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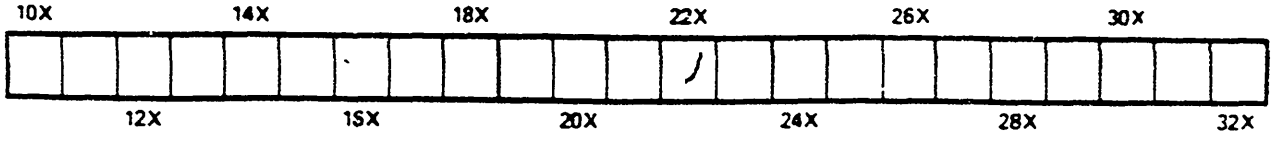

CANADIAN BEE JOURNAL.

PUBLISHED MONTHLY.

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Annual Meeting Ontario Bee-Keepers' Association.

The annual meeting of the Ontario Bee-keepers' Association has passed and gone, and we trust has left its lessons behind it. The attendance during the afternoon of the 7th and the 8th was good, and the discussions harmonious and profitable, but on the morning of the ninth, after the election of officers, when the attendance had dwindled down to such a number that the jury room accommodated a repetition of the very worst scenes that have injured the conventions of the Association in the past, were repeated. It is hope this will have been for the last time. Some of the members present thought that the criticism on the proceedings of former conventions made in the Canadian Bee Journal should have been made at the close of the last convention. Others that it was necessary, others that they should never have been made. Some denied the facts. An old subscriber writes: "It appears to me, that in justice to bee-keepers generally it is not advisable to give too much place to the squabbles and faults and jarings of the Ontario Bee-keepers' Association. I believe their membership is only about one hundred, and they represent only a very small portion of the bee-keeping interests of the Dominion, or even the province of Ontario, and they must represent even a smaller percentage of the subscribers. Let us have more of the rural news, methods of bee-keeping, and, if possible, illustrations. Take it all in all I believe the Canadian Bee Journal is of greater value than it has ever been." While there is a diversity of opinion as to what should be done, we are inclined to follow the wish of our subscriber, although he must remember that at present Ontario has the lead in apiculture, and the association is the Ontario Bee-keepers' Association. That the organization is not larger and more influential and does not embrace more bee-keepers is to be regretted. We would like to see this remedied in the future, not by hiding the facts as to our conventions, but by remedying the evils connected with them, reproving whoever is guilty of hindering useful discussion, doing energetic work to advance bee-keeping interests, and by sending out useful reports which will draw others to the convention.

Annual Meeting Oxford Bee-Keepers' Association.

The Oxford Bee-Keepers' Association called to order by President John Newton, at 10.30 a. m., November 24th.

Minutes of spring session received and adopted.

John Newton was re-elected President; Rayside Gemmill, Vice President; J. E. Frith, Secretary-Treasurer. J. E. Frith was elected delegate to the Ontario Bee-Keepers' Association.

Afternoon session called at 1.30 p. m. Routine business disposed of, a paper, by Wm. Couse, Secretary O. B.-K. A., on "Some Differences," was read, and drew

from the members a good deal of practical and profitable discussion.

The leading point was the present price of honey as compared with fifteen years ago, and how to maintain a profitable balance between the present low prices and the facilities for producing honey at the present time. Avoid glutting the commission houses and sending down the price was emphasized by the paper and much more so by the Association. Developing the local market met with hearty approval from all.

Another point hinted at was the possibility of forming a honey exchange or guild. We are producing a quality of honey second to none, and should receive prices that will make the production reasonably remunerative. Time limited a thorough thrashing out of the subject.

The value of the paper was decided by the hearty and unanimous vote of thanks tendered the writer.

The good features of four equal sided sections being presented, they were considered worthy of a trial the coming season.

An exhaustive discussion on section followers decided opinion in favor of perforated wood. The perforations to be about three-eighths inch in diameter and numbering one hole to the square inch, and so made as to allow bee space between the follower and the side of the hive.

Bridges in shipping crates were decidedly recommended, but do not nail them to drip pans, else they will leak.

The Pettit system of bottom boards, only they must be telescoped, was considered the best.

How to get rid of fertile workers? By a new bee-keeper. Destroy the colony as it will cost more to rid it of fertile workers than it is, or would be, worth, was the answer by nearly all present. This was their experience.

The method of taking comb honey by J. B. Hall's system of reversible super recommended itself to all as perhaps the most economic and successful process yet discovered.

Tarred felt, not paper, was declared to be the best covering for outside packing cases.

This Association recommends that the title, "Foul-Brood Inspector," be changed to "Inspector of Apiaries."

Dequeening.—Dequeen, in eight days cut out all queen-cells. In five days more cut again and introduce a virgin queen. Less honey will be stored between the cuttings.

It was decided unanimously that this Association co-operate with sister Associations in asking the Dominion Government to establish a permanent experimental apiary at the Central Experimental Farm, Ottawa, and that John Newton of Thamesford, be appointed to the position of Dominion Apiarist.

An adjournment to meet in April, 1898, brought to a close one of the most interesting and profitable meetings we have held for some time. J. E. FRITH, Sec'y.

Princeton, Ont.

Who Shall Keep Bees?

G. C. MILLER.

It is a matter of some consequence to decide whether it is better that bee-keeping should be, like poultry raising, a minor branch of agriculture to be carried on by every farmer, and also by everyone with a village lot, or whether it is better to have it carried on by the specialists. A little difficulty occurs right at this point for want of agreement as to what is meant by "specialist" and "specialty." Some seem to take the word "specialty" as applied to bee-keeping, to mean keeping bees exclusively—having no other business whatever. In that sense the number of specialists in bee-keeping would be very limited. Probably a more correct use of the terms would be to say that a man is a specialist who pays particular attention to some one department, whether he devotes his time exclusively to it or not. A grocer may say, "We keep a full line of all sorts of groceries, but we make a specialty of teas, and have the fullest and finest assortment to be found in the place." Perhaps a man might be called a specialist in bee-keeping who keeps fifty or more colonies of bees, no matter what other business he may follow.

The way in which one views a thing depends upon his standpoint. If a publisher of a bee-journal is asked to decide the matter, and if he looks at it in a selfish way, he will say, if not very far-sighted, "By all means let every one keep bees; let there be half a dozen colonies on every farm. If bee-keeping be left in the hands of a few our subscription list will be too short for profit." Another publisher, just as selfish but perhaps more discerning, says, "Better limit bee-keeping to those who will give it enough attention to be well informed, or at least to

want to be informed, say a man should not keep bees unless he cares to keep fifteen or twenty colonies. But better not have any one run up to more than fifty or seventy-five. With less than fifteen colonies a man will not give enough attention to them to care for more literature on the subject than he will get from the general apicultural paper. If the apiaries of one hundred to a thousand each are cut up into apiaries of fifty each, and the scattered colonies, one to half a dozen in a place, are bunched together in apiaries of twenty each, our subscription list would be at once trebled."

But are publishers of bee-journals the ones to be chiefly consulted? As compared with the bee-keepers, publishers are the few and bee-keepers the many. Let us ask a bee-keeper. He replies, "When I had only five colonies my honey cost me twice as much per pound as it does now with two hundred colonies. I now devote my entire time to the business, study our best plans and appliances, and am constantly aiming to secure results at less expense. Of course, the less it costs me the lower price I can sell at. Let apiaries at proper distances be established all over the land, each apiary containing 100 or more colonies, and more honey will be obtained, and at a lower price, than to have the business all cut up as it is now. You see this thing of having a farmer here and there with half a dozen colonies, putting his honey on the market at any price he can get, just knocks the market all to pieces for those who make a business of honey-raising, and its no wonder that many leave the business in disgust. By all means increase the size and lessen the number of the apiaries."

