall—How many stocks of bees have you?

Mr. Post—Three hundred and twenty-five.

Mr. Hall—If your packing was loose all around and not tight you would find that they wintered better; you would have more honey than you get now, although you get a lot.

Mr. Post—The sun on bright days in the winter will warm them up.

Mr. Hall—But there is sufficient warmth of themselves if you keep it there.

Mr. Post—It is too much like a refrigerator in my way of thinking.

Mr. Hall—Not if it is loose.

Mr. McEvoy—These men come from different places. In warm weather, let the sun straight at them in the spring and it is as Mr. Hall says.

Mr. J. Armstrong—When would you take the bees out of the packing provided they wintered out-doors?

Mr. Gemmell—I take mine out between the 24th of May and the 1st. June.

Mr. Post—I took mine out on the 1st. of August this year.

Mr. Newton—I take mine out between the 25th. of May and the 1st. of June. I have a neighbor about fourteen miles from

me who has never taken his off, and he always has a good crop, I must say.

Mr. J. H. Best—I am very much interested in the discussion that has taken place. In our locality we generally winter outside. I have never attempted cellar wintering, but I find as a rule that leaf packing, as was mentioned here by some, is superior to some other things that have been used. I have taken chaff and other different materials for packing, but I find forest leaves answers the purpose better than anything I have used. I take pleasure in moving that this paper be received.

Mr. Gemmell—I second that.

Mr. Alpaugh—After putting the bees out in the spring my experience is that it would be better to pack them from September until the time they are put in. What I have found is this, once the cold nights come on the moisture of the bees will condense on the honey on the outside of the combs for instance, and it will thin it if there is any uncapped, and, in fact, it will thin that which is capped, and that honey, before spring, will have time to sour, and in the spring that honey will kill your bees. Now, packing in the spring is no good for that, if your honey is all right your bees do not need any spring packing. If there is good honey, that has no moisture in connection with it, that is fairly thick and ripe they will spring all right, almost surely, but the trouble comes in the honey getting damp in the fall before they are set away or before they are winter packed outside. When I pack bees outside I take them as early as I can get them in September. I packed my bees this year in September and I have got leaves enough to pack another hundred colonies next year, that I can pick long before they fall. I couldn't use those leaves at all just then but they were handy and I gathered them quite easily. It is an uncommon thing to look ahead, but sometimes you have got to do that in this country.

There is another thing which is mentioned in the forepart of the paper. He says to have your colonies well stocked. Now I want to ask him how are you to do that or what is the necessity for doing it?

Mr. Sparling—Why do you object to having a strong colony of bees?

Mr. Alpaugh—Is that all you are going to answer to my question?

Mr. Best—Repeat the question.

Mr. Alpaugh—How are we going to make our bees strong in the fall, and what is the necessity for doing so? Are we to unite them if they are not strong, or are you to stimulate them by feeding?

Mr. Sparling—With me, we never fail to have a fall flow of honey.

Mr. Hall—You couldn't live in a place where it was cut off in the middle of July. (Laughter).

Mr. Alpaugh—My experience is the reverse. The bees with me that have wintered most successfully have been those that have been moderately strong, with a young queen, and plenty of stores. I have several times, although I have never mentioned it in this convention or any place before, I mention it now because I am getting old and it might be lost altogether, I have removed my colonies in the fore part of September, taking off the top story and setting it down on the old stand just to catch the bees that return from the old colony, when it was removed and when I got them there I would destroy them and there was nothing left in the old colonies but young bees and I found those colonies to grow into the finest colonies I have ever had.

Mr. Holtermann—What about those in which there are no young bees. Would you do that if you had almost all the young bees in one, and the old in the other?

Mr. Alpaugh—That does not occur very often. You will find in removing your hives at any time the bees will not all go back, there will be a sufficient number always left; they seem to find out in time that they are in a new place and commence to mark the location after a number have gone.

Mr. Holtermann—When you winter those colonies do you contract the brood chamber?

Mr. Alpaugh—I never spread brood and never contract a brood chamber.

Mr. Holtermann—What would appear to me to be a weak point in wintering as you state, is, and I confess that the idea first came to me from Mr. Newton, that you be careful and have your stores well ripened in the fall of the year and not absorb moisture. You have not got the bees there to cover all those stores and whatever moisture they expel is likely to be absorbed by the honey and prove injurious.

