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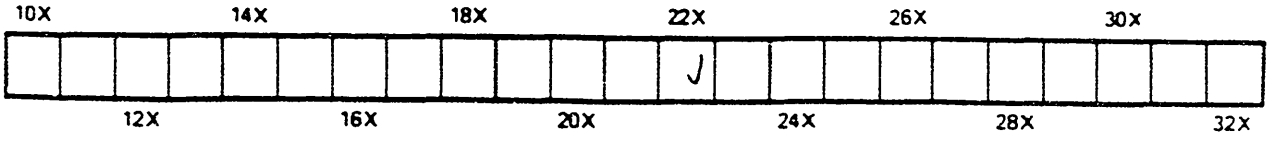

CANADIAN BEE JOURNAL.

PUBLISHED MONTHLY.

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Your Subscription is Paid to No.....

We are anxious to have the amount due, kindly remit and oblige. Please send the amount at once, the smallness of the item is often a reason for putting it off, but when added together it is a large and important amount to us.

The convention at Buffalo has come and gone. It was the good fortune of the editor to be at the meeting the greater part of the first two days. The evening of Wednesday we had to leave for Toronto to prepare for the Toronto Industrial Exhibition. We left for Buffalo the evening of Monday, August 23rd, and reached our boarding house about 9 o'clock. We found that Mr. Wm. Couse, Streetsville, the secretary of the Ontario Bee-Keepers' Association, had already arrived. Before we left, as far as we can remember the following Canadians had arrived: Messrs. D. W. Heise, Bethesda; R. McKnight, Owen Sound; I. Overholt, South Cayuga; Jas. Armstrong, Cheapside; F. Dunn, Ridgeway; M. B. Holmes, Dunns; Mr. Wallace, Belleville. If we have missed any, or if others arrived later we should be pleased to have their names as we are anxious to have a complete list. Among those of our U. S. brethren were Captain Hetherington, McIntyre, California; O. Skeleton, Florida; G. W. York, Editor American Bee Journal; A. I. Root and E. R. Root, of Gleanings in Bee Culture; Dr. Miller, Dr. Mason, W. Z. Hutchinson, editor Review; Messrs. Cogshall, N. Y.; G. W. Doolittle, E. T. Abbott, editor The Busy Bee and many others. Among those not present was our friend Merrill, of the American Bee-Keeper, who could not get accomodation and prices to suit him at Toronto some years ago. But then we fancy Mr. Merrill would find it pretty slow work to "talk bees" and matters would have to be very congenial to draw him out. We are expecting to have a short report of the convention. Addresses we think of interest to our readers will be published, but it is not our intention to publish the proceedings in full, quite a little that was said and done will not be of particular interest.

The Buffalo Convention.

* * *

With one thing and another we have been away from the office for about five weeks. The Toronto Industrial exhibit of honey was this year fully up to the mark. The large exhibitors were the Goold, Shapley & Muir Co., Limited; Chas. Brown, Drumquin; R. H. Smith, St. Thomas; Jas. Shaver, Cainsville; Geo. Laing, Milton, and Wm. Goodyear, Woodstock. In the order of prize money taken the exhibitors stand in about the same order. For a beginner Jas. Shaver, has done very well, he took first for best filled twelve sections. Two years ago we gave Mr. Shaver the loan of some new comb honey supers and sections and what pointers we

Toronto Exhibition.

could on taking comb honey. He has used them with intelligence and care and has succeeded well. We congratulate him, and do not mind in the least that he made us take second place. Mr. Shaver is president of the Brant Bee-Keepers' Association.

* * *

Ottawa Exhibition

The Ottawa Exhibition is well conducted and progressive. The prize list is light. Retailing of honey is not done there, but for various reasons we have found it to our interest to exhibit there, and in the long run it would doubtless pay others to show at Ottawa. Mr. Percy H Selwyn, Ottawa, owing to the poor crop east was the only local exhibitor. Jas. Shaver, Cainsville, had a very neat exhibit, the G.S.& M.Co. taking first and Mr. Shaver second with the exception of the 12 section lot in which the order was reversed. Mr. Selwyn took first on bees' wax, and the educational exhibit. The company's exhibit was very large and judging from newspaper comments and the remarks of visitors, pleasing and attractive.

* * *

Extracting Honey.

An idea well worth considering, is that brought out by Mr. McIntyre, of California, he stated that he found the bees always stored less honey for a day or two after extracting the combs, they were repairing the breaks and bruises resulting from the operation, and they were hindered in the storing of honey. If this is the case, we have a strong argument in favor of extracting only a portion of the combs of a hive, the bees can then repair and prepare one lot, while going on storing in the other.

* * *

Comb Honey.

Another point brought out is by Wm. Aikin. He thinks the difference between the amount that can be secured of comb and extracted honey is not so great, and in this we can entirely agree with him. We have for years felt inclined to this belief. Mr. Aikens suggestion *re* taking liquid honey by pressing it from the comb we consider of no use in this country. If we go so far as to allow bees to build comb and cap it, it would be as well to let them put it in sections, and then we might sell it as comb honey securing a much better price for it.

* * *

Winter Stores.

We are afraid that many bee-keepers in eastern part of Ontario and Quebec have bees with insufficient stores for winter. This should be seen to at once. They should have thirty to thirty-five pounds. Use two parts granulated sugar to one part water. Do not do this by what is called percolation, but bring the syrup to a boil. Some say, by the former system the syrup is likely to granulate and we do not want to risk that. Another point, do not feed back honey; you may think you know but you are not sure that one colony may not have stored some foul broody honey. Are you willing to run the risk of sowing the seed in every colony you feed?

* * *

The Season.

A very good season on one hand and a very poor one on the other should not made you loose your head. The position may be reversed next year. Keep your bees ready for anything that may come during the year, 1898.

Profitable Feeding of Bees.

—A. E. Manum.

Much has been written upon the subject of feeding bees, and many experiments have been made by bee-keepers with varied success. I am aware that any one method will not prove successful with every bee-keeper, since localities vary so greatly, as well as our methods of management. I can therefore, only speak for myself and my locality, taking my market into consideration. I have no market for extracted honey, hence I work entirely for comb honey.

The subject of "feeding back" extracted honey for the purpose of completing unfinished sections has often appeared in

print. We have been told by some writers that feedng back is unprofitable, while by others we are told that it can be made profitable. Here comes in the difference in localities and markets. If one has a good market for extracted honey at a fair price it would not be profitable to feed back any extracted honey he may secure.

In the twenty-five years that I have experimented in feeding bees, I have been both successful and unsuccessful in making the feeding back of extracted honey profitable. In the twenty-five years I have learned something regarding the preparation of colonies to be fed, the kind of feeder best adapted for the purpose and the preparation of the honey that is to be fed. Until within five years my success in feeding back was somewhat varied. But, for the past five years I have made it profitable to feed, by extracting from a portion of my unfinished sections and feeding the honey thus taken to colonies especially prepared for doing the work of completing sections. Thus transferring the honey from a portion of the unsalable sections to another like portion thereby making the latter portion marketable with no expense except my own labor of extracting and feeding. I find the shrinkage by the transfer of the honey from one set of sections to the other is very slight. The greatest loss is due to the process of extracting, or in other words, to the adherence of honey to the extractor and other recepticles.

I first prepare the colony by filling the brood chamber with combs well filled with brood and sealed honey, or both. The unfinished sections are then placed on the hive two, three or four tiers high, accord ing to the strength of the colony. Directly on these sections I place a large feeder capable of holding sixteen pounds of honey.

The honey is first diluted with warm water and then poured into the feeder just at night for the first, and if all works well it will need refilling in the morning. I find for best results the honey should be a little thicker than it sometimes is when first gathered, for if fed too thin the sections will have a watery appearance, while on the other hand if fed too thick the work will progress slowly, and the cappings will be more or less soiled.

