

...The Canadian Bee Journal

PUBLISHED MONTHLY.

NEW SERIES
Vol. VIII, No. 8.

BRANTFORD, ONT., FEBRUARY, 1901.

WHOLE No
432

Annual Meeting

Twenty-First Annual Meeting Bee-Keepers' Asso., Ontario.

HELD AT
NIAGARA FALLS,
DEC. 4, 5, 6, 1900.

The President now called upon Mr. Holmes, who read his paper entitled "Queens," which is as follows:

Mr. President, Ladies and Gentlemen,—As stated in the program of this convention, I am to give an address on the subject of "Queens," and it may be presumed that the master, as he scans the list, will see an opportunity. If he be a sporting man he will at once suggest "the queen of the turf," or if he be a society man his thoughts will immediately become centred on the "queen of the party." Force of habit and influence of association acting as a matter of course as the prompter of the scene in these and other similar flights of fun and fancy.

To individuals of this class, if such be present, I have only to say that this association of practical men convened in this town for purely practical purposes, that it is composed of individuals who are not speculative in any way, but operative in the strictest sense of the term, and that the only thing eligible for consideration at the meeting of this regularly organized

meeting of Canadian and American bee-keepers are the queens of our colonies and mothers of our most wonderful pets, the honey bees.

The practical man contemplating the advisability of entering upon any line of work or business, carefully studies the situation from every point of view, and, when fully convinced of its desirability as a lucrative venture, complies most assiduously with all the conditions necessary to the complete success of the undertaking.

That all business men are not thus thorough in calculation and execution goes without saying, and it is also perhaps safe to infer that bee-keepers as a class are not without their failings as well. But every bee-keeper knows, or thinks he knows all about queens, and yet it would seem as though some, perhaps too many, bee-keepers are satisfied by merely knowing that "a queen" is in the hive without any consideration as to her qualifications or ability for the duty which she is to perform. The splendid hives and foundations of the day are certainly a boon which every true bee-keeper appreciates, but the great centre on which success most largely depends, that "centre" at which no "master" bee-keeper can err is in securing "the good queen" for every colony.

What do I mean by the good queen? By the use of the term "good queen"

I mean the queen that will do the largest amount of work in a given time.

The late Lorenzo Lorain Langstroth, who has been justly styled "the father of American Apiculture," describes a good queen in that marvelous work of his on "The Honey Bee" as one who will lay three thousand five hundred eggs per day for several weeks in succession during the breeding season.

What bee-keeper of any considerable experience has not had occasion to note the difference between good, medium and poor queens? The colony with but a handful of bees, so to speak, gaining so rapidly in numerical strength as in some cases to exceed the more populous colony in the next hive in the actual amount of surplus honey stored; thus demonstrating that the good queen was in the colony which had wintered poorly where as the well-favored colony had only a medium or poor queen.

Dzierzon, the great German bee-keeper and scientist, says "queens differ much as to the degree of their fertility.

Mr. Langstroth notes an observation made while transferring bees by counting the eggs dropped on a black cloth in forty minutes by the queens of four different colonies. The first queen dropped but one egg, the second twelve, the third eighteen and the fourth twenty eggs in the stated time. This observation was made in the middle of April and on the fifteenth of July the colony of the first queen was very poor, the second was of average strength, and both the others were very strong.

Now let us apply the result of this observation to practice and see how it would figure out:—Take for instance an apiary of one hundred colonies, the average annual yield of which is, say eighty pounds of ex-

tracted honey per colony; now let us suppose that twenty-five of the one hundred colonies are poor, fifty average and twenty-five strong, and then try and solve the problem as to how the average yield of eighty pounds per colony is obtained. The poor colonies will gather about half as much surplus honey as the fifty of average strength, or say forty pounds each, then in order to get the average of eighty pounds per colony for the whole apiary, the twenty-five strong colonies must gather one hundred and twenty pounds of surplus honey each.

Now, if in accordance with the observation and deduction of Mr. Langstroth as already noted, the difference between the poor, average and strong colonies is attributable solely to the difference of queens, then we are forced to admit that the mere act of tolerating the twenty-five poor queens has incurred an expense of one thousand pounds of honey when compared with the average colonies, and three thousand pounds short when compared with the strong colonies, either of the items being sufficient to pay for all the good queens required and have a considerable balance to the good.