If we are to seek the greatest good to the greatest number, the bee-keeper's word should be taken before that of the publisher. But what about the consumer? And what about bees as fertilizers? For we bee-keepers are all the time saying that the chief mission of the bee is to fertilize the blossoms, honey coming in as a by-product. Every farm should have bees enough visit it to do all the fertilizing needed, whether the homes of those bees be on the farm or a mile away. So when we come to largest classes, the farmers whose flowers are to be fertilized and the general public whose tables are to be supplied with the pure and healthful sweet, the question takes this shape: What is the best way to get bees evenly distributed all over the land, and to have an abundant supply of honey at so low a price that it may be an article of daily consumption on the tables of the great middle class, and that it may even be many times enjoyed by the very poor?

I confess, I don't know the right answer to that question. The problem is complicated. Pro. Cook is a fair man, and he is in a position to look at the matter with a more impartial view than either publishers or bee-keepers. To be sure, he is an enthusiastic bee-keeper, but before that he is a teacher, especially of the future farmers, and as such has their interests deeply at heart. But how would his plan work? How *did* it work? What stoped the farmers from keeping bees on a small scale on many farms? Was there anything except that they found it unprofitable? And is there anything more to induce them to go into bee-keeping now than there was when they dropped it? If all the apiaries of 100 or more were wiped out of existence, would it make any more bees kept on a small scale by farmers? Confessedly, farmers in general don't keep bees as formerly, else why should Prof. Cook advocate a return to the former way. And is there anything to hinder every farmer now from keeping bees, even if large apiaries are planted all around him?

On many accounts it seems that it would be a good thing to have bees on every farm, but if farmers will not look after the nectar that is yearly secreted, then it may be a good thing to encourage some one person in every few square miles to do so, leaving the matter largely in the hands of the specialist.

A question, however, remains back of that. Is it not possible to have the rising generation so educated that every farmer will want to keep bees, both as a matter of pleasure and of profit? That is a question more easily asked than answered. In some countries the government takes the matter in hand, giving encouragement to bee-keeping, and only lately I read of one country, I think it was Finland, where at one time a farmer was punished if he did not keep bees. Proper instruction and encouragement at all the agricultural colleges might have something to do with it. If there was a Prof. Cook in every agricultural college, very likely there would be a large increase in bee-keepers among farmers.

I find your Journal very interesting as well as instructive, and I enjoy reading it.

JOHN HUNTER, Riceville, Ont.

Nov. 30th, 1897.

Notes and Pickings.

By D. W. Heise.

1. "There is the usual factor present this season—thin honey. And in the majority of cases there is but one cause for it, viz.: too great haste in extracting. It has a raw pungent taste, and purchasers will not come back for that brand a second time. This honey is also liable to become sour, and ferment, resulting in a dead loss to producers. Thin honey can be ripened by standing in a large tank for some time, but in this case it never gets the fine flavor that can be secured by thorough ripening in the hive, where the bees know how to do it."—Mr. J. H. Martin in A.B.J. With all the preaching that has been done along this line, we still find bee-keepers disregarding the wholesome advice. Just quite recently I dropped into a grocery store in a local town, and noticing some honey cans on the shelf, I made bold to examine their contents. I found they contained white clover honey, with the color good and flavor fairly so, but so miserably thin that a deep ladle would be required to dip it out. The grocer, of course, thought it was adulterated, which I do not think was the case, but was evidently extracted from the comb as soon as it had been stored, and by a bee-keeper (as I learned) who had been in the business for probably forty or fifty years. While I have never been much in favor of fixing a government standard as to specific gravity of honey, it does seem as if some such regulation were really necessary if bee-keepers will persist in placing such thin stuff on the market, to the ultimate injury of the industry.

2. I like the "question department" in a bee-journal, and especially that one presided over by Dr. C. C. Miller, in A. B. J. It has been a fountain of knowledge to me. I have made it a practice to read the questions, and then try to evolve a plausable answer to the same, before reading the doctor's answer. It is needless to say that my answers are, in the majority of cases, at variance with those of the doctor's extensive experience and knowledge, but by following along this line, said questions and answers make a deeper and more lasting impression, and therefore more useful for future reference.

3. Mrs. Lambrigger, in A. B. J., defends sweet clover from several standpoints, and I take the liberty of copying a few of her paragraphs. She says: Shall such a plant be destroyed on the ground of its being pernicious, baneful, unwholesome and of no use to man? Its value for honey goes unquestioned; its value for hay and fodder has been fully established; and its recognized value as a medicine is but a question of time. As to its being a weed when out of place, what then? So is alfalfa, so is mullein, the tobacco plant and the deadly night-shade, yet all have their uses in the economy of man; even the much despised thistle furnishes a dainty tid-bit for the humble donkey. All this hue and cry about sweet clover will exhaust the promoters in time, and dwindle down to nothing. It will be only another instance of "Lo! the mountain has labored and a mouse is born."

4. I want to ask the pardon of the American Bee Journal readers for ever having written a word about bees and bee-keeping. The man who gets a few colonies of bees, and reads all, or a good many of the bee-books and papers, and works along through several years of light honey flow, or no flow at all, may imagine he knows something about these things. Then let him find himself some June morning with half a hundred to a hundred colonies on his hands, and the bees filling up his hives and supers with bewildering rapidity, and the conceit will soon be taken out of him. He begins to realize that he does not know much of anything, and that what he does know is hard to make available at just the right time, and at just the right place."—Edwin Bevins in A. B. J. Although my experience is no doubt limited when compared with that of the writer of the foregoing, and although I have never managed the number of colonies he refers to, I have nevertheless realized that it does make just a great, big difference in managing colonies during a moderate and slow flow, and one coming lavishly and with a rush during the swarming season. The management (or at least a good deal of it) that will be necessary with the former condition will not apply to the latter at all.

5. Bee-keepers who have attended the conventions of the O. B. K. A. for the last four or five years, and also having attended the last one at Hamilton, would naturally ask themselves the question. "Where am I at?" Practically, everything passed off so pleasantly and har-

moniously, that one would wonder if disagreement had ever existed among such an agreeable lot of fellows.

6. Don't forget that very few people get tired of first-class honey, and above all, remember that almost anyone will tire of poor, thin, unripe honey. This is one of Dan White's sayings, and has been going the rounds of the bee-papers, and rightly so. It would be a grand thing if those few truthful lines could be brought very conspicuously before the eyes of every producer, as well as vendor of honey. Pass it around.

7. "I never saw a queen yet but there was a decidedly tremulous motion to her wings," quoth ye editor, p. 694. "I never saw a horse neigh but there was a decidedly tremulous motion to his tail. But cut off the tail and the horse will neigh just as well; and cut off the wings and the queen will pipe just as well," Frank Cheshier says, p. 157, vol. II. "Speaking of piping, it is certain that the wings are not concerned in its production, since queens clipped so vigorously that not a vestage of wing remains, can be just as noisy as others," Dr. Miller in Gleanings. Time after time have I observed queens in the act of piping, and I have never yet seen anything that would lead me to believe that the wings are employed in the production of the sound. but what Cheshier says in the above about clipped queens piping, and what Elias Fox says on p. 811, Gleanings, about having a queen several years old, and clipped, and still a piper, rather staggers me. I have always supposed that only young and not yet laying queens would emit this piping sound. I have always taken it for granted that when it was heard a young queen had hatched in that hive. Now if I am to believe those fellows, that a laying queen will engage in emitting this sound, it will knock all the props out from under my supports! What I would like for someone to tell me is this: Is it a fact that laying queens will and do pipe, if so, is it a frequent occurence, and under what circumstances can it be heard? If I can be assured that it is a fact, it will cause me to change my management while bees are swarming. Who will be first to answer my questions and oblige?