Therefore, in my case when I misjudge the duration of the honey flow, and unfortunately put on more sections than the bees are able to finish I find it necessary to do some extra work such as extracting and feeding back. In this I find it more profitable than to carry over these unfinished sections, or to sell the honey in the liquid form.

But, the most satisfactory and profitable feeding with which I have had experience, is spring and summer feeding—stimulative feeding so called—but more especially summer feeding.

Early in the season (I mean the brooding season) the apiarist should see to it that the bees are well provided with stores near the brood, this may be honey or sugar syrup, our colonies should never want for ample supplies at this season. In order to avoid this I aim to feed moderately, or enough to keep a supply of uncapped honey in the combs until the bees commence to gather honey.

If there is an interval at any time during the honey season between any of the sources from which we get our surplus, as there usually is between fruit bloom and clover, I feed moderately that the brood combs may be kept well filled; that there may be no vacancy in the brood combs to be filled with the next flow of honey, the object is to keep the brood constantly filled with either brood or honey, so that all the white honey gathered may be stored in the sections. If this practice is kept up judiciously through the honey season we are sure to catch all the honey in the sections. And later on we can transfer it to our purses in a greatly reduced form.

Bristol, Vt.

Improved Methods of Extracted Honey Production.

R. C. AIKIN, Loveland, Col.

This is a knotty problem. That improvement is necessary, I believe that most will admit, though just how to improve is as yet largely an open question. To know what impovement is necessary we must know the faults of present methods.

Shall extracted honey be a luxury only, or shall it become a staple? I answer, a staple. Sugar now holds first place as a sweet, is backed by a huge monopolistic trust that scruples at nothing, good or bad, so long as its financial interests are forwarded.

Competition, it is said, is the life of trade, though in fact it is the death of it. If competition were only at all times fair, then a thing would stand or fall as it has merit; but alas, competitive methods are often so devoid of justice that merit loses much of its weight.

Comb honey is, and will probably re-

main, a luxury; but extracted has reached that point that it must become a staple sweet, or else its production be limited I suppose that in all civilization there is not a place that sugar is not found It is everywhere as a competitor with other sweets. Two things govern the demand for any sweet, viz: the consumer's tastes and his ability to buy. Of two or more sweets offered, the cheaper will be used unless the other appeals to the taste, and can be afforded. As a fine article of granulated sugar can be bought at five to six cents, it remains that extracted honey must sell at or near that price to all but those who can afford and want it as a luxury. Our market quotations show this now.

We must, then, look to methods that will both improve the quality and cheapen the product. Old methods contemplated the taking of unripe honey, and thus increasing the quantity, which has proved a step backward rather than forward. I suspect that many have not yet learned that to thus increase the volume of production is but to sacrifice quality, price and demand. An unripe, poor grade of extracted honey is not the equal of granulated sugar syrup, while a good article of extracted is superior to sugar. Honey has for ages been a favored sweet, and is so yet, and if at a price to compete with substitutes will hold a place.

I have just been looking over the market quotations in August 12th issue of American Bee Journal. The quotations on "fancy comb" range from 9 to 14 cents, the average of the highest quotations being about 12½ cents. The average of all grades of comb honey is somewhere near 10 cents, with extracted ranging from 3½ to 7 cents, averaging probably near 5 cents. It appears, then, that extracted honey and sugar are about the same price. In order that liquid honey compete with sugar, not only should the price be proportionate, but of equal quality and convenient to handle.

It is commonly claimed that two pounds of extracted can be produced to one of comb, which statement is generally accepted to mean that extracted can be produced at one-half the cost of comb. Suppose we can get two of extracted to one of comb; the increased quantity requires an increased amount of labor, both in producing and marketing, as well as additional cases and investment in combs and such, hence by no means doubling profits.

For about 13 years in Iowa, and 7 in Colorado, I have produced both comb and extracted side by side Never did my crop of extracted, per colony, double over that of comb. The best that I can claim has been three of extracted to two of comb; but some bitter experience in losing in winter and spring by starvation of the extracted stock, showed me where I got my extra surplus. Run two colonies one for comb and the other for extracted, and when the crop is off make an accurate estimate of the honey in the brood chambers and see where you get your honey. It is as reasonable as can be, that comb honey colonies will pack more honey in their brood chamber than will those having unlimited store comb above. The fact that my stock run for comb invariably winter better than extracted stock, beat into my head this fact.

It is necessary, then, that stock run for extracted shall have a larger brood chamber than does the comb honey stock. This is no argument in favor of small hives. We want large hives for comb honey, and larger still for extracted. 10L frames are nearer right for comb than 8, and 10 to 20 for extracted. I have two apiaries in American hives, run for extracted honey. A portion of these, instead of full depth, half depth size, 2 shallow chambers with 6 inch frames equalling one chamber of full depth size. I am running these using three and four shallow chambers or two deep ones for brood nest.

Swarming is the great difficulty that hinders cheap or inexpensive methods. I have this year had but one swarm from 140 colonies in these big brood chamber hives. At the beginning of the flow I put the chamber containing brood and stores at the top, the dry combs at the bottom. This puts the brood up near the extracting combs and a set of dry combs under. With this arrangement strong colonies will occupy the extras above about as quickly—sometimes more quickly—than the ones beneath. As the honey crowds the brood in the top of brood nest the queeen occupies below, instead of swarming.

The first point, then, is a large brood chamber, depth being important. Depth is much more effective than width, and the brood at the top when the flow begins. This big, deep brood nest with unlimited comb room above practically solves the swarming problem, reducing it to the minimum.

The next thing is to get rid of the immense amount of labor required with present methods, during the flow. Aside from the swarming problem, it is much easier to manage comb honey colonies than extracted, if the *extracting be done during the flow*. It is just as simple and easy to get on a super of sections as one of combs, and just as easy to shift the full sections to the top as to shift extracting supers in a similar way. I would do this in either case. To

put empty combs under a full set draws the bees from the brood chamber and discourages swarming, and will frequently draw the honey there to, hence another necessity for large brood chambers, lest too much go to the extra.

The 2nd point, then, is *no extracting during the flow*, but plenty of extras to hold the crop and have it fully ripe. At any time, during the flow, or later, the cost of extracting and casing is fully as great with the extracted as with comb. I would by all odds prefer to remove and case the comb—it is less labor and more pleasant work.

The third point is removing from the hives. Here, my methods are identical for both comb and extracted. The first requisite is a window in the honey room (or any room most convenient, even a tent with a screened hole), the screen running above the window and open at the top. The opening may extend clear across the entire width, but should be several inches above the window. A better way is to let the screen run up like an inverted V to a small opening, and on that opening have a box or trap so that the bees pass through a cone into it, then the trap can be carried among the hives to liberate the bees, and thus avoid young bees congregating about the windows.

When I am ready to remove the honey I just smoke at the top and send the bees down on the run, holding the smoke right after them (not before) until the most are out, when the super is at once removed. If honey is coming in or so that they will not rob, the supers may stand about the yard awhile and many bees go out there. If not safe out, I take at once to the room and set before the window and close to it in the strong light. The bees will at once begin to go on the screen and work upward to the trap or outlet, the noise of those on the window helping to draw the others. If to be extracted at once I begin on that having the fewest bees. Even if I have to shake off a few bees it is cheaper than to handle the combs one by one in the yard. When they would, the chambers are gotten into the house so quickly that they don't know what is up till it is all over with.

The 4th point is having enough extras to hold the entire crop and extracting later. One can thus remove it at any time and store it in the honey house. When a convenient time comes to extract, the honey will have to be warmed. This looks like a big task though really but a very simple matter. A stove in the honey room will do the work. Shut all doors and windows or other openings, and a very little fire will heat the room to 90 or 100 degrees. Keep the room at this degree for about 24 hours, when the honey will be ready to extract. However, if the chambers be piled solid and in such a way as to interfere with a free circulation through them, it may be necessary to keep the heat for 36 to 48 hours.

The past month I removed honey and piled it into a brick room 10x16. Built against and opening into this room on the south, is my 6x6 solar. By opening the solar into the room the temperature soon went up to 90 and 100 degrees, and by evening the honey extracted just as nice as direct from the hives.