You may change the figures as you desire and the result will always show that the poor queens are heavy detractors with no prospect of paying and should under no circumstances be tolerated. Keep the best and only the best; the very best are the cheapest in the end, and an economy that prohibits the employing of the best queens is certainly a false economy.

The owners of Ayrshire, Jersey, Holstein or other stock do not stop at merely knowing that their animals are thoroughbred; their ambition is that each individual member of the herd shall be the very best of the kind, and should not be kept by a

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study their own interests by copying the example of the stockmen in this regard? Yes, by all means, yes! And one point more in this connection, and one which many bee-keepers scattered over the province will do well to study and ponder carefully, and that is the fact that the stockmen find that it pays to be a member of the Provincial Association which is studying and advancing their interests.

Bee-keepers in the remote parts of the Province into whose hands the Government report may fall will please make a note of this and remember at the same time that the Ontario Bee-Keepers' Association is studying to advance your interests, and like the stockmen you will study your own interest by communicating with the Secretary, Mr. Wm. Couse, of Streetsville, and secure membership in the Association which is trying to do you good.

And now, Mr. President, I have already taken up too much time, and in conclusion I would say to those who have come expecting to hear a flowery dissertation on scientific queen rearing, and to those who may have wished that their favorite kind or race of queens would get an advance in the address, if such has been your participation I can only tender you my sympathy in your disappointment. I said at the outset that we had met for practical purposes and I have endeavored to give you a plain, practical talk on the topic assigned to me, and I hope my address and the discussion which will follow may prove a practical benefit, not only to those gathered at the convention here, but to many of our fellows who are not privileged to be with us.

Wishing you and each of you and your fellow-keepers engaged in Apicultural pursuits the fullest possible measure of success I beg to conclude. (Applause).

Mr. McEvoy: That is the best

paper on the subject ever presented to this association and I think that our President will bear me out in this statement.

Mr. Post: I agree with you Mr. McEvoy, the paper just read is a very excellent one.

Mr. Fixter: Do you advise raising your own queens or buying them?

Mr. Holmes: Answering that, I should say that I buy largely. I of course raise a few queens but I buy the most of them.

Mr. Hall: Mr. Langstroth and many other men go in for prolificness; Mr. Holmes has got the same fad. Fad I will call it; fad it is. All those of you who have taken honey and have taken notice of the stock of bees you have received it from, will notice sometimes two stocks of bees equally strong and the one will gather three times as much honey as the other, while the one queen is just as prolific as the other. I do not want the prolific queen except her progeny are workers,—honey gatherers. I have been so unfortunate as to have stocks of bees in my yard that would fill every corner of the hive with brood and consume every ounce of honey they gathered for the purpose of feeding it.

Mr. McEvoy: Providing the queen that furnishes the small quantity of bees and the queen which furnishes the large quantity of bees are equal so far as honey gathering qualities are concerned, wouldn't you prefer the one which produces the greatest quantity of bees?

Mr. Hall: I have had stocks of bees in my yard that apparently were only medium; I have had stocks in the same yard, perhaps along side of the other, with three times the quantity of worker bees and from all appearances supposed to be the same, but at the end of the honey harvest the one which gave me the smaller

quantity of bees would give me the larger quantity of honey in the best marketable shape. Therefore, I want the queen which raises not the greatest number of bees, but industrious bees, the bees that bring us in the honey. The honey is the only thing we are into bee-keeping for; if we are in it for anything else, I am not aware of it. The beautiful queen does not supply our wants, we do not sell a bee or queen or anything but honey, therefore, it is honey we want and the honey bee we want. Mr. Hutchinson has got some bees and if his bees are all he says they are, I think I would like to have some of them, but we do not want these prolific queens that fill up everything you can give them with brood and when they come to go into winter quarters they have not given you anything for their summer keep and they have not got enough for themselves.

Mr. McEvoy: Mr. Hall didn't answer my question yet. Supposing that these are the good working strain of bees that you want and you are going in for a crop of honey; you say it is dollars and cents you are after, don't you want a queen that will produce three times as many of that race of bees, if you can get her?