8. "How quickly bees notice any change in appearance at a time when forage is scarce! Set a hive in a new place, or put an extra story on it, and promptly the robbers will interview it to find if there are weak places. At the same time a weakling, not half so able to protect itself, will be left untouched, so long as there is no change in outside appearance." —Stray Straw in Gleanings. The doctor is right, and this goes to prove that he DOES know something.

9. L. A. Aspinwall, in Review, has the following to say of the preparation of bees for winter: "Although having been uniformly successful in the wintering of bees by special repositories, still, with properly constructed hives, and the requisite amount of food for each colony, I am persuaded that out-door wintering far transcends any or all methods heretofore advised." There now, take that, you cellar wintering fellows, and hear what further he has to say. "With a successful out-door method of wintering unrestricted flight is maintained, the desirability of which can only be appreciated when contrasted with the restless roar of bees confined in cellars during warm winters, especially towards spring. Furthermore, bees wintered in the open air require absolutely no care, and the machinery of success obviates the necessity of further brain efforts." Has'nt Aspinwall said it pretty near all in those two para, aphs.

10. Under the heading of "Wintering Bees in Snow Banks," in A. B. J., G. M. Doolittle sums up his experience as follows: I have given what I have since found in every case which has come under my notice where bees have been drifted under snow for any length of time. Since the winters mentioned, we had a winter in which we had very deep snow, and owing to a peculiar wind and a new fence which I had put up, many of my hives from five to ten feet deep. I tried as far as possible to keep the hives shoveled open, but I completely lost track of 10 colonies, of which not one was living the first of May. From the above experience, during 18 or 20 years, my advice to all would be to go slow in this matter, who are not sure that the plan of wintering bees under snow is a success with them. Try only a few at first, till you know for certain that you are right. This coincides precisely with my experience of a few winters ago, when during a terrific snow storm which lasted three days, I was unable to attend to the snow shoveling. When I removed the snow which had piled over some of the hives to a depth of ten feet on the fourth day, six colonies had smothered, three more petered out in the course of a few days, and a good many of the balance were so demoralized that it took them until late in the summer to build up.

Canadian Thistles by Telephone.

F. ALEXIS GIMMELARIO.

Hello there! Are you the Bee Journal?

No, not exactly, but I am the editor.

Well say, Mr. Editor, I thought I would ring you up and tell you that I am once again on deck, having just returned from Scotland, the land of my forefathers.

All right—go ahead!

You know I was over there with the Jubilee Kilties from Toronto, who carried away so many prizes and did such noble shooting. Of course, you can readily imagine me being proud of my countrymen. Ta ta, Mr. Editor, I'll give you more particulars later on.

See here, you Franco-Spanish, Dutch-Italian, Canadian-Scotch Hybred, is there no other country you will lay claim to being a native of. I heard you had gone from Rossland to the Klondyke, and had returned to attend the Ontario Bee-Keepers Meeting to be held in Hamilton, which I hope is true. Good-bye, Frankie, good-bye.

LADY APIARISTS IN BRITISH COLUMBIA.

According to the October issue one of our Ontario lady apiarists must be either a visitor or a resident of British Columbia. Oh, my! how I wish I was there. Now, Mr. Holter-woman, don't you misconstrue what I have written, and tell the readers of the C. B. J. that I want to go to that part of Canada just because Miss Buller is there. Such is not *exactly* the case; or rather it is not the only reason why I would like to there. It is the climate—yes, the climate—that catches me most. You know, I don't like the cold weather, and I do long for warmer weather than Ontario furnishes in winter.

But say, Mr. editor, I am seriously contemplating a journey to the Bermuda Islands, shortly, and in the meantime if you can furnish any information regarding apiculture there, or give me the names of any bee-keepers in that salubrious climate, you will much oblige.

THE PETTIT SYSTEM OF PRODUCING COMB HONEY.

The above system is all right. I had little doubt but that it would succeed, and prepared to give it a fair trial. I used both the the wedges for ventilation, and assisting or inviting the bees to run up the sides of the hive, in order that they might deposit their stores in the outside sections, as well as the perforated follower or divider, and believe the two combined are better than either one alone. As to the proper size for the holes in the divider I may state that I saw no difference in the work of the sealing of the sections whatever; in fact, one half of some of the dividers had ⅜ inch holes, and the other half 5 16 inch holes; others had nothing but one size of hole, say ⅜, while yet another lot were bored with a 5 16 bit. I tried none larger or smaller than the above. My candid opinion, however, is that the extra bee space furnished by using the divider is of more value than the wedges in securing the end in view. I like the wedges, nevertheless, for the extra amount of ventilation they afford. I am not sure that I want more than one cleat on each end to be nailed permanently so as to prevent the divider from splitting. If more are nailed on, it makes extra work to clean them of propolis. I am, however, going to try another dodge next year, but I'll study the matter more minutely before enlarging on its possibilities.

THE NEW SECTION AND CLEATED SEPARATOR

I observe that "brudders" Root, York and Hutchinson are now booming the new or rather an old style of section (I suppose you will follow suit), whose top, bottom and sides are all the same width, and in order to furnish the usual bee space, the separators are cleated in much the same manner, if not exactly, as Mr. Pettit does his perforated divider or follower.

The cost of the new sections, on account of being more easily manufactured, will be less than those at present in use, but the cleating of the "fence" separator, as illustrated in Gleanings, will be a trifle more expensive than the old style, so that as far as cost is concerned, little or no difference will be experienced to those like myself who have been using separators in the past. The saving, however, will be in the price of the crates for marketing the honey, as more sections, containing the same amount of honey, can be crated for less money, to say nothing of the better appearance of the section when filled, and the greater ease with which they can be cleansed of the propolis.

Those having T supers or section holders can utilize either with the new system, without any readjustment except the purchase of new cleated separators, which Mr. Root says are made from material which has previously been destroyed, but

can now be saved and put together with automatic machinery.

There is only one objection to having such separators permanently cleated, which I have already stated, holds good with Mr. Pettit's dividor, and that is the scraping of the propolis from them when they become so much soiled as to require such treatment. Some apiarists, however, prefer throwing away the old and using new ones yearly, so that my objection may not amount to anything after all.

I agree, however, that a wide separator made as proposed at Medina, should be perforated or made in such a manner as to afford all the possible freedom and communication for the bees throughout the super. In fact, I already suggested in a former issue of the C. B. J. that separators be perferated, not that it was original with me, but because I believed them an advantage. The world moves, so I'll try 'em.

SEALED COMBS FOR WINTERING.