Having this fully ripened honey extracted, my 5th point would be to at once, before candying, put it into retail packages. If, however, it is to be retailed at home and drawn into buckets and whatever the customer brings, such portion must be kept in a tank, and this tank should be arranged with some kind of a heating appliance, especially if the honey candies freely.

In addition to the foregoing, I wish to offer some thoughts that will probably be new to the most of you. For 3 or 4 years I have entertained a new departure in producing extracted. The system would include the large brood nest and large surplus room, but instead of having a large stock of extracting combs I would have only a few "bait combs," enough to draw the bees out to the supers. Aside from these "bait combs" which I would keep permanently, the bees would be allowed to build their comb as much as needed. This honey would be removed and stored as previously described, and the bait combs extracted in usual way. The new combs I would cut out and crush between rollers similar to a clothes wringer, but simple and cheap, the honey dropping into a vat to drain off much as cappings in an uncapping can. I would thus produce as fine an article as could be had, and a very superior grade of wax.

It takes about two pounds of wax to hold 50 pounds of honey. If the yield should be reduced ¼ by the bees having to build their combs there still would not be so much loss. 12 pounds of honey at 5 cents is 60c. The wax from the 38 pounds of honey would be worth 30 to 40 cents at least. Without having given the matter a thorough test I should estimate that the larger per cent. of wax, together with the decreased amount of labor both in the work of extracting and in caring for extracting combs, would more than offset any decrease in yield. I could crush thousands in the time I could throw out hundreds.

You will, in view of the foregoing plan, understand that I do not believe in the theory of great quantities of honey being

consumed in the production of wax. At present I cannot accept anywhere near the 15 or 20 to 1 ratio. More than this, I do not believe we can get any considerable more extracted per colony than of comb. I am carefully studying this problem, and have for about 20 years produced both comb and extracted side by side. To here give all the proofs of my position would make this essay altogether too long.

In a few words, improved methods of extracted honey production means producing a superior article at much less outlay for fixtures and labor—especially labor—and putting much of this labor outside of the honey season.

I hope that these thoughts may receive thoughtful consideration, and that they shall prove helpful to the fraternity. I regret that limited honey flows—even this year of great plenty—has prevented a more thorough knowledge of the new method, and also prevents my being with you at this meeting.

Notes and Pickings.

By D. W. HEISE.

I am realizing for the first time, the important part a fall flow plays in a successful season's operation with the Bees. This being the first season in eight, that this locality has furnished such, and I notice it makes a great difference in more ways than one.

"I see by C. B. J. 52, that the G. S. M. Co. are prepared to furnish the Root Dovetailed Outside Wintering Case, each (mailed) 75c. I expect of course, if I should need any, that thay will prepay the postage."

["Nailed," you Dutchman.—DUTCH ED.]

In last "Notes and Pickings," page 61, I read: "during the season 9 swarms issued" The number should have been "19" Of course anyone reading further on would see that 9 was a mistake. But a correction I think will not be out of place.

"There is much to learn in apiculture—about bees, queens, and the production of honey, and I apprehend that there is no one so wise in the long catalogue of bee-keepers but may learn something about bees, and that's the grand mission of our journals on bee-culture—to distribute this knowledge," J. A. Golden in A. B. J. Mr. G. is very much mistaken in thinking there is no one so wise that they can learn nothing more about bees. There is a Scotchman who raises queens on Toronto Island, who claims to have reached the limit of where anything can be learned about bees and their management. I very much envy his possession, but am simply not in it. Bah!

Will some of the readers of C. B. J. answer the following question: Is a swarm issuing the second time in the same season, with the same queen, properly called a "virgin swarm;" if so, why?

Did you notice, Mr. Ed., the worry and anxiety it gave Dr. Maison at the Buffalo Convention to make speakers face the audience when speaking. I fully expect the result will be a large shrinkage in the Doctor's avoirdupois. But say, isn't he a jolly good fellow!

The 26th Aug. issue of A. B. J. contains portraits of six prominent bee-keepers, accompanying the articles written by them. I congratulate the Editor in thus presenting them; for me, it gives force to the article. I always appreciate an article better when I can look upon the image of the person who wrote it. Especially is this true when one has no personal acquaintance with the writer. More of this in C. B. J. I think would be enjoyed. My own of course always excluded. See?

In discussing the merits and demerits of the eight and ten-frame hives at the Buffalo Convention, we got the information from one enthusiastic speaker, that even eight frames are superfluous, he preferring only six. But say! didn't it nearly take everyone's breath when he sprung upon us the fact, that the swarms issuing from his six frame hives were as large as those from a fourteen. Mushrooms! who would expect rats out of mice?

In *Gleanings*, 587, Mr. M Knight says: "Whiskey is usually adulterated with water." Perhaps so, but I opine that Buffalo tanglefoot during the convention was practically free from that adulterant, leastwise, it appeared to be strong enough to disarrange some people's equilibrium. It is, too, very strange that men should bore a convention with the enquiry of what a full colony of bees is, when at the same time they claim fourteen years' experience with the same.

C. P. Dadant, in A. B. J., 533, gives some hard facts to convince the doubting Thomas that the Dadant hive is "The hive." In five reports, varying in date from 20th to 29th, July, with an aggregate of 322 colonies, spring count, located in five different yards, only five natural swarms were caught, and the amount of honey secured to above date 13,200 pounds. Another report reads as follows: "I live within a stone's throw of the Dadant home farm. I have a

apiary mainly in small hives, which numbered in the spring 4 colonies, I have had 9 swarms, and not a single pound of surplus honey to date. I now have 10 swarms all told. The large hives gave the largest swarms, but the small hives gave the largest number of swarms" All the above bespeaks oceans for the Dadant hive and their management, and I believe they are right in holding both up to a high plane, all the host of small hive advocates to the contrary, notwithstanding. The proof of the pudding is in the eating.

Foot notes will be in order, Mr. Ed. to this batch of "Notes and Pickings," they were very conspicuous by their absence in the last issue.

Assuming that the Merengo Pee Man does not read C. B. J., I would just like to say, "BEHOLD THE MAN." Those bee-keepers who have been reading his writings for years, and have not had the good fortune of meeting him face to face or felt the grasp of his warm hand, which is but the expression of a true heart, or heard the melody of his speech and song, cannot realize or comprehend in all its fulness the noble character in the person of Dr. C. C. Miller. To see and hear him is but to create within one a desire to be like him, and to rejoice in the fact that you saw him as he is. "Oh, I vas so glat I vas at Puffalo and saw Dr. Miller."

I had thought very seriously of discontinuing "Notes and Pickings," for the simple reason, that I had doubts as to whether they interested any of the readers of C. B J. and also as to whether they were appreciated by any. But after getting the assurance of the Editor, and several others at the Buffalo Convention, that they were at least passable reading matter, and a few actually went so far as to shock me by offering their congratulations. Therefore I have been persuaded to continue them, at least, a few months longer—for with all their imperfections I sincerely trust they will not kill anyone.

During the Toronto Exhibition Mr. R. H. Smith was called to the death bed of his wife, she passed away about 26 hours after Mr. Smith's arrival. Mrs. Smith had been ailing for a long time. The husband and son Henry have our sincere sympathy.

Mr. W. Z. Hutchinson, Flint, Mich., has also lost a daughter under peculiarly sad circumstances. May he and his be comforted by a higher power than ours. The family have our sympathy.

Bee-Keeping in British Columbia.

In compliance with your wish that I should write and tell you anything I could learn in regard to bee-keeping in British Columbia, I take up my pen this afternoon, though so far I have only made acquaintance with one bee-keeper, a Mr. Hancox, who is a carpenter by trade and has employment in the C. P. R. workshops, so that bee-keeping is not his business, only a recreation. He tells me that being away from home all day he loses a number of swarms, and he is making a swarm catcher or hiver from a plan illustrated and described in the Bee-Keepers' Record, for June '96, called Taylor's Swarm Catcher.