Mr. Hall: I want longevity in my bees; I want that first and foremost; that is why I don't want to replace my queens every year, because if I do, I must kill them and I don't know what I kill. If I keep them three or four years and they have done good work for four years, wintered well, given me comb honey and in good shape, that is the kind of queens that I want to raise from, whether they raise few or many bees. It is honey we want, and we do not want short lived bees. If you have a very large family you may have a lot of puny ones that do not amount to anything,

but if you have three or four sturdy boys and girls they are worth something and the results will be much more than from fifteen or sixteen weaklings. We want longevity as well as energy.

Mr. Post: I think Mr. Hall will admit that he finds more difference in the bees in the spring during clover honey than he does in the fall flow. We all notice with colonies of bees of the same strain that one colony will gather double the quantity that another will and this is more likely to take place in the summer flows than it is in the fall, for the simple reason that some colonies become very strong in the spring and the bees are the right age to gather the honey, while others do not get strong until the honey season is on. They are full of bees but the bees are too young to gather. If you continue the experiment right through until the buckwheat and golden rod honey come you do not see half of that difference; you do not see much difference.

Mr. Hall: I have kept bees twenty-five years, and it is only in the last three or four years we have had any fall flow. Our honey flow shuts down about the 22nd July, and the bees that get ready for the early harvest are the bees that give us the honey and we select those bees to breed from because of their ability to be prepared for the honey harvest. The bees in the fall are of no use to us in my past bee experience. I told one man they were not worth twenty-five cents per bushel. We have such bees that come out of winter quarters, but these colonies brood up on dandelion and fruit blossoms and are ready to swarm in the last of May, which we do not want. We very often have swarms that we do not want. What we do want are those bees that are long lived so that they will be ready

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as soon as the honey harvest begins, to gather the honey. The more bees you raise, the more honey it takes to feed the babies. If those babies do not live long enough to gather that amount of honey, we come short at the end of the season.

Mr. Post: I notice there is a great difference during the white clover season, that some colonies do so much better than the others, but I take them to the buckwheat fields in the fall and I declare to you I can't see any difference. I think it is in the age of the bees.

Mr. Hall: If you had only an early flow to depend upon you would soon weed out those fellows who do not get ready in time.

Mr. McEvoy: I will agree with Mr. Hall so far as he has gone and I will admit that there can be a large quantity of bees in a hive that are worthless to gather honey. Mr. Hall has got a good strain, but if he has a hive with a queen that will produce just twice as many of that good strain, isn't she the better queen?

Mr. Hall: Certainly.

Mr. McEvoy: Because double the number of bees will give double the quantity of honey, and double the quantity of money.

Mr. Holmes: Answering Mr. Hall's objection and criticism, I think Mr. Hall brought out a good point there, that we sometimes have very populous colonies and one colony here will be good honey producers while the other there will not. It seems to be at least somewhat of a mystery. As to whether or not they are holding a counsel of war and deciding whether they shall establish a new home somewhere, I do not know. As I said before, that is a mystery to me; however, I think if Mr. Hall will look a little further down in my paper, he will find a paragraph which covers the ground which he has criti-

cized. I say that our aim should be to get the best and keep the best. Of course if we keep the best that is with a view to the best honey gatherers.

Mr. Hall: Your paper does not say so. You say "those that are most prolific." Langstroth was not a honey producer; he raised bees for sale; he wanted those that looked nice and laid a lot of eggs.

Mr. Holmes: In my paper my intention was to refer to the stock producers as not being satisfied with knowing that every one was thoroughbred but to know that each individual of the herd was of the very best kind. I think if you read between the lines you will catch it.