Mr. Alpaugh—You reduce that if you pack your bees early enough before the frosty nights come.

Mr. McEvoy—For years I have made it a rule to have strong colonies and those that were not up to the mark I united if they were not strong I would unite some of them, and I have come out with better stocks in the spring by going into better quarters with good strong colonies.

Mr. Gemmell—Just tell them now what you do with the bees when you double them up. How do you keep them from

breeding when it comes towards spring?

Mr. McEvoy—I go to a great deal more work. I make it a rule to remove the comb from the brood chambers and to give them sealed stores from the top stories and crowd them so that the queen cannot lay until further on in the winter and the bees are at rest and there is no larva. These bees winter better and there are more bees in the spring because they are not worn out by feeding larva during the winter.

Mr. Alpaugh—In regard to these old bees I find they keep dying off in wintering out side, if there is a chance at all; it is those bees that clog up your hives and if the hives are wintered properly they ought to be thrown out. Very often good bees lose their lives in that way.

I found that while some colonies went into the cellars strong in that way they came out very weak and I could account for it in no way only that good bees were lost with the dead ones, and that was what caused me to remove my hives to get rid of the old ones.

Mr. Hall—I concur in what Mr. Alpaugh says, in strong stocks, for instance, rather than unite them, we shake them off into the hive and take their combs away and let them die. We simply do not want any more bees in the hive than what are there. If there are enough bees to take care of the queen through the winter and enough to live on until they get another little growth in the spring we do not have to feed so much honey and they do not have to die on the bottom board. Medium colonies of bees are the ones that give me the honey the following season. The large number of bees very often consume all the honey in the spring in the cellar and are no use at all. A small quantity of bees with a vigorous young queen cannot consume the honey and therefore when they are put up there is food to feed on and multiply and feed the babies.

In the fall I never save any bees. If I want to destroy a stock of bees they are destroyed; I don't put them with any others.

Mr. Frith—This question was pretty well threshed out in the North American some years ago, and the very best bee-keepers all over the northern part of the Continent seemed to have agreed that what we require is young bees all through, the conditions being proper and that old bees are useless. I found it in my experience as Mr. Alpaugh has. If you have below a certain number, if you have only a few dozen you cannot expect them to keep up the heat nicely to supply vitality. If you have a good colony



W. J. WALTON, Scarboro Junction.
President York County Bee-Keepers' Association.



D. W. HEISE, Bethesda, Ont.
Vice-Pres. York Co. Bee-Keepers' Assn.



L. MAPES, Headford, Ont.
Sec.-Treas. York Co. Bee-Keepers' Assn.

of young bees in going into winter quarters and good stores there is no difficulty in wintering either indoors or outdoors. I think that was a decision which was almost universal.

Mr. McEvoy—I have no doubt if we took a vote on it here that nine out of ten would vote that the medium colonies would be the best. Now, it depends a good deal on how they are prepared. Mr. Hall said that the large ones did not do so well put in the cellar. I will agree with him. You take them just as they come off in the fall; you take a rousing strong colony with plenty of room in the centre of the hive and a young queen and put them in the cellar and that queen has got room to start laying and there is abundance of bees to keep it warm and that will break the cluster, and just as soon as it breaks the cluster the brood rearing goes on, the old bees wear out rapidly and a medium colony will heat that off, but have these combs sealed, stop the queen laying and these colonies will come out ahead.

Mr. Holtermann—Do you propose taking the younger bees and having a medium to even a weak colony, or would you say the same thing if you take a colony just as it is, old and young; would you then take a medium or fairly strong colony in preference to one from the lower side.

Mr. Alpaugh—I would just as soon have quite a weak colony as a very strong one.

Mr. Gemmell—He means a medium.

Mr. Alpaugh—You know what it is like about the time you have removed your old hive; that is the kind of colony I am speaking of.

Mr. Holtermann—Mr. Sparling suggests feeding back the honey to the bees in the spring under certain conditions. From what I know of what has been done in different parts of the Province, bee-keepers want to be exceedingly careful about feeding back honey. There are many who think they have no foul brood in the yard, they feel reasonably sure about it, they think they are quite safe and sometimes they are not. If they take extracted honey and they have one colony or two colonies they may get the slightest touch of that disease through that honey which they are about to feed back, and when they feed that honey back they may disease a great many colonies in the apiary. I always think that feeding back should be done with a great deal of caution.