Being a carpenter Mr. Hancox is able to make all his own hives, cases, etc., and has even made an extractor for himself, which I have not seen yet. He tells me bees do as well here as in England, his native land.

There is no trouble in wintering as they require no protection, only to keep them dry by having good tight covers. They gather an abundance of honey from white clover which grows everywhere in the greatest luxuriance, and there is also a kind of wild Phlox that grows about two feet high and is very plentiful, on which they work a great deal. Mr Hancox says he finds it a good plan to do a little feeding in the spring, as soon as the crocus comes into bloom, which, even in a backward spring like this as been so far, is about the middle of March. Bees have been carrying in pollen from pussy willows for nearly a month. The comb honey that I have seen out here is very white and delicate in flavor. It sells for 20c a pound.

Mr. Hancox makes close end'ed top bars to his frames; so he always has them evenly spaced; even his wide frames for sections he makes in the same way, and his frames he also makes, making them a quarter of an inch shorter at the bottom bar than at the top, as he says it is easier to remove them without crushing or irritating the bees, than where the frame is as wide at the bottom as at the top.

I am told there are a number of bee-keepers in a small way, in Mount Pleasant, a suburb of Vancouver, and I mean to hunt some of them up shortly, when I may send you another communication if I have anything likely to be of interest to your subscribers. HENRIETTA F. BULLER,

Vancouver, B. C.

UNITED STATES BEE-KEEPERS' UNION MEETING

President's Annual Address, delivered by George W. York at the Buffalo Convention of the United States Bee-Keepers' Union, Aug. 24, 25 and 26, 1897.

FELLOW BEE KEEPERS AND FRIENDS:—

Another year has sped away since last we met in convention Lovely Lincoln of the "wild and woolly West," a year ago favored us with her large-hearted hospitality and most genuine and unselfish generosity.

Two years ago we were just across Lake Erie, in triumphant Toronto, surrounding which there flourish hosts of our brethren —among the best bee-keepers the golden sun and silvery moon ever shone upon.

But now we meet in beautiful Buffalo, fast becoming known as the "Convention City." We of the West have come all the long way to learn from the multitude of wise bee-men of the east. And it is inspiring to find so many of them here, who are ready to pour into our receptive (as well as capacious) ears, all the most mystical mysteries of the hive, and the success compelling secrets that aid in securing the magnificient crops of Nature's purest sweet through the faithful help of the industrious bees.

The pursuit which the United States Bee-Keepers' Union represents, is one of the oldest known to man. Even in the olden Bible times honey was a familiar and esteemed food. While then they had not the present day innumerable contrivances (more or less helpful), with which to gather in the 'honey-showers," nevertheless they had it in great abundance, for did not their goodly land flow with honey—and milk?

While bee-keeping was a deep study on the part of a few of the more thoughtful ones of the passing centuries since honey was extracted from the rock, or the carcass of a lion, it has remained for our Nineteenth Century civilization to place the industry of bee-keeping upon an enduring basis—to give to it a deserved permanency along with the other honored branches of modern, intelligent and progressive agriculture.

Tho' the bee-keepers' faithful servants be exceedingly small, they are wonderfully numerous, hence the results of their combined efforts aggregate so enormously, and are of such great importance to the world to-day. Thus it is that gatherings such as this are found, where those most interested may compare experiences and strive to so aid each other that knowledge concerning the little busy bee may be increased, and its product become a greater source of profit to those whose business it is to harvest it, and distribute to the world's hungry human toilers.

I cannot hope to add much, if anything to what my audience already knows regarding the practical work connected with bee culture, but I may strive to remind you of some things that you are quite familiar with, and also offer a few suggestions that possibly may cause a discussion that shall result in something of real benefit to each

INCREASING THE CONSUMPTION OF HONEY

First, I wish to call your attention to the very urgent need of devising some means by which honey—nectar fit for the gods—shall become more generally a dietary article. It should be found upon the plain but neat and wholesome tables of the toiling masses, as well as on the sumptuous banqueting boards of the rich and royal classes. The price of the article can no longer be urged as a barrier to its universal demand.

But how shall honey producers proceed to create a more general use of their delicious and health-giving sweet, and consequently increase the demand? No great height is attained and permanently occupied without much and constant effort. As in other domestic lines, so in this of honey consumption. Education of the public is the great necessity. They must be taught the intrinsic food value of our product ere they can be expected to use it to any appreciable extent. But this cannot be accomplished in one week, or one month. It will require years to attain the desired goal. But it can be done. One beekeeper

cannot do it. All must help. As in the bee-hive, this is where individual work counts. Let every producer of honey see to it that his own neighborhood is thoroughly informed as to the true value of honey as a food, and it will not be long until the aggregate of honey-educated neighborhoods will embrace the total of America's great population.

But what special means can be employed to bring about this much desired result? No one thing will do it. Of course a good deal of talking will have to be done. The circulation of literature explaining the nature and valuable characteristics of honey as a food, together with recipes detailing a few of the very best forms in which honey may well enter as an ingredient—I say, the unlimited distribution of such concisee, pitomized information will go far toward solving the problem. But this form of educating the public most be thoroughly and continually applied.

Again the use of local newspapers should not be overlooked. Also the presentation of tempting samples of honey to prospective customers will often prove especially helpful. Other means will readily suggest themselves to the usually bright brain of the bee-keeper.

DISPOSING OF LARGE CROPS OF HONEY.

One of the greatest questions that confront many a bee-keeper, and one that must be solved ere long, is that of disposing of large crops of honey. It is little encouragment to have produced a big crop of beautiful honey, and then find that there is no established market for the same—no organized co-operative system through which the large crops can be distributed, or placed upon the market so as to yield the best financial returns. Right here is where the pursuit of bee-keeping is exceedingly weak. The fruit growers are away beyond us in this regard. We must awake, and meet, in some satisfactory manner, this need that presents itself with such force to the extensive producers of honey. I doubt not there is ample wisdom and intelligent foresight possessed by those in attendance at this convention to successfully meet this emergency. It must be met. The question is HOW?

It has been discovered, I think, that it will not do to rely wholly upon commission men. They can handle only a portion of the honey produced in our mellifluous land. And then, some of the commission men have proven themselves altogether too swinish, and devoid of common honesty, besides. There is too great an opportunity for fraudulent dealing ever to make the commission way of handling honey entirely and generally satisfactory to the large or even the small producer. Bee-keepers must some day be organized so as to handle and dispose of their honey themselves. They can do it and they will do it ere long. Then good-bye to the flower-tongued, boastful proud-of-his-big-rating-and-references commission man, who is a veritable leech upon his fellowmen, and should long ago have been everlastingly retired to the robber's cave whence he came.

GRADING OF COMB HONEY.

The question of properly grading honey is one that has received all too scant attention on the part of the producers. There is not a doubt if they could obtain a mutual agreement between honey shippers and the dealers, it would be a very great help toward securing a better and more nearly just price for the product. It seems to me that an executive committee should be appointed by this Union, whose duty it shall be to secure suggestions from the dealers in the principal markets, and also the ideas of the most extensive and practical producers, and from the views of both prepare and submit for consideration a set of rules for grading comb honey, being the combined wisdom of the committee, the producers, and the dealers. Then having such rules as a guide, they could be held open for further suggestions and criticisms, and for discussion in the bee-papers, until a stated time, when the committee should issue the final and perfected rules, to be followed by the producers in packing honey for shipment, and by the dealers when issuing market quotations.

PUTTING AN END TO HONEY-ADULTERATION.

Another line of most important work in which bee-keepers should unitedly engage, is that of forever putting an end to the adulteration of the fair liquid product, by the admixture of glucose or other foreign substance by the unprincipled and criminally inclined. This, to-day, is the greatest bane of the pursuit of honey-production, and to in some degree wage the initial battle against the hydra-headed monster. A year ago a new constitution was adopted by this organization, one of whose several important objects is that of attempting to suppress the adulteration of honey.