I have noticed that Dr. Miller, in a late issue of Gleanings, states that I have had success in wintering on solid sealed stalls. The junior editor of above journal, Mr. Ernest Root, endorses my method, to some degree, at least, by inserting such combs right in the centre of the brood nest, and that since adopting such tactics the winter loss has been less than 3 per cent. That's right—I know a man who winters and don't lose any per cent. He lives in Woodburn. I know another fellow who thinks the wintering of his colonies the easiest part of the business, but extreme modesty prevents his name appearing here. Both these are Canuks, as Dr. Miller calls us chaps, but that is no reason why the Yankees can't do as well. Just keep on advising your readers Mr. Root, to follow up the practice. Now just in conclusion let me whisper in your ear doctor, that it is possible to cure foul brood in, say November, by shaking the bees, one or more colonies into about 5 soled sealed combs of sound honey. If it is done when little or no unsealed honey is present in the diseased colonies, so much the better, but even if they do carry some away and no vacant cells are in the prepared hive, it cannot be stored, and is used up long ere it can be used for brood rearing. Try it, ye unblievers, but don't half do the job, and then report it an entire failure. You must be sure the new combs contain honey free from disease, and it will do no harm to see that the new made colony is put into a clean hive. I mean one that has not been infected to such an extent that it can conceal foul brood germs, either in propolized crevices or otherwise, as cited by Mr. Muth of Cincinnatt, who appears quite satisfied, he gave the disease to swarms put into old hives that had contained diseased colonies several years ago.

Mr. McEvoy can, however, give you more information on this suject than I can, as it was he who first let me into the secret, he having followed the above practice for over twenty years, both in the wintering and curing of foul brood.

QUESTIONS.

I have one colony that will not work in the sections. My hive frame is 12 inches deep and the brood chamber well filled. The bees in the Langstroth hives are storing in the sections. What can I do to remedy the matter.

Put a super above the sections that is large enough to hold brood frames, and put two or three frames in it that are full of brood and honey, contracting so there will not be room in the upper super for honey. DR. A. B. MASON.

Pitch off the sections and put on an extracting super filled with combs, and your trouble will be at an end.

A. D. ALLAN.

I don't think the size of frame makes any difference. We use both a deep and shallow frame, and they enter sections as readily from the deep frame, as they do from the shallow. J. PIRIE.

This question is too vague to warrant an answer that will be of value. There may be many reasons given for the state of things you mention; but without further information that you give I confess I cannot answer you intelligently. Evidently you have not given that attention to the principles of bee-keeping that you ought, and my advice is, to study up the whole matter in the text-books, and inform yourself generally on the first principles of bee-culture. Thus you will

be better able to understand peculiar conditions as they arise, and combat them successfully. J. E. POND,
North Attleboro, Mass.

The cause is not always, in fact, not often chargeable to the depth of the frames. Sometimes two colonies appear to the observer to be of equal strength in number of bees, when, in fact one of the colonies may have largely the advantage in number of field workers, that is—bees that have arrived at the proper age to do field work. If I had a case on hand like you mention, I would put some partially built combs in the section case as "starters." This will start the bees to work, if there is any honey in the fields. I have heard many a fellow complain bitterly, that, "my bees won't work in the boxes," referring to a time after the honey flow was past, or when there was no honey flow. G. W. DEMAREE,
Christiansburg, Ky., U. S. A.

See that your bees have a good laying queen, and give them two or three sections with drawn comb from some other hive.
W. SCOTT.

A shallow hive is considered best for obtaining comb honey. Your statement of the case suggests the same.
EUGENE SECOR.

Change supers. R. A. MARRISON.

A frame 12 inches deep is rather deep for section honey. I should run the deep hive for extracted honey, or transfer to Langstroth frames. R. H. SMITH.

Sometimes a colony will insist in keeping to the brood chamber, and hanging out in front without any apparent cause. I have known increased ventilation to have remedied the matter, that is, by raising the hive from the bottom board, using side strips ¼ in. in front and tapering to nothing toward back (as per Mr. S. T. Pettit). In your case, I am inclined to blame your brood chamber, they are too well accommodated. Transfer them to a Langstroth as soon as you can and save waste of time.
W. J. CRAIG.
Brantford, Ont.

ETHICS OF BEE-KEEPING.

The Sealing of Honey—The Cause of Sour Honey—A Platform Scales.

—A. BRIDGE, P. M.

Editor of the Canadian Bee Journal:

DEAR SIR,—This has not been a very good year for bees; most bee-keepers in the vicinity of Kingston report a small crop of honey and very few swarms. My bees, however, have done very well for a poor season. I commenced the season with 90 colonies of bees and increased to 115. I took off 5,615 lbs. of clover honey, of which 280 lbs. was comb honey in sections, and 5,335 lbs. was extracted honey. I also extracted 2,356 lbs. of Fall honey, making a total of 7,971 lbs. I fed back 300 lbs. to the bees, leaving a balance of 7,671 lbs., and thus making an average of 85 lbs. to the colony's Spring account. This honey was all taken from the supers, none taken from the hives. My bees will go into Winter quarters with double the quantity of honey required to winter them. I also made 100 lbs. of beeswax from cappings and old combs.

I allow my honey to remain with my bees until it is sealed over. The wax more than pays for the trouble of uncapping. By working on this plan I always have a first-class article of extracted honey. Quite a number of bee-keepers take off their honey before it is sealed over. They get along with their work faster on this plan of extracting, and produce a poor article of extracted honey. *Honey, when* first gathered by the bees, is as thin as water. Bees never seal their honey until it is ripe, and before they seal it they put a small portion of acid into each cell with the point of their sting. Honey that has been sealed over by the bees will keep forever, if kept in a dry place, in the comb or extracted. Honey that has been taken off before it is sealed is liable to sour, and this is the reason so many people refuse to buy extracted honey. They have got some of the sour stuff that has been taken off before it was properly evaporated and sealed by the bees, and they do not want any more extracted honey. Bees use their stings freely in protecting their hives, but the principal use of their stings is in curing their honey. Without the acid the honey will not keep, and, if it has been taken from the bees before it is *sealed, the*

acid has not been put in, for it is not put in until the honey is evaporated and ready for sealing. In fact it is not honey until it is sealed; it is only sweetened water, and is only fit for vinegar.

I keep a hive of bees on a platform-scales. I put them on in the Spring, and leave them on until Fall. This hive tells me when my bees are losing and when they are gaining, and just how much they gain or lose every day.

We had a good honey flow from clover the first five days of July, and to give you an idea of what a hive of bees will do in a few days, in a good honey flow, I will give you the exact weight of ripe honey for each day: July 1st, 10 lbs.; 2nd, 10 lbs.; 3rd, 14 lbs.; 4th, 11 lbs.; 5th, 7 lbs.; total for five days, 52 lbs. When the honey is coming in at this rate, there are 2 lbs. go off every night in evaporation; consequently 10 lbs. should be added to the 52 lbs. to get the correct weight of ripe honey brought in in five days, as I only weigh the honey once a day, in the evening, when the bees are all in. I weighed the hive every hour the day they made 14 lbs., and it gained 2 lbs. every hour after the scales balanced in the forenoon, until the close of the day.

Yours truly, A. BRIDGE, P.M.

Westbrook, Co. Frontenac.

Bee-Keeper's Alphabet.

A stands for Aptness for the pursuit;
Then unless you begin right, you may never recruit.

B is for Build your bees up in the spring,
If abundance of honey you wish them to bring.

C is for Cover them up nice and warm;
This will ensure you, a strong early swarm.

D for Double weak colonies. Good bee-keepers say,
"It's the only way, they ever will pay."

E for Endeavor your hives with brood to get filled,
And all poor queens, should next autumn be killed.

F is for Feed any hive that is light;
The best time to do it, I think is at night.