Mr. McKnight: The paper just read by our friend Holmes is perhaps one of the best of its kind that I have listened to in connection with this subject during the long years I have been associated with this Association. It is a very peculiar subject that was assigned to him and he has treated it well. The queen bee is a most remarkable creature. To use a paradoxical phrase she is the mother and she is the "father of the man." I believe that it is generally recognized that the mother is the father of the man (Laughter). This is paradoxical, but biography seems to support me in that statement. The queen bee is one of the most remarkable creatures in all history, in all nature in fact. He told us she will lay three thousand five hundred eggs in a day. What does that mean? It means about three times the weight of the creature which deposits them. Is there any other creature in creation that performs such an extraordinary feat as this? I remember once, I think it was in Brantford, that I said a few words on the queen bee and I incidentally referred to just what Mr. Holmes has referred to now. The

Dairymen's Association had met shortly before and one of the questions discussed at their meeting was the proper rations for a cow, that is, the daily food that would enable her to produce the greatest quantity of milk. I think I said then, and I will repeat it now, that the dairyman might take a lesson from the bee-keepers, if bee-keepers know anything,—I don't think they know very much about the queen. I know I don't know very much about her, but I know she is an extraordinary creature. If they could produce the rations that would enable a cow to produce three times her own weight of milk in a day, that would do something for their country. Will any of you tell me how it is possible, how it is that a creature like a queen bee can work up out of her system three times her own weight in a day? She must have assistance; she must have something to enable her to do it. It is one of the most extraordinary things, I think, in all nature.

I have not the slightest doubt but what the queen bee has a good deal to do with her progeny, with the bees she produces, with the three thousand five hundred she produces every day for a certain length of time, but how our bee-keepers can so handle it that the highest quality of the man will come from the mother, I do not know; I am sure I cannot tell.

Mr. Hall: They can only do it by selection; they cannot guide their ways; that is why I do not kill the queens.

Mr. McEvoy: How do you know the best queen you have in your yard?

Mr. Hall: From the work she has done in the previous years and from the work that her offspring have done.

Mr. McKnight: My own impression is that there is not so very much

after all in the queen as people imagine.

Mr. Hall: It is her offspring.

Mr. McKnight: But the offspring is the product of the producer. Has the male bee nothing to do with that?

Mr. Hall: Yes, he has.

Mr. McEvoy: You are both right.

Mr. Shaver: I think this meeting is all out of order. Mr. Brown who, according to the program, was to open the discussion on this paper, is here and we have never given him a chance.

Mr. Brown: The discussion has been going along very well indeed and I have been taking it all in. The subject has been so thoroughly covered in the paper that I could see no point to contradict or even to raise a question upon. I can only indorse what Mr. Holmes has written. The paper has been a very valuable one and I would fully agree with him that the selection of queens are as necessary to a bee-keeper as the selection of his cow is to the dairyman. I have noticed very often in the spring of the year some very weak colonies, and I find in letting such take their course that some of them will go the whole season through and not amount to anything. There must be something the matter with such a queen, consequently I would discard her as soon as possible. I am not a queen raiser, but I know that when there is an inferior queen in the yard it would be much better for the apiarist and for the yard that she be taken out of it.

Mr. Post: Mr. Brown, It was an oversight on my part that you were not called on to open the discussion on this paper. Mr. McEvoy sprang to his feet at once and I was really greatly taken up with the paper myself.

Mr. Fixter: I think there is a great deal in what Mr. McKnight said about

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selecting the drones or taking good care of them. In stock raising the sire is looked to a great deal; too little attention perhaps has been paid to the male bees by those who have been giving their attention to queen rearing.

An Observatory Hive.

A SEASON'S "OBSERVATIONS" OF BEES AT WORK—FROM BRITISH BEE JOURNAL.

Probably no development of bee keeping can give greater and more sustained pleasure to its fortunate owner than a well-devised observatory hive stocked with a healthy colony. It will, indeed, prove to be of absorbing interest to any intelligent person who may come across it. The hive should contain not less than six standard frames, and an additional story for sections as may be needed. It should be double glazed in such a manner that every portion of the combs on each side is visible, and should contain a trustworthy thermometer. The best position for the hive is close to a roomy north or north-east window in a hall or sitting-room. The exit will be through the hollow central pivot on which the hive revolves, and this should lead immediately into a glazed passage through which the bees will pass on their way to the flight-hole through the window. The advantage of this arrangement cannot be overrated. Not only will the movements and disposition of the framing bees be thus displayed, but every bee that enters will be under convenient observation, and a magnifying glass can be used to advantage. A feeding place of the kind devised by Mr. [Name] should form part of the equipment, as staged by Mr. James Lee in the "Royal" and several other hives during the past season.