This is a subject in which every bee-keeper in christendom is vitally interested Unless something radical is done, and that right speedily, the very existence of our beloved industry will be endangered.

It had been hoped by some that by the time of this meeting our able General Manager and wise Board of Directors might

be permitted to accomplish something along this line, but not yet being supplied sufficiently with the needful financial equipment—the "sinews of war"—to begin the fight against the honey-adulterators, it was deemed best to simply wait until there is in hand ample "ammunition" to insure the entire annihilation of the enemy when once the war is begun.

It seems to me that the very first thing we need to do is to rally round the standard of the United States Bee-Keepers' Union, a veritable host of determined, never-say-die honey producers who are willing to go in for the whole war, whether it takes all summer, or any number of summers to eternally destroy our common foe, the abominable adulterators of earth's purest natural sweet!

I might continue these suggestive hints, but it is scarcely necessary. Every one of you is ready to go forward whenever this Union shall but give the starting word. Let us hope that at this convention such action will be taken along various lines as shall prove the bright harbinger of better things in our pursuit.

In conclusion, permit me to say that though the presidency of this Union was thrust upon me at the last meeting, I have endeavored to discharge its duties to the best of my limited ability. I trust that wherein I have failed to measure up to your anticipations you may be lenient; and that at the close of my term of office I may have the pleasure of welcoming as my successor one who shall lead us all to a higher height of success, until the great and ennobling industry of bee-keeping shall be unto its devotees all that it rightly deserves to be.

GEORGE W. YORK.

Chicago, Ill., Aug. 14, 1897.

PURE AIR, VENTILATION, AND ARTIFICIAL HEAT, IN THE WINTERING OF BEES.

During the summer of 1895, I had the good fortune to visit the apiaries and home of one of our foremost, and most enterprising Canadian bee-keepers, Mr. C. W. Post, Trenton, Ontario.

Mr. Post expressed great confidence in artificial heat for cellar wintering. He was kind enough to give me his ideas, and the system he thought it would be well to follow, and as a result, a very thorough test was made during the winters of 1895-96, and again during the winter of 1896-97.

I am perfectly well aware that a great many have applied fresh and pure air in the wintering of bees, and with greater or less success. I am also aware that artificial heat has been applied, the instances on record, are however, less frequent, and I do not know of any, who for a series of years, has made a success of this, nor do I know of anyone who is constantly using artificial heat and fresh air to replace the air made impure by the bees. A combination of these will lead to success. In the application of pure air the great difficulty has been regularity of current, and regularity of temperature. When cold outside, it is necessary to exclude, or partially exclude outside air to keep the cellar the proper temperature, this we know leads to foul air. If this cold fresh air is allowed to enter, the temperature falls, and the bee-keeper is often at a loss to know which of the two evils is the lesser.

Again, when the outside temperature is about the same as the inside, there is a tendency to stagnation, and the atmosphere in the cellar becomes vitiated, the bees are correspondingly restless and proportionately worn out and aged. Subearth ventilation has been tried, but in this, the above difficulties have presented themselves to a lesser or greater degree, and many have used them for a time, in the end abandoning these methods.

To cheer and comfort the fraternity, (if comfort can be derived by having brethren in tribulation) I may in passing say, that Dairymen who require accurate temperatures and degrees of moisture in ripening cheese have experienced all our perplexities, and those advanced in their calling are studying this question as we are.

What we required, is to be able to control temperature, and to secure a cheap and practical power by means of which we can secure a steady ventilation, or in other words, draw or push atmosphere. For some years, my thoughts ran in the direction of electricity and although it is not yet within the range of the practical, I believe the time is not far distant, when by a system of storage batteries, we will at a nominal outlay, through wind mills, develop electric power which can be used as required for power, heat and light, and by means of electric currents, ventilators will open and shut, heat be applied automatically, as temperatures rise and fall in the cellar. But for the present, by means of artificial heat we have the power to force currents in whatever direction we may desire. The same heat also serves to regulate the temperature, and here, we have an element within the reach of the practical.

The first test was conducted under the following conditions:—A large stone cellar was divided into five parts, four of these was used for the bees, and these repositories communicated with one another by means of doors, and also by means of openings 14ins.

square near the top of the room, and through these openings the pipe ran. Size of the pipe was 6 inches, the balance of the openings of course allowed a circulation of air from one to another.

A stove called the "Tribune" and manufactured by Wm. Buck, Brantford, was placed in the first room and near the cellar door which communicated with the outside, and through this door the fresh air from the outside had access. The air in its natural course by means of the openings around the stove pipe passed from room to room, and finally in the fourth room passed out by means of a similar opening in the chimney, the same chimney into which the regular pipe entered. This chimney had in addition, entering it, a pipe from the stove used in the living room above.

The fuel used at first. was wood, but the pipe was too hot and irregular and it resulted in more or less odour from the pipe, particularly the last portion which became cool before entering the flue. Stove coal was used and the fire kept up for 3½ months, stove coal was the size and 2550 lbs. used.

There were 70 colonies in No. 1, 75 in No. 2, 80 in No. 3, and No. 4, 75. The bees were put in No. 1, Oct. 26th; No. 2, Nov. 21st, and No. 4, Nov. 22nd.

In the records (with one exception) the variations in temperature were very slight. The night of Feb'y 14th, the fire went out and next morning the cellars registered as follows:—No. 1, 38 degrees, No. 2 and 3, 40 degrees, and No. 4, 42 degrees. You will notice that the temperature was raised by the bees as it passed from cellar to cellar. There was a wet and dry bulb thermometer in each and the temperature half way between the floor and ceiling was as follows:—

	Dry.	Wet.
No. 1.....	46	43
No. 2.....	45	43
No. 3.....	45	43
No. 4.....	46	45

The difference in temperature of top and bottom of No. 2 was three degrees, in No. 4, six degrees. In No. 4, there was a fire in the room above, in No. 2 this was not the case. I draw attention to this as some may not consider these variations sufficient when taking the temperature of a cellar. You will notice that No. 1 and 4 dry bulb both stood at 46 degrees, but the wet in No 1, the first cellar into which the pure air passed, stood at 43 degrees and No. 4, at 45 degrees. into this air went, after being through the other three cellars, the added moisture we would expect, it being expelled by the bees in the previous cellars. Misture and temperature was taken, but how about the impurity. I think I can give you several practical indications of this, at least the weight of evidence tends to show that pure air is an important factor.

The bees in No. 1 cellar appeared to be quieter than in No. 4, leaving a lamp burning for even a half-hour in No. 1 the bees never flew to the light, in No. 4 although they did not fly to any great extent to the light there was a tendency in this direction. In fact all through the winter they were more restless in the last cellar, and to prevent great injury to the bees, fresh air from another source was allowed to enter No. 4 cellar.

There was no perceptable difference in the first three cellars, the bees could be seen clustering quietly in No. 1, some of the hives were within 7 feet of the stove. A thorough inspection was made March 19th, the contents of the hives were examined at the entrance, and upon lifting cushions and quilts, when possible, not the slightest indication of mould or dampness could be detected. Only two colonies showed the least sign of dysentery, and these had bees whose queen had shown symptoms of the same disease the winter before and were kept purposely to see if they would have the disease again.

No. 1 cellar contained 60 colonies with bottom boards as on their summer stands and entrance full width. Fifteen had 2 inch rims placed under the brood nest. No. 2 contained 50 hives with the back ends of the hives 3 inches higher than the front, and the brood chamber ⅜ inch from the bottom boards and 25 colonies with 2 inch rims under the brood nest. No. 4 had 75 colonies, all the back of hives raised ⅜ inch from the bottom boards. All the hives were covered with a cloth, and over the cloth one inch of sawdust. The bees were placed on their summer stands April 7th, 8th, 9th and 11th. As to method of adjusting entrance and bottom boards, there appeared to be no great difference in results. With the exception of several starved and mice destroyed colonies, every one came through alive and in good condition. The indications of good wintering were:—

1st. Their quiet condition.