Mr. Gemmell—If you do not feed honey you will have to feed sugar syrup and somebody will kick up a row,

Mr. Holmes—With regard to the matter of feeding, Mr. Sparling quotes from Dr. Miller in support of it. In so far as my experience goes in feeding, I have never ventured to feed back the cheaper grades of honey to dispose of it in that way. There comes in a little bit of danger, in as much as the bees from the other colonies pass up along, and they often get a smell of the honey and they invite their fellows to come in and take something, and they go away without paying for it seems to me there would be a danger of incentive to robbing; that is my experience in feeding. My experience is to feed a sugar syrup made from the best granulated sugar. You can then get a feed that is very cheap, as cheap as the cheaper grades of honey, and it seems to me to be a cheaper and better plan.

Mr. Holtermann—I do not think it has the same stimulating effect as honey.

Mr. Dickenson—What do you do with this unsaleable honey, if you have two or three hundred pounds of it?

If this feeding is done at the right time, I mean stimulating just at the right time in the evening, you have no trouble.

Mr. Gemmell—By boiling it.

Mr. Dickenson—Certainly.

Mr. W. J. Craig—Do you encourage breeding late in the season in order to secure young bees for the winter?

Mr. Alpaugh—I have never encouraged fall brooding. There are always plenty of young bees by the time the flowers shut down. I have kept bees in quite a few parts of the country now, and I have been where there is no fall flow particularly at all, and I always found there was plenty of brood in my hives up to September; there seems to be plenty without breeding and without stimulation.

The President—Some years ago in preparing my bees for putting them away in the cellar, I think it was in October, there were three or four colonies I thought I would look at again and I found patches of brood as large as my two hands. I made up my mind that those colonies would not be of much service in the spring, but the fact was they came out the best and the strongest of any put away. I put brood away that had not hatched out. I have heard it said that young bees must have a fly after they hatch out, or they will cause trouble in the hive. I know they had not hatched because the brood was sealed over when the bees were put in the cellar and they caused no trouble, whether they died or not, but they came out dry, clean and strong.

Mr. McEvoy—In your case the queen

had slackened up in laying, she had not continued in brood rearing right through.

The President—They had been breeding right through the fall.

Mr. McEvoy—They did not follow it up.

Professor Shutt—I would like to ask information as to whether there is any difference noticed in the strength of bees that are fed on the one hand with honey, and on the other hand with sugar syrup made from ordinary sugar. There is a very interesting question involved there; bees, like all animals, require a certain amount of nitrogen to replace the waste of their tissues; that is absolutely necessary. Honey does not contain any nitrogen, but honey does contain a certain quantity of pollen, and I take it that the small quantity of hydrogen, the necessary quantity of nitrogen that the bees require to keep up the waste of their tissues, that is to say, in flying and various physiological functions that they perform, they get from the pollen. I am only asking this question. Of course, the sugar is burned by the bee with the aid of the oxygen of the air and the burning of it is just similar to the burning of a piece of wood in the stove. At the same time, there must be a small quantity of nitrogenous substance to keep up the waste of the tissues, and if there is a difference noticed in the flavor of the honey I think the suggestion would account for it.

Mr. Hall—Professor Shutt is not a practical bee-keeper. He is not posted in bee-keeping, otherwise he would know that this nitrogenous matter is deposited by the bees and protected with honey, with a cap over it to preserve it until the following spring, to use for the building up of the tissues of the old bee and also for the raising of the young bee. Allow me to say that one year we took more honey from our bees than we should have taken, and the following year we had to feed them bright and early, and we fed on West India sugar. Allow me to say that I prefer common West India sugar for feeding up in the spring to any material I can find. Refined sugar is a very inferior article, it is not nearly so good as honey for that purpose, and honey is not so good as common West India sugar. I do not know the chemical analysis of sugar, but I know that is a fact. They do not need to have the pollen although it is there. They put pounds of it away in the summer and reserve it for the spring, and they can mix this with the syrup that we give them; but I, for one, do not want to feed until

after the fruit blossoms. I do not want to give them an ounce.