G is for Giving attention and care:
If you always do this, you're sure to get there.

H for Have everything ready for use;
For not having done so, there is no excuse.

I for Implements all nice and clean,
That round a good bee-yard should always be seen.

J is for Jarring or shaking a hive;
One who does this had best look alive.

K is for King bird, that one often sees
Near the apiary, gobbling up bees.

L is for Labor, that always will tell,
But try to get in some science as well.

M is for Many who nothing will read,
And that is the reason they do not succeed.

N is for Neatness in all that you do;
With zeal and persistence the calling pursue.

O for Old notions some people still hold;
Of wonderful "king-bees" by them we are told.

P is for Puzzling actions of bees,
Which every intelligent bee-keeper sees.

Q is for Queens, prolific and good;
Keep any other no bee-keeper should.

R is for Rendering wax in the sun;
By the Solar extracter it quickly is done.

S for Subscriber to the C. B. J.
"A dollar," so spent, "good interest will pay."

T is for Toads which some people say,
"Put many poor bees out of the way."

U is for Use your own "common-sense";
Bees have no set rules, make no such pretense.

V for the Vicious hy-brid and black,
So anxious to empty their small poison sac.

W for Winter, a time of the year,
When too many bee-keepers are idle, I fear.

X for eXamine spare combs now and then;
Moths are more active than are many men.

Y for the "Yellow-bees," gentle and kind;
And they are the bees the honey to find.

Z for the Zeal that we all need,
If, in the bee-business, we wish to succeed.

—GEO. MCCULLOCH.

Harwood, Ont,

UNITED STATES BEE-KEEPERS' UNION MEETING

Suggestions on the Making of Exhibits at Fairs.

BY W. Z. HUTCHINSON.

Dealers in apiarian goods, and manufactu. of these goods, have made exhibits at the fairs for the sake of the advertising that may be secured thereby. The producers of honey have also exhibited their product for the sake of the advertising, and for the sake of what they might sell at the fairs. Others have exhibited bees and honey at the fairs mainly for the sake of securing the premiums offered. It is with the latter object in view that I have made exhibitions, and it is from this point of view that my suggestions will be made.

The first thing to be considered is the premium list. It is at the winter meeting when the agricultural societies revise their premium lists, and to these meetings should be sent a delegate or delegates from the state bee-keepers' societies with instructions to look after the interests of the bee-keepers. I went one winter with Mr. H. D. Cutting, to the meeting of our State Agricultural Board, and succeeded in getting the premium list raised from $150 to $300. Whoever has charge of the preparation of the list should be extremely careful as to the wording, that it be so simple, yet so specific and clear that it cannot be misunderstood. I must say that I admire the N. Y. list in one respect. It limits the amount of honey that shall be shown. The limit is 250 pounds, no more no less. In times past the premium was offered on the largest exhibit. Now most of the lists say "the most attractive display." This is much better. It is true that size may be one factor in the attractiveness of a display, and the illinois list places quantity at 40 per cent in one hundred points. But if 250 pounds of honey are shown, I think that better results may be secured by offering a premium upon the quality of the honey and the attractiveness in which it is put up, than by offering a premium upon a larger quantity. Put the exhibitors on their metal as to attractiveness of display. As it now is, the displays are, mostly, simply big piles of honey as it might be piled up in some commission merchant's store.

Extracted honey in liquid form cannot be shown to much advantage except in glass, and if the glass is of the white or flint variety, and there is a window back of the exhibit, the light coming in and "shimmering and glimmering" as it strikes the honey, a very beautifnl display may be made. There ought also to be an exhibit of candied honey, and explanatory labels, then when honey candies on the hands of some ignorant purchaser, or rather purchaser that once was ignorant, he will know that it has not "turned back to sugar." I am glad to note that Illinois offers premiums on displays of candied honey. Illinois has done another good thing, she has gotten up a score card to be used in judging the honey exhibits. This shows exhibitors upon what points their exhibits are to be passed upon, and is a guide to the judge. I believe that Illinois now stands near the head as regards her apiarian premium list and show at the State fair. One reason for this is because her bee-keepers hustle and tell the managers what they want. The managers of fairs are usually willing to grant anything reasonable that is asked of them. The reason, or, at least one reason; why the premium lists of so many States are so meagre is because the bee-keepers have never asked for anything better.

Of course, I am saying considerable about the premium list, for that is the foundation of all successful and profitable exhibits. In most of the other departments of the different State fair lists there is something approaching uniformity—that is, the horse department of the premium list of Michigan does not differ materially from that department in other premium lists, and there is no reason why the same uniformity might not exist in the apiarian department; in fact, it is approaching that now to some extent. No list any longer offers premiums on

fail colonies of bees — they all say: "single-comb observatory hive." But let the premium list be what it may, the exhibitor should make it his guide and counsellor. It should be studied thoroughly; not only the apiarian part, but all of the rules and regulations. The exhibits must fit the list—must comply with its requirements. I remember an old man who once made quite a creditable exhibit, perhaps as good as some exhibitor who received $75 in premiums, yet this old man received only one meager premium of $2.00. He felt that he was treated unfairly, but the only trouble was that his exhibits did not meet the requirements of the list.

Plan well beforehand what you will exhibit, and how you will exhibit it. To illustrate, one man who had had no experience in exhibiting at fairs met me the second morning after we were on the grounds and said: "Well, I suppose that you have been planning all night just how to put up your exhibit so as to 'do me up'?" "No," I answered, "I knew before leaving home exactly in what shape I should set up my exhibit." "You did," he exclaimed, "well, that beats me. Had it all planned out before you left home? Well, well." This planning and arranging an exhibit is half the battle. Time and time and again have I seen an exhibitor beaten by some one who had fewer and inferior goods, but who knew how to exhibit them to the best advantage. Many a time have I heard H. D. Cutting say, in passing an exhibit, "Wouldn't I like to get in there and arrange that exhibit. Some of you fellows would have to take a back seat if that exhibit was only up in shape." And he was correct.

Have everything the very best that it is possible for you to get it. Remember that in these days it is only the very best that can secure a premium. To go to a fair with a second grade article is only time and money wasted. Never stop with "That's good enough," or "that will have to do." It is good enough only when you can make it no better, and even then you will often find that it is only second best. Nothing takes the conceit out of a man like making exhibits at the fairs. I have been at it now for about 15 years, going to five State fairs last year, and I expect to start next week on a similar trip, and I suppose it is this experience that is largely to blame for my modesty.

But to return, not only have everything first-class, but have it ready a week before you start. If you don't you will be hurried at the last, will forget things, not do good work, and leave home tired and flustrated, and if there is any place where a man needs to be at his best it is with an exhibit at a fair. Have everything all ready and boxed, and each box labeled with its contents, so that you will not have to be opening box after box in a worried search for needed articles. I remember one great, big, stout, enterprising beekeeper, whose home is in this city, who once upon a time came up to Detroit with an exhibit. His comb honey was packed in bulk in big boxes, his honey crates or cases in the flat, his extracted honey in bulk, and his bottles ordered of Muth to be sent by freight to Detroit. How many times he went to the freight office after those bottles I do not know. But they finally came and were washed and filled in the night. Then there were broken combs to be disposed of in some way and the drip cleaned up. The sound of his hammer kept folks awake until four o'clock in the morning, and then he lay right down on the hard floor and slept the sleep of the exhausted, I guess. Not only should the comb honey be packed in its exhibition cases, but the cases should be in a dust proof case or crate with handles on the end. The extracted honey should be bottled and packed. By the way, the nicest way of packing bottles of honey is by the use of card board, of the cellular style, made into partitions of the egg crate style. This kind of board is made by the Thompson and Norris Co., Nos. 2 to 24 Prince St., Brooklyn, N. Y. It is cheap and the company that furnish it will cut it up and cut the kerps for putting it together. I had about 500 bottles packed that way last year and took them to five state fairs, and not one bottle was broken. A little excelsior is put in the bottom of the boxes.