2nd. Bees clustered compactly.

3rd. Individual bees did not fly to the light from the stove, lamp or outside door through which the fresh air had access.

4th. There was no brood in the hives when placed on their summer stands.

The air passing from cellar to cellar is not a condition to be desired. but it served as a splendid object lesson to the bee-keepers of the country, and emphasized the desirability of having pure air as no other experiment could. A similar experiment was

tried during the winter of 1896-97 and with similar results.

There is one point I wish to emphasize, and an additional experiment during the past winter goes to show the importance of this. The chimney into which the foul air passes, must be what we call a live chimney, it must have a pipe with hot air constantly passing into it. Why? Because in this way, we secure the power necessary to make the current travel one way in the chimney. We know that cold air will rush into warm, and the variations in temperature is a cause for the movement of atmosphere. Last winter I arranged another cellar with the same method in view. The stove was boxed in a compartment about 4 feet square, as air tight as matched lumber, felt paper, and sheet iron could make it. A shaft of fresh air opened under the stove and half way between ceiling and floor and at opposite sides two pipes led to the cellar, the pipes discharging pure atmosphere along the cellar walls. I could not reach a live chimney, so put the foul air pipe outside of, and about the stove pipe, making a double pipe, thinking that the heat from the stove would act as a sufficient motor to secure a steady current of air. During cold weather, everything worked well, but when the fire was low, there was not sufficient heat in the pipe and the atmosphere would become stagnant or the current reversed and instead of the foul air being carried off by the pipe, the cool air would rush down the ventilating pipe and into the cellar without passing through the heating compartment. The direction of a current can readily be detected by means of a sheet of paper held close to the opening. The sheet of paper will be drawn in the direction of the current. There were slight symptoms of dysentery in some, only one colony was found dead when taken out, one was queenless, it was an improvement on no regular ventilation, but not satisfactory. So much for pure air and artificial heat. You will notice that the appliances available were not perfect. A cellar should be so constructed that air can enter and escape only through regular openings. What is required is a thoroughly equipped apiary and building specially constructed for experimental work in every county. R. F. HOLTERMANN.

Wm. Peck, Albany, Ont., has again taken many of the prizes in apples at the Toronto Exhibition.

John Newton, Thamesford, Ont., and Mr. and Mrs. Miller, London; Ont., visited the Toronto Exhibition. They intended showing at the London Fair.

Among the Bees.

The question has been put to us, says an expert bee-keeper in The Cable, as to which pays the bee-keeper best—to put *full sheets* of foundation in the frames or only starters (i. e. narrow strips along the top bar.) Well this entirely depends upon the object of the apiarist. If we only wish the combs built from the foundation to be used in the brood nest, it pays the bee-keeper by far the best to use whole sheets of foundation.

It is well known among experienced bee-men that if starterrs only are put into the brood nest during spring, the frames containing them will be completely filled with drone comb. Now, as soon as ever this comb is completed, the mother bee will fill it with drone eggs, which in just over three weeks (twenty-five days), will produce a vast army of drones; these are not wanted by the apiarist who wishes to raise honey—they being consumers and not producers. Supposing several of these frames having starters are inserted into the hive—we have seen this done in hundreds of cases—thousands of drones will be the result, populating the hive to the exclusion of worker bees in more than equal numbers.

Let us now, therefore, take the *opposite* view of placing whole sheets of foundation into the brood nest, these sheets being impressed with the shape and size of the base of a worker cell. The bees, although their instinct prompts them to rear drones at this season, cannot, or rather will not, make drone cells on these sheets; but will, in all cases, if the foundation is made of pure beeswax, fashion this into worker cells. Now a normal mother-bee will not lay drone eggs in worker cells or vice versa, so we obtain an enormous advantage in having a large army *of useful* workers instead of one of useless drones just at a time when they are required for honey gathering, or three weeks after the insertion of the foundation into the hive.

It will be as well for the benefit of novices to explain that the mother-bee has the power of laying eggs at will, from which either drones (males) or worker bees (rudimentary females) will be hatched; but, as before mentioned, always makes use of different sized cells for each of the two descriptions of eggs to deposit them in. There are certain exceptions to *this rule*, as for instance, when a mother bee has not been fertilized by the drone, in which case she lays drone-producing eggs—being unfertilized she has not the power to lay

worker-producing eggs—in worker cells. Of course, in such a case the colony gradually dwindles away and ultimately dies out, for be it remembered the drone never collects or stores honey, neither will it act in any of the multitudinous duties of a worker bee.

There are some instances where the use of starters may with questionable advantage be used, as, for instance, in the extracting supers, between which and the body or breeding compartment of the hive mother bee, excluding zinc has been placed to prevent the mother from ascending, and there breeding in the supers. The fashioning of drone cells seems to be a much quicker method for the bees to make comb, as it is found that bees during a heavy honey flow, if left to their own resources, always make such for the accomodation of their surplus. It is also claimed as preferable to the bee-keeper when extracting the honey stored in these large cells leaving same with greater ease when placed in the extractor. So we may advise the use of whole sheets of foundation in the brood nest, and if the bee-keeper cannot see his way clear to spare the wherewith to fill his supers with whole sheets, he may use starters, providing he places excluder zinc between the same and the body of the hive.

A valley is the most suitable location for an apiary. It gives a chance for descending flight when returning to the hive heavily laden. If the flora is mostly westward from the apiary, fewer bees will be lost during storms. Most storms come from the west, and it is easy for them to reach home with the wind in their favor, but it is almost impossible against a gale. The latter causes many to perish when storms late in the day are succeeded by a cold wave. The foot of an eastern slope of light grade is the best place for an apiary. The hives should be at least eight feet apart each way, unless land is very expensive. This gives a chance to mow between them if a lawn is kept in the apiary, and also prevents the new swarms from leaving some hives and mixing with others, which they often do when placed too close together. The entrance should be east or south.

The down-hill side is the most convenient place for the entrance for several reasons, but a northern or western slope, (especially if steep grade) is a very objectionable location for an apiary, on account of cold winds and colder temperature that prevent the bees from moving in winter and taking food, and it is also later in warmth during spring mornings when the bees commence to gather pollen.

Apiaries exposed to cold winds should be protected by high board fences or an evergreen hedge thickly planted. The entrance to the hives should be from four to eight inches high—the former if the grade is somewhat steep and the latter if light.—J.H. Andre in Country Gentleman.

A Three Years' Experiment in Outside Wintering.

—Ontario Government Report.

During the spring of 1893, we purchased a colony of bees supposed to be a particularly good honey-gathering strain. The hive was decidedly objectionable, owing to its peculiar construction and odd size; but, as stated, we were after a particular strain of bees. The brood chamber was divided into two parts, the lower set of frames, ten in number, measuring $14\frac{3}{4}$x$8\frac{1}{2}$ inches, and the upper ten measuring $14\frac{3}{4}$x$4\frac{1}{2}$ inches. After swarming, the young queen in the parent hive was lost, and we introduced a queen of our own rearing. In the fall of the year, the entrance to this hive was contracted to five inches, and an empty super, filled with old woolen clothing for packing, placed on it. Aside from this, without further protection, the hive was left on its summer stand. Snow was kept clear at the entrance. It was one of the strongest colonies in the apiary in the spring, and the first to throw a swarm. During the winters of 1894 and 1895, the experiment was repeated. Our attention was then drawn to the advantage of permitting free communication within the cluster, allowing it to contract and expand according to the surrounding temperature, without inconveniencing the bees on the outside of the cluster. The following year, the hive was prepared for winter as before. The bees again wintered successfully, and again threw the first swarm. The experiment was repeated under the same conditions during the winters of 1895 and 1896. They again wintered well and, as far as we could judge, were fully equal in strength to any other colony in the apiary.