Mr. Gemmell—Of course there is pollen in the hive and it make no difference what you feed them, they use this pollen anyway.

The President—I think there is a misunderstanding about the position taken; in all honey there are more or less grains of pollen floating, and it is in these floating grains that Prof. Shutt is supposing perhaps have a stimulating effect upon the bees—not that they store it in the cells for future use.

Prof. Shutt—I have already said I am not here as a practical man, but I am interested in this as a physiological question. Suppose the bees have access to no other feed, do you, as practical bee-keepers, notice any difference in the effect upon the strength of the bees and their vitality in feeding on the one hand with honey and on the other hand with sugar syrup.

Mr. Gemmell—They have this pollen in the hive, and they will utilize the pollen in order to supply nitrogen material, no matter what they are fed with.

Mr. Hall—You cannot raise bees without nitrogenous food and as they have a reserve, they utilize it, so it makes no difference what you feed, so far as that is concerned.

Prof. Shutt—That question cannot then of course be answered.

Mr. Hall—No; you can of course take all the pollen from them, but if you do they cannot breed.

The President—Sometimes the bees are short of stores and they are fed sugar stores. Bees will winter on stores made from granulated sugar, without anything else, and they will come out clean in the spring, but it is impossible for them to raise brood without nitrogen in some form.

Mr. Frith—In regard to being fed entirely upon sugar syrup; there must be some pollen in the hives. I remember something which comes to my mind. A few years ago there was a terrible fatality among bees, and a great many bees died all over the country and throughout the United States, and the journals of the United States and the best bee-keepers came to the conclusion that the bees suffered for want of the pollen. Pollen had been very scarce the autumn before, and they had not stored sufficient to keep up the vitality, or this waste of tissue. Of course my experience has been, and I think it is the experience of most bee-keepers where I have been, that if you have to feed anything at all, in a great

many seasons your bees will winter far better on granulated sugar. You must take into consideration that they must have had a certain amount of pollen in those hives before you fed the sugar.

Mr. Evoy—I think what Prof. Shutt meant to ask was, what would the bees winter best on?

Prof. Shutt—I put the question as a question in physiological chemistry. Admitting and supposing that they had access to no pollen, that there was nothing else that they had access to, wouldn't they do better on honey than on cane sugar? And if they did, I could account for it in that way.

Mr. McEvoy—Yes, they do.

Mr. Holtermann—I do not think there is any data on that question, but there is this about it: it seems to be reasonable and the theory is generally accepted by bee-keepers at the present time, that so long as the bees winter quietly; and all they have to do practically is to keep up the heat of the hive, under those conditions almost hibernated, but not hibernating proper; that there is no wear and tear of muscle, and under those conditions they do not require the nitrogenous food and do not require pollen, or at least to a very slight extent. The question is this: are the bees able to take up the honey, or is it the excrement that the pollen grains pass through? If that is the case, it would almost indicate that the bees are unable when they are in that quiet condition to take up the pollen grains.

Mr. Gemmell—Personally I believe there is very little excrement on the bottom boards. I believe it is pollen grains that have been passed out after.

Mr. Hall—I think it is pollen grains that have already spoiled in cleaning combs out.

Mr. Best moved, seconded by Mr. Gemmell that the thanks of this Association be tendered to Mr. Sparling for his very valuable paper.

The President put the motion, which, on a vote having been taken, was declared carried.

QUESTION DRAWER.

Mr. W. A. Chrysler—Has any bee-keeper present found it profitable to save propolis to extract wax from?

Mr. Alpaugh—My experience is if it is just propolis there is no use saving it.

Mr. Post—That is my experience. If it is all pollen that is all it ever will be, any way.

Mr. Chrysler—The reason I ask this question is: A bee-keeper sent me twenty

or more pounds of wax which he claimed was rendered entirely from propolis and it is very nice wax. He is one of the best bee-keepers in Canada.

Mr. Gemmell—And don't know propolis from wax.

Mr. Darling—How do you separate propolis from wax.

Mr. Post—By the steam wax extractor.

Mr. Darling—How and why does it separate?

Mr. Smith—You put it all into the solar extractor.

Mr. Hall—The propolis stays on the tin of the extractor and the sun melts the wax and it runs away.