Now a suggestion (you know this paper is only suggestions) about preparing bees for exhibition. Take two combs of bees and sealed brood from the colony having the bees you desire to exhibit. Set them in a hive. Put a queen in a cage on top of the frames. Shut up the hive and keep it shut up until towards night the next day. Keep it out of the sun while it is closed. When it is opened set it by the side of the old colony. In a day or two most of the old bees, that is, the flying bees, will have returned to the old hive. Now release the queen. Do this a week or two before the bees are to go away. The day before they are to go away take them to a new stand. Shake the bees from one of the combs, returning it to the old colony. This gives an abundance of young bees that can bear confinement. The day that the bees are to go away, set the comb of bees

into the little single comb hive in which they are to be exhibited. There must be an abundance of room and plenty of ventilation. There must be room at the bottom, top and sides, and one side of the hive should be of wire cloth, the other of glass. Don't take bees without a queen, as queenless bees worry more. With bees prepared in this manner I have had them build great pieces of comb, and when bees do this they are not suffering.

Ship your exhibit by freight and go with it, if you have to go in a freight car. I have done this many times and enjoy the novelty, although I must admit that it is a bit lonesome at nights. This is the only way to get an exhibit around in time, especially if you go from one fair to another and not have your goods smashed. Take a tent and sleep on the grounds. When there are several bee-keepers, all can share one tent, each bringing his bed and some provisions, and buying when more is needed. In this way the expenses are very slight, the fare excellent, and the enjoyment supreme. I might say it is the one outing of the year with me.

There are often many little mishaps and delays and annoying circumstances. Don't let them upset you; keep cool and look at the matter philosophically; and above all, don't let the loss of expected premiums sour you and spoil your enjoyment. I never yet received all of the premiums that I expected to win, but at the same time I have often received those that were unexpected.

And when the fair is over don't be in too big a hurry to get away: The great mass of goods on the grounds have been several days accumulating, and they can't be removed in a few hours; it takes time. I have seen men fret and stew and swear and sweat, and stay up all night, trying to get away, while others who went to bed and took things coolly, went out on the same train as the "fretters."

But I have written enough, and shall be glad to listen to others.

Flint, Mich.

CO-OPERATION OF BEE-KEEPERS.

We are living in an age when the presentation of practical problems is commanding more attention than at any time in the world's history.

We meet with evidences of this on every hand; the labor agitations, the manufacturing combines, the various exchanges and other co-operative organizations, all point to one object, and that is, to advance and protect the interests represented.

The existing state of things to-day demand just such organizations, and no class can stand aloof and expect to successfully combat surrounding influences without organization. The producing element to which we belong should be especially interested in the solution of this problem, but unfortunately, we are, as yet, in a chaotic state, drifting about on the sea of circumstances, hoping for the good that "might have been" but never comes.

The conditions that present themselves to the bee-keepers of the United States to-day are not theories but plain, every-day facts, and you can scarcely refer to a copy of any of our bee journals that does not contain an article bearing on some of the evils now existing. The theories adduced have been more numerous than the colors of the rainbow; some claiming that it is due to over-production, while another that it is under-consumption, others that adulteration is the cause, while, last but not least of all, improper distribution is responsible.

The first course of a physician with a diseased patient is a proper diagnoses of the case, and we claim that the diseased condition of our industry has been diagnosed minutely, and every one of the symptoms referred to exist, and if this is true, we have reached the most serious stag of our industry, for if adulteration exists to the extent claimed, and continued, what will be the result? If there is an over-producing and the output on the increase, where is our remedy? If it is under-consumption in one section and vice-versa in another, how are we going to equalize this? If over-production is nothing more than the result of improper distribution, where is our machinery to relieve this state? The remedial stage is the most difficult of all to the experimental physician, but to the man of experience the selection of a remedy is not an experiment, for positive results always follow positive remedies.

In our present state we also have a positive remedy, and, while we do not claim it a "cure-all" for every ill that besets the bee industry, we do claim it has proved its efficacy in the cure of the diseased state of kindered industries, and we do not hesitate to second the advocacy of co-operation as a positive remedy for our own relief. It is evident that what it has done for other producers it can do for us. Co-operation in this State has completely revolutionized former methods in the disposal of the various industrial products. The thrifty, wide-awake producer, who, a few years ago, saw nothing but disaster staring him in the face; with the grip of the middle man tightening his grasp more and more as the years passed by; with a far distant market; a perishable product,

prohibitory freight rates and many other seemingly insurmountable difficulties; all of which have been overcome by the indomitable will and perseverance of the California fruit power. The California Bee-keepers' Exchange, although of recent growth, is proving a factor in this, its first season's experience, in the upholding of prices, reducing the cost of supplies to its membership to a minimum, and instilling a feeling of protection that never existed before. We predict that if the business of this organization is conducted in accordwith the outlined footsteps of the California fruit growers, like success is sure to follow.

Opposition to co-operation as a rule is due to two sources,—misinterpretation of its objects, and selfishness. The true spirit of co-operation is the hand that assists his neighbor, and rejoices in the welfare of others as well as his own. The selfishness and short-sightedness displayed by the refusal to assist in the disposal of our neighbors' product is beyond comprehension, for the result is sure to enhance the value of our own. We all know that some of our most successful producers are incapable salesmen, and the depreciation in prices is often due to this very incompetency. That improper distribution has much to do with our existing difficulties is undoubtedly true for the ratio of honey consumption in the United States is less than one pound to an individual, and nothing but co-operation can correct this.

Co-operation is not a selfish project for it only recognizes the individual in his product, and the product in accordance with the grade, and it is the only method that harmonizes all antagonistic interests.

The feasibility of this plan, as stated, has been fully demonstrated in practice, and we firmly believe that until the bee-keepers of this country band together in the form of local and other associations, the existing state of hopeless expectation will positively continue and the demoralization of prices will be repeated every successive season.

The formation of local associations result in the concentration of the interests of many, the selection of the best material at hand to supervise the whole, the buyer deals with one instead of many, all grading is equalized as well as prices, and by systematic methods in course of time establish such a reputation that results in a direct demand for their product instead of glutting the markets by improper distribution. Then as "great trees from little acorns grow," so shall we also witness the growth and formation of other kindred associations as the natural development of the local organizations demand.

The absurdity of beginning at the head instead of the foundation has been fully experienced in the pioneer work of other associations, and while we fully endorse the establishment of a National Exchange, as previously stated, we can not expect success to follow such an enterprise until local, district and state associations demand it.

"Hope, though, never dies," and the inspiration following the birth of "The Infant," at Lincoln, Nebraska, a few months ago, is reviving the dormant faculties of a great many who had fallen into the slough of despair. With hope renewed all eyes are turned towards this new star of destiny for deliverance from present bondage.

The infant development of this new United States Association will depend very much on the atmospheric surroundings, and generous diet given it in form of financial support. We feel fully assured of the first in the absolute confidence we have in the faculty who have it in charge, the enlargement and scope of its work depends entirely upon the individual bee-keeper and it is for us to make it and mould it to suit our varied wants.