In studying the above experiment, we must remember that the natural shape of a cluster of bees on the comb is that of a ball. In this way, they can best maintain the warmth which they generate. To regulate the temperature, the cluster contracts as the temperature falls, and expands as it rises When the combs hang in the hives, with the bees clustered between the combs

as in fig. 3 (spaces A B C D), if the cluster contracts, the bees must travel to the top or

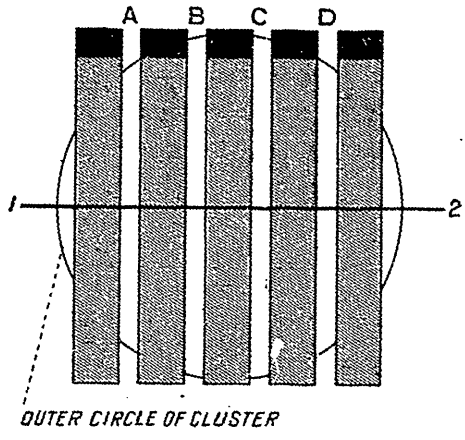

Fig. 3

bottom of the space, and the bees on outer spaces become separated from the cluster. As long as many bees are together, they do not easily chill; but when one or more become separated, they soon chill and perish. The natural direction for the bees to travel when the cluster contracts is towards its centre, and it will be found that the bees which by contraction become detached from the main body of the cluster, perish, owing to their inability to travel around the top and bottom of the combs.

With the ¼ inch space between the sets of combs (see fig. 4), the swarm can expand or

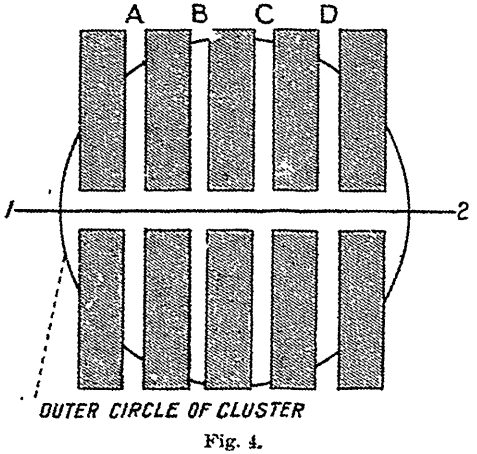

Fig. 4.

contract without breaking the cluster, the bees passing between the two sets of frames. In the experimental work for the seasons of 1896 and 1897, a test is being made of the effect of cutting passages in the centre of each comb. Through these the bees can pass and repass as the cluster expands or contracts. These passages answer, to a certain extent, the same purpose as the bee space between the two sets of frames. If these passages prove as advantageous as the space in the two sets of frames, they will be much more desirable. Odd sized hives and frames, such as the one described, are decidedly objectionable in the apiary.

Bee-Keeping in Canada.

—M. B. HOLMES, Athens.

Officers and Members of the United States Bee-Keepers Union. Mr. President Ladies and Gentlemen.

A few weeks ago I received a communication informing me that my name was being placed on the program of this present convention and asking that I at once endorse the action, and notwithstanding the fact that I had sundry misgivings as to the legality of the undertaking (owing to certain existing laws) and as to whether the executive had made a mistake, and as to—well, some other things, I yet had grave fears that it would be a very serious matter to question the wisdom of so great an organization as the United States Bee-Keepers' Union.

With this last named conviction before me I wrote your honorable secretary, Dr. Mason, that in accordance with the stated request of the committee whose duty it was to prepare the program, and in accordance with the venerable exhortation of holy writ, which bids us "Bow to our superiors and to those in authority over us," I would endeavor to file an appearance and deliver an address on "Progress of Bee-keeping in Canada," and in the Order of a kind providence we are permitted to meet in convention and exchange friendly greetings in this, one of the many beautiful cities of a great and glorious republic; and it is certainly a most transporting scene which presents itself to the eye of the beholder as he steps out on this borderland between two great countries.

Looking toward the north we see fair Canada, most beautiful and attractive from many different points of view but specially noted for the most wonderful wheat fields, the richest of gold fields, and the variety and excellence of fruits, for the very high standard of her dairy products, etc. Look-

ing to the southward we see the wonderful republic of the United States, with its myriad of thriving industries of every conceivable kind, and as the observer admires those two great countries (which are said to be about equal in point of area if Alaska be left out of the reckoning), he notices that the millions of inhabitants to the north and the millions to the south are apparently one and the same people, and the question at once suggests itself: Why not, really and practically, one?

But, Mr. President, the perplexing question (which has doubtless troubled many of us when considering union in another sense) would ever present itself: "If we are to be made one, which one will it be?"

Getting now to my subject, I may state that previous to 1830 bee-keeping in Canada was in a very crude state. There were many comparatively large yards of bees throughout the country, but the honey-extractor was very little known and less used. No comb foundation was used, and no sections employed. Comb honey was secured in small boxes placed on top of the honey-board, but most of those who kept bees got their honey by the old method of brimstoning, and the individual who happened to secure a few hundred pounds of honey was considered very fortunate indeed.

In 1879, Mr. D. A Jones of Beaton, Ont., conceived the idea of making a trip to the far east in search of new races of bees. He accordingly secured the services of Mr. Frank Benton as a general assistant but principally as an interpreter in the east, as he spoke several languages. For his services Mr. Benton received a heavy salary, and all expenses paid, Mr. Jones assuming the entire cost of the expedition. He bought bees in Cyprus and established apiaries there, and in many parts of Palestine, Jerusalem and vicinity, and at Jaffa and Bey Route and other places. Having left Mr. Benton in charge of his interests in the east, Mr. Jones returned to Canada in 1880, bringing with him nearly two hundred colonies of bees. He, however, received hundreds of colonies from the east at a later date as he kept Mr. Benton there for some time, raising and shipping bees to him This was the first move towards bringing bee-keeping into prominence in Canada.

In 1880 Mr. Jones made the first large display of honey at the Industrial Fair at Toronto. His exhibit consisted of about ten tons of extracted honey put up in barrels, kegs and tins. There was no prize offered for honey that year, but the Industrial board awarded Jones a massive gold medal on his exhibit. During the progress of the fair aforementioned Mr. Jones called a meeting of bee-keepers at the city hall. Mr. McKnight, of Owen Sound was chairman of the meeting, which in point of attendance and general enthusiasm was an unqualified success. At the close of this meeting, which lasted three days, the Ontario Bee Keepers' Associaton was organized with Mr. D. A. Jones as president and Mr. R. McKnight as secretary - treasurer. The constitution and by-laws of the association were drafted by Mr. McKnight and revised at a later date by the same gentlemen to suit the change brought about by incorporation. They have been revised once since that date by a committee composed of Mr. Darling, of Almonte, Mr. Couse of S reetsville and myself. This revision being necessitated by some slight changes in the "Agricultural and Arts Act" of the country.

There was no bee journal in Canada at that time but arrangements were made with the publishers of the Canadian Farmer for the use of one of the pages of that weekly paper to be devoted exclusively to bee literature, Mr. McKnight was duly installed as editor of this department of the Farmer, and had to supply a page of copy each week. This state of things continued about three years, when Mr. Jones started the Beaton World, which was the bee organ until he started the Canadian Bee Journal.

The Ontario Bee-Keepers' Association was incorporated in March, 1886, by act of parliament, and a government grant of $500 was given to strengthen the movements of the association. A government grant of $100 dollars was also given in the same year to send an exhibit of honey to the Colonial and Indian exhibition in London, Eng.