Mr. Smith—It will run sufficiently to cake.

Mr. Darling—There was a thought occurred to me; I find that where there is propolis and wax mixed together, no matter whether it is in the comb I have taken or whether it got mixed in the wax extractor, when it is placed in hot water it separates itself. They both melt. Propolis is heavier than water and goes to the bottom and forms in hard lumps.

Mr. Frith—In getting wax from propolis there must be small quantities of wax on the frames.

Mr. Chrysler—Probably this man meant he had scraped the propolis off his frames and rendered the wax from it. A great many, I think, probably throw away too much propolis that contains wax.

Mr. Smith—What is the best manner of preventing pollen in the section? Is it by the use of the thinnest foundation or some other means.

Mr. Holtermann—I believe in a thinner foundation up to a certain stage at least, but I do not think the heavier foundations would give you any more pollen in the sections than the thinner.

Mr. Hall—I do not know that there is any information in what I am going to say, but we put in about six thousand sections this year and we took about 4,500 of honey and I must say that there was two supers out of the whole lot that had a quantity of the pollen in them, and I do not think there is an average of one cell of pollen to the whole super. This was not taken off a shallow hive, it was taken off a hive 12½ inches deep, and I used thick foundation. I never think of the pollen that is in it, I think of the honey that is in it. Last year we had a lot of pollen in our sections, and it was heavier foundation; this year we used heavy foundation and we never had so little; I cannot account for it; we used the same depth of hive.

Mr. Gemmell—There is a great difference in the seasons in regard to pollen in sections. The depth of the frame would have a good deal to do with it.

Mr. Smith—Last year we had very little pollen in the sections and this year we had a great deal. I could not account for it; the foundation was as near the same as could be. I thought it must be the season or the time of putting on the supers. The supers are put on after they swarm.

Mr. Holtermann—I think there is no doubt that this season had a great deal to do with that. In our own comb honey we never had so much pollen in sections, and another man told me he had no pollen in sections, practically; I went through his comb honey and I found he had more in it too than he ever had before. A man at the Toronto Exhibition said to me, "I don't believe I have got a cell of pollen in that whole pile." The judges broke up a section and they found in that very section two cells of pollen.

(To be continued.)

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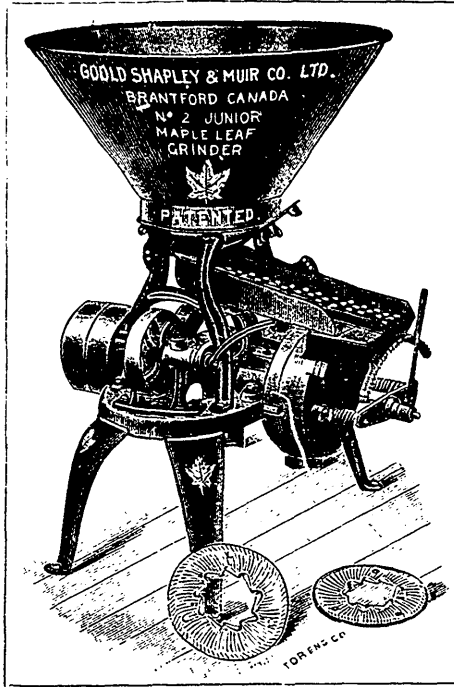
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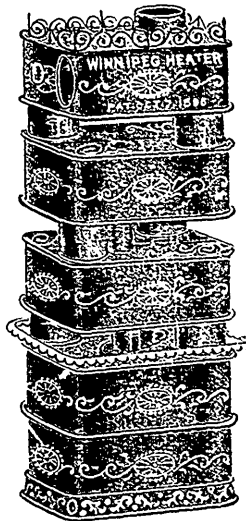
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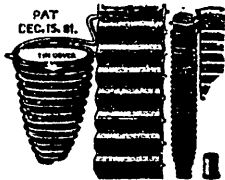


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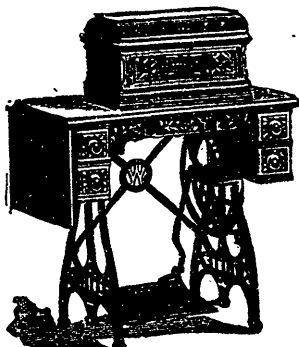
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