As a closing theme and one bearing on the subject of co-operation, we desire to outline a field of operation for your present or future consideration, and this is the establishment in connection with the present organization of a Bee-keepers' Information Bureau.

The object would be to supply its members with all information at hand in regard to matters bearing on this industry. The establishment of agencies in the various states and centers of business. The agencies to glean information for, to supervise and disseminate matters of interest to the members for the central office. The following would be some of the benefits accruing to the participating membership :—

A rating of individual responsibility; the possibility of securing such information pertaining to members, or of anyone dealing in our product; the amount of honey produced in every section of the Union; by the statistics available the centers of over-production and under-production could be readily determined. It would be an effective agency in ferreting out and prosecuting the adulterator when once this organization has secured national legislation, and we can never expect to suppress this foe to our industry until this is accomplished.

GEORGE W. BRODBECK,
Los Angeles, California.

Eighteenth Annual Meeting OF THE ONTARIO BEE-KEEPERS' ASSOCIATION

THE eighteenth annual meeting of the Ontario Bee-Keepers' Association was held at the Court House in the City of Hamilton on Tuesday, Wednesday and Thursday, Dec. 7th, 8th and 9th, 1897.

The president, Mr. J. K. Darling, called the meeting to order at 2 o'clock p. m.

The secretary, Mr. Wm. Couse, read the minutes of the last annual meeting, which, on motion, were confirmed as read, and signed by the president, after which the president, Mr. J. K. Darling, delivered the following address:

PRESIDENT'S ADDRESS.

"Another season has passed by, and we are again met together to compare results and lay plans for the future. The past season has been a varied one, the bee-keepers in some localities securing a fairly good yield of first-class honey, while in others there was very little, and in some places none whatever of a first-class article stored by the little workers. In some sections there was a small flow of dark honey in the fall, and in others the bees secured barely enough for winter stores, and a good number of colonies have had to be fed. As a consequence prices are firm and the surplus of last year is likely to disappear before another season opens. As an association we can congratulate ourselves on making progress. Some years this advance is not as pronounced as at other times, yet "Onward!" is the word and we are living fairly up to it. If we take a statement made by the President of the Dairymen's Association of Eastern Ontario, at their annual meeting held in Brockville last January, and compare our work with theirs, we will have no cause to feel disheartened. After referring to the vast amount of butter and cheese which Ontario exports to England, he says, 'Now, how has this been brought about? In the first place by organizing a dairymen's convention at Ingersoll thirty years ago this spring, with the motto of 'Progress.' For the first fourteen years all that the association did was to hold conventions, to teach cheese and butter-making while attending, and holding of cheese shows.' Surely our record is as good as that, and, while we cannot hope to accomplish as much as the dairymen can accomplish, or to increase the industry of bee-keeping to the magnitude of the butter and cheese trade, there is plenty of room for advancement. The work of the association must be mainly along the line of education, and I think we ought to begin at once to push that branch of our work with more vigor than we have ever done in the past. It is that kind of work that has placed the dairy interest of the Dominion in the front rank as it stands to-day.

'There have been no complaints of adulteration during the past year, owing no doubt to the efficient work done in the Inland Revenue Department at Ottawa; and it is my opinion that, with the law as it is now, and a proper watchfulness on the part of honey-producers, we will not have much trouble with adulterated honey. It is a matter upon which we can congratulate ourselves that not one of the adulterated samples was traced to a bee-keeper, and that most of the samples which were adulterated with glucose were traced directly or indirectly to one firm in Montreal, and further that most of the adulterated samples secured were secured within a radius of that city. This is a matter that ought to be proclaimed from one end of the Dominion to the other, thus allaying the distrust that has arisen regarding pure honey. Only one sample in fifteen and that in a limited area. Regarding a standard for the specific gravity of honey, we are very much at a loss as yet how to proceed. The fact that the percentage of water in the samples analyzed at Ottawa ranged all the way from 12 to 33 per cent. would show at once that much more must be done before any definite conclusion can be reached. This work we now have before us. The foul-brood inspector's report will be laid before you, and if it is taken up and discussed by this meeting you will learn that there is a large amount of association work in that field. The educating of the masses in regard to the use

of honey, thereby increasing our home market, is a matter deserving the attention of this association quite as much as teaching those who wish to keep bees how to care for them. The programme which is placed before you will provide an opportunity for each one present to contribute something to our store of bee knowledge. I hope that the friends who looked forward after last year's meeting, with the expectation that our meetings in the future would be less turbulent and more harmonious and useful, will not be disappointed. I thank you for the confidence placed in me a year ago in elevating me to the position I now occupy, and I trust you will assist me in making these meetings both pleasant and useful during the few hours I shall remain in my present position. (Applause.)

Mr. R. F. Holtermann—I am sure that we have listened with pleasure to the address of our president; I do not think there is very much that any of us can take exception to, and I would move that the address of the president be filed, and that it be incorporated in the report of these proceedings, after which there are one or two remarks that I will have to make in regard to it.

Mr. F. A. Gemmell—I have much pleasure in seconding that.

First vice-president, Mr. W. B. Holmes, put the motion, which was declared carried by a rising vote.

Mr. R. F. Holtermann—There was a question which was brought up at the last annual meeting by Dr. MacFarlane, of the Department of Inland Revenue, and that is in regard to the percentage of water to be found in honey. I think if I am a correct judge of the views of the members of this association and bee-keepers at large that that was a question of very vital importance to the bee-keeping industry. In travelling about the country I find that there is altogether too much honey which has been taken from the hive at a time when it is not properly ripened and when it has too large a percentage of water. You remember last year a resolution was passed asking the Department of Inland Revenue to pass some regulation after consulting with the Executive Committee in regard to that percentage of water.

Now, we know that if honey is taken from the hive before it is properly ripened or before a proper percentage of moisture has been taken from it, the nectar which turns it into honey has not that flavor which is pleasing to the palate and which it is absolutely necessary it should have if we are going to develop our markets to the highest possible degree. We are living in a section of country which has perhaps been educated to a greater extent upon this subject than other portions of the Dominion. You must remember that this is now a Dominion matter, and if we ask the Dominion Government to do a certain thing it will cover the entire Dominion. When you go to other portions of the country, and I make special reference to the city of Ottawa, which I have been visiting for several years for the Goold, Shapley & Muir Co., if you go into the stores of the city of Ottawa fall after fall you find that the honey put upon the market by local men there, is largely put up in pickle bottles and corked, and all you have to do is to turn that bottle upside down to see that it is exceedingly thin and that there is a large percentage of water in it, and when the consumer puts it upon the table the result is that he is not pleased with the honey as he should be. Many are not aware as to what the trouble is with that honey and the result is that that consumption of honey is curtailed by putting such an article upon the market, and these men who put their honey upon the market before it is properly ripened are simply feeding and living upon the good reputation which the better article has gained throughout the Dominion.

Another unfair element is that the price of honey is reduced by putting such an article upon the market; it costs more and is a greater expense to produce an article with a heavy specific gravity. I do not think that there are any two views upon that question. Now, it appears to me it is not so exceedingly difficult. When I first brought this question up in the department of Inland Revenue, Sir Henry Joly was there and the Deputy Minister of Inland Revenue and Dr. MacFarlane, and they seemed to think that it was quite possible to do that, and if we knew what we wanted, they would be prepared to pass an Order in Council giving us what we wished. It would be no expense. We do not propose going to the expense of going to the House, it is simply passing an Order-in-Council giving us the Act. Let us ask for only a certain per centage of water to be found in honey, let us put that down upon a safe basis, let us fix a limit as we find that it is workable, and, if it is desirable, we can increase that percentage and the tendency will be to educate the bee-keepers in regard to that fact, and if the consumer can be taught to judge honey better in that respect, and if the producer can also be better educated in that direction, we

will accomplish something. I admit we should be careful, but I am still of the view that we should work in that direction.