This was probably the largest exhibit of honey ever made, either since or before that date. It freighted forty tons, and consisted of over thirty tons of honey exclusive of packages and cases in which it was put up, and was contributed by twenty-six Canadian bee-keepers. Messrs. R. McKnight of Owen Sound, D. A. Jones of Beaton, S. T Petit of Belmont, and S. Cornell of Lindsay, were commissioned to go with this monster shipment to London, where under the direct supervision of these gentlemen the honey was placed on exhibition from the middle of September till the 10th of December. The commissioners all remained in London until the close of the exhibition except Mr. Pettit, who returned to Canada in about six weeks from the opening of the exhibition. The management of the business in connection with that exhibit was no child's

play. There were four persons employed liquifying, bottling and labelling, and nine salewomen were employed continuously. All visitors to the building were invited to taste Canadian honey. In this way about four tons of extracted honey was given away, besides contributions to the Queen, Prince of Wales, Lord Lorne, and other dignitaries. The entire lot was disposed of at the close of the exhibition and the contributors were paid 12c to 18c per lb. for ther comb honey and 10c per lb. for extracted honey and pay for all cans or packages holding ten pounds and under. I have already told you that a grant of $1,000 was given to help defray the expenses of this exhibit. The Canadian government also furnished the building. A prominent member of the British Bee-Keepers' Association was heard to remark that he did not believe the same number of bee-keepers could be found in all England who could have done as well as the Canadian commissioners in charge of the honey exhibit, and it goes without saying that they won the admiration of all Canadians while in discharge of duty in that capacity.

A few years later, the attention of the government having been drawn to the fact that a contagious disease known as "foul brood" was playing sad havoc in the apiaries in some districts of Canada, a bill was introduced in parliament to the end that the disease might be stamped out. This bill provided for an inspector and sub-inspector of apiaries, those officials to be the appointees of, and amenable to the Ontario Bee Keepers' Association, subject, of course, to the approval of the Minister of Agriculture. Complying with the provisions of the act in that regard, we have Mr. Wm. McEvoy of Woodburn, as inspector, and Mr. F. A. Gemmell of Stratford, as assistant. These gentlemen are too well known to need an introduction here. In passing, however, it is most pleasing to note that the disease is fast disappearing under their skilful management. So apparent has this become that the bee-keeping world are becoming interested in the "McEvoy Foul Brood Treatment." The Act For the Suppression of Foul Brood Among Bees became law in Canada in the year 1890.

In 1891 a bill was introduced in parliament prohibiting the spraying of fruit trees with poison during the time such trees were in bloom. This bill was assented to in April 1892, and came into force the first day of January 1893.

I might go on lengthening out the list but enough has been said along this line to convince you that, not only are the bee-keepers of Canada alive to their own best interests, but that the government of Canada fully realizes the importance of the industry and are willing to foster and protect it whenever it is necessary. The last census reported about 170,000 colonies of bees kept in Ontario, and *it is estimated* that a large proportion (perhaps four-fifths) of the bees kept in Canada, are in Ontario.

A passing notice of Canada at *The* World's Fair and Columbian Exposition would very properly come in here, and you will kindly allow me to make a few brief extracts from the report of the late lamented Allen Pringle, Canadian commissioner at the World's Fair: "Twenty foreign countries and seventeen states and territories of the American Union made apiarian exhibits in Jackson Park. Ontario took seventeen apiarian awards. This number of awards is more than twice as many as that taken by any state in the Union, or any other foreign country. In fact it is more than all other foreign awards combined. Our apiarian exhibit at the World's Fair cannot fail to enhance the standing and promote the future interests of apiculture in Canada."

My remarks in reference to the *enterprise* of Mr. D. A. Jones may have conveyed the idea that he was the first to introduce the bees from the far East *into Canada*. To remove this impression I might say that as far back as in the sixties a firm known as the Thomas Bros., of Brooklyn, Ont., sold Italian queens quite extensively and there may have been others selling them at that time, but interest seems to have died out to a considerable extent until the date of Mr. Jones' venture.

The honey harvest just closed would seem to be a fair average crop. To the south and west a good yield is reported, while the north and east report very light yields. And now ladies and gentlemen may I dare to entertain the hope that your anticipations have been in some small measure realized in my effort to picture to you the progress of bee-keeping in Canada, and wishing you, and each of you an overflowing measure of success and happiness in life, I beg *leave to* conclude.

HONEY WANTED.

We are prepared to purchase during the present month a few thousand pounds of comb and extracted honey. Those wishing to sell, may send samples of extracted honey by mail, putting their name on the samples, and writing advising us to the quantity and how put up. In all cases gives price f. o. b. their station. In the case of comb honey we do not want

sections that are not well attached to the wood. The comb must not bulge sufficiently to bruise sections. State if honey is all light honey, and if sections are free from travel stain and clean. If supplies can be taken in payment we can take all honey offered. If cash on payment is wanted state so in your letter.

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The Ontario Convention at Hamilton.

Streetsville, Sep. 27, 1897.

Editor Canadian Bee Journal,

DEAR SIR—The annual meeting of the Ontario Bee-Keepers' Association, will be held in the City of Hamilton, on the 7th, 8th, and 9th of December next. We feel confident the programme will be as good or better than usual, as the programme committee have promises of some good papers and expect more.

Yours truly, W. COUSE.
Sec. O.B K.A.

P. S. I expected to have the programme ready for October C. B. J., but all have not replied yet that have been invited to assist us.—W. C.

Personal.

Papers in this issue by A. E. Manum, R C. Aikin, R. F. Holtermann on "Pure Air," etc., and M. B. Holmes, are part of the Buffalo Convention report

Wm. Alford, Post Office Department, Ottawa, who is also engaged in bee-keeping and fruit growing, has taken several prizes at Ottawa, in the horticultural department.

Mr. T. C. Watson, lately from England, who holds an expert's certificate in bee-keeping there, assisted the Goold, Shapley & Muir Co., Limited, at the Toronto Exhibition.

The Toronto papers published an item that the Hon. A. S. Hardy, Premier of Ontario, having cultivated a taste for honey on the farm during his boyhood, visited the honey exhibit at Toronto and purchased some honey. It also stated that Mr. Hardy spent some time at the tent in which bees were exhibited. All bee-keepers may not know that the Premier of Ontario came from the farm. With the many cares and duties which rest upon a man in the position of premier, we were surprised that Mr. Hardy could take time to visit the honey exhibit. He has evidently not forgotten his boyhood, and we know he is a good judge of honey. Would that more of our prominent men took an interest in bee-keeping and honey.

THE

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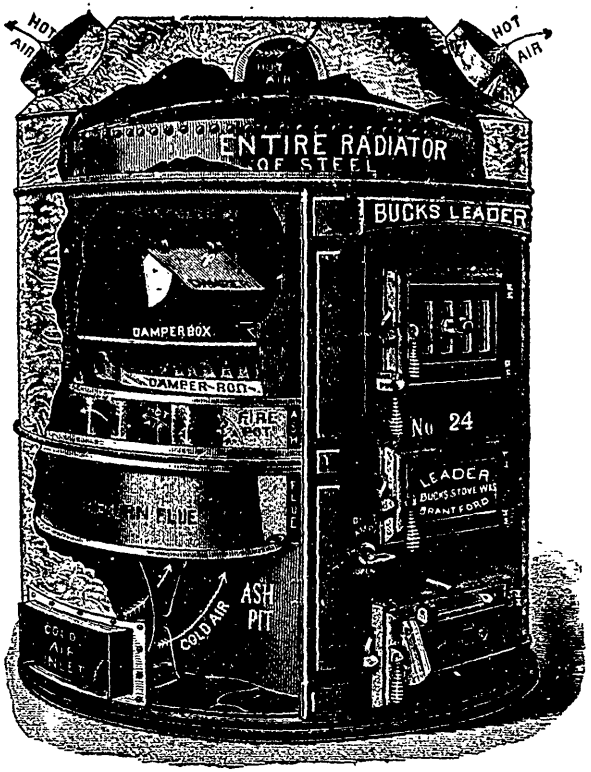

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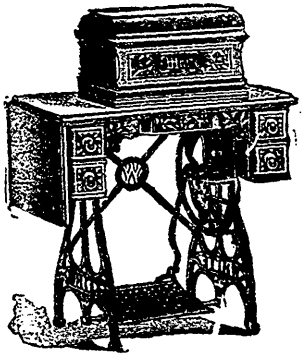

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