Mr. F. A. Gemmel: Is it that honey should not be allowed to be sold unless it has a certain specific gravity?

Mr. Holtermann: Just as it is with regard to certain other products; there is in the Dominion Statutes Act which allows the Department of Inland Revenue by order in Council, to see that there shall not be beyond a certain percentage of certain ingredients in certain things; that covers not only honey but foods generally. What we want is that the percentage of water shall be limited in honey and let us fix it at such a rate that unless a person puts upon the market something which is absolutely good he will not come up to that law.

Mr Gemmell—The only way would be to class it.

Mr. Holtermann—We had better keep it on the safe side.

Mr. J. D. Evans—Unless there is some very great evil arising in this connection I think we ought to go slow and I am a little afraid it would give consumers the idea that the bee-keepers' were mixing water with their honey and if that idea gets abroad it will probably injure the sales of honey. How many of the members of the association find this practiced to any great extent? Let us find that out, and if it is not a subject that is worth taking up, and if it is not injuring the sale of honey at the present time I think I would go very slow in taking any action for fear we create another suspicion as to the honey we produce.

Mr. J. B. Hall—I find in my apiary, I do not know how it is in others, that some colonies of bees will not give heavy honey, I am speaking now of comb honey, not extracted; the extracted would be under our own control. Some races of bees will not give heavy honey, and how are we to get over this difficulty. As far as the percentage of water in our honey is concerned I am afraid we shall have to kill a lot of our bees. I do not know but what it is better that we should kill them, but I find such a difference in stocks of bees sitting alongside of each other, feeding in the same field, we suppose from the same food, one gives a heavy smooth oily production and the other is a very thin watery production. One will keep, but the other will not, and one while new is just as fine flavor as the other, but it deteriorates. It is rather a difficult matter for us to get over.

Mr. Holtermann — Does Mr. Hall ever find that the product that he speaks of is as thin as some of that which he finds upon the market? I am admitting that there is a great difference in the ripeness of honey; that is, one class of bees will ripen honey and it will not have anything like the specific gravity, while the percentage of water will be much more than in another. But I am talking of an article which goes beyond that, and which has a grear deal more water in it, and it is that article we want to try and prohibit.

Mr. Hall—That is what we commonly term green. The trouble is to get the specific gravity of water into the green honey. I do not know what percentage of water there is in this honey which I have spoken about but I know it is not as thick as I would like it.

Mr. Holtermann—The proposition is not all to deal with comb honey. We have with us Professor Shutt, from the Dominion Experimental Farm, and I think he is on our programme. Perhaps you would like to hear a few words from him upon that subject as he is a chemist.

The President—Would this afternoon or this evening suit you best, Professor Shutt?

Professor Shutt—Mr. President, it makes very little difference to me. I have not come prepared to speak of the question of honey because I understand Pro. MacFarlane, the Analyst of the Inland Revenue Department has been paying special attention to that subject and will be here either to-morrow or next day to specially treat on that subject, and under those circumstances I really do not know whether I should intrench on his ground. I came particularly to speak on the subject that we have been investigating, the question of the utility of various brands of foundation, and if it is suitable for you this evening it will be quite as convenient for me to speak then as this afternoon, or this afternoon as this evening.

The President—The reason I asked the question is because we are getting programmes printed and we have you down for this evening, and you can have the whole evening to yourself if you wish it, but if it will accommodate you to speak this afternoon instead of this evening we would vary the programme.

Professor Shutt—I have to leave to-morrow morning. Perhaps we might leave the programme just as you have it for this evening.

The President—As far as the discussion on this subject is concerned we shall be glad to hear the suggestions you may have to give us as well as any other person in the Association.

Professor Shutt—I am taking the place

of a learner, I have not come here specially to speak about honey from a practical standpoint. From what I remember of the subject the English analysts have said that the percentage of water in honey is subject to certain fluctuations, within certain small limits, and that usually the percentage of water in genuine honey varies between eighteen and twenty per cent., but that there have been examples in which the water has far exceeded that; I believe there are genuine honeys with as much as twenty-five per cent. of water. So that I presume what Mr. Holtermann is speaking of and what he wants legislation for is to prohibit the percentage of water when it exceeds the latter quantity, twenty-five per cent., to bring the matter to figures; that is what the whole thing seems to me to come down to, and if twenty-five per cent. is the outside limit, and I should judge so because I know in England that twenty per cent. is looked upon as a very large percentage of water in honey, you will be quite safe in putting it at twenty-five per cent. and considering that honey containing more than that would be accounted adulterated. The law is an adulteration law, and when the law comes to treat of it it will call it an adulteration because it could not treat of it unless it did designate it as such; I think that is the reading of all designating laws, no matter whether it is something that is not taken out, or something that is added whether for the purpose of getting additional weight or whether it is anything that is injurious to the health; they call all those things adulterations under the law.

Mr. Frith—I understand from certain experiments which were made at Ottawa that the percentage ranges from twelve to thirty per cent.

Professor Shutt—We have done nothing with regard to estimating the percentage of water in honey.

The President—The Inland Revenue Department conducted the test.

Professor Shutt—When I quoted thos figures, eighteen to twenty per cent., I said those were the limits usually of the percentage of water in honey; that might be called the average per cent., but there was some honey that went as high as twenty-five per cent.

Mr. Frith—There does seem to be some difficulties in regard to fixing the per centage of water; as Mr. Hall has said, he finds some honey with a great deal more water or very much thinner, the consistency is not as great; and as another speaker suggested, if we commence to legislate along this line perhaps it may augment ideas which are now existing against honey in the way of adulteration; and it does seem to me it would be very hard or somewhat difficult for bee-keepers' throughout the country, especially small bee-keepers'. They would have to have this honey analysed in order to find the specific gravity before they could sell it. I think there was something done along this line, or was talked of being done in the butter business. If there was anything done in regard to the butter business we might find out from them how it works.

Mr. R. F. Holtermann—I am very much pleased to have heard Professor Shutt's remarks. I think from his remarks he is a practical chemist and a good man. I think from the view he has expressed that there will be no difficulty in fixing a per centage which would be entirely safe.

Now, in regard to the idea that we might arouse certain suspicions in the consumers' minds, I think that can be said of every piece of useful legislation, especially every Act in connection with adulteration, and more than that, that is what we want to do, gentlemen. We want to arouse the consumer's ideas upon the subject. I spoke at the Pure Food Exposition in Toronto the other day, and I made a point of telling them exactly how to judge good honey, and the sooner we can do that the sooner we will bring bee-keeping down upon that basis so that bee-keepers' must produce a good article to get rid of it, and the sooner will we have an article sold upon its merits, and when a man produces a good article he is going to get the benefit of it, and when a man tries to sell a poor article to a consumer he will get the benefit of that. It appears to me it is quite within the bounds of practicability, and, let us fix that percentage upon such a basis that the honest bee-keeper, the man who is anxious to produce a well-ripened product will not need to fear the Act one particle, and the rest will have to come to time.

(To be continued.)

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