Into such a hive as this I introduced a stock of nearly pure Ligurians on June 3rd last. The queen had been lost a few days before in an attempt to swarm, and queen-cells were in progress. A queen was soon hatched. It was interesting to see how little notice was taken of her even when, as the other queen cells were nearly ripe, the bees made up their minds to swarm. The queen showed great excitement, but failed to find the exit, in spite of which the bees went off, and actually clustered on a neighboring tree, remaining there for several minutes. They then returned. Next day the queen must have found the way out, for two days later all the queen cells had been destroyed, and she herself bore a matronly appearance as she walked about the combs, attracting to a moderate extent the attention of the bees as she passed them. I was disappointed at not having seen her leave the hive or return to it, but that very week, when examining a nucleus hive, I found another young queen at what must have been almost the moment of her return, for she was still carrying about with her the organs of the mutilated drone with whom she had coupled.

The colony thrived and multiplied until the middle of August, when the queen became less anxious to lay eggs, and by the end of the month most of the combs were filled with honey, principally, I think, from heather. So I cleared out one side of the hive, gave one empty comb and a full sheet of foundation, and fed back the honey removed. In this way fresh energy was aroused; the queen laid freely, and all partly filled sections were completed. Sections completed under the influence of autumn feeding will never be very clean or good to sell, and on the whole it is as well that it should be so. The whole summer's yield was

fourteen filled sections. At the end of September the colony was removed into an ordinary outside hive for wintering, the queen being unfortunately lost in the transfer. I will now refer to certain points which may be of interest.

The queen when laying invariably turned herself round so as to be head downwards on the comb. The time occupied in depositing the egg and getting clear of the cell varied usually from twenty-five to thirty-five seconds; very seldom as little as twenty-five and occasionally as much as forty-five. In the brisk season the laying seemed to go on throughout the twenty-four hours, but with intervals of varied duration. I often observed at night, but never through the twenty-four hours. The "Guide Book," supported by other books of instruction, says that the queen is capable of laying from 2,000 to 3,000 eggs a day. I do not dispute it, although it would be interesting to know how the conclusion has been arrived at. But whether capable or not, it seems to me improbable that the number of 2,000 is ever reached. Suppose the queen to lay for eighteen out of the twenty-four hours, resting only six. At the rate of two eggs a minute the number laid would be 2,160. Now this would be possible only when that number of cells should be ready for her, empty and adjacent. This implies about eighty-six square inches of unoccupied worker comb, in itself a not unreasonable condition; but it must be remembered that the queen would not settle down to wholesale laying unless honey and pollen were coming in plentifully. When this is the case, a competition for the empty cells arises between queen and workers, and here and there she will soon find a cell blocked. A grain or two of pollen or a trace of honey suffices. Again, bees are not methodical, and

as a queen is found on dissection to be poorly supplied with brains as compared with a worker, it is not surprising to find her travelling rather aimlessly along the combs and examining cells in which she has recently laid an egg. She will therefore soon cease to get in her two eggs a minute, and I think it will be found that she spends more time in looking for cells than in laying. For the above reasons it seems to me probable that a queen rarely lays more than 1,000 eggs in twenty-four hours.

It is well-known that a queen when fully primed for laying is unable to retain her eggs. I saw my queen in this condition. The egg was deposited or rather dropped on to the outside edge of the cell, and was at once seized and devoured by an expectant worker. Once only did I see two eggs deposited in the same cell; one of them subsequently disappeared.

Last summer I brought home a laying queen from a neighboring apiary. She was in full laying condition, and laid several eggs while on my hand, so that it was easy to watch the operation through a good magnifying glass. The use of the sting as ovipositor was very evident. The queen seemed to be surcharged with eggs, but having no cell wherein to place them she retained them as long as possible, so that at one time she had to the best of my belief, no less than four eggs loose within the cavity of the last segment of her abdomen. After watching her for a considerable time I remained in doubt whether or not as long as no more than two eggs at a time were loose she retained the power of depositing an egg singly. On the other hand, although three could be retained in the cavity they came out confusedly. While I was watching her, an egg protruded for a few seconds without leaving her body and was retained until no less than

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four eggs were ejected simultaneously. It seems probable that when more than one egg has been observed in a cell, those eggs present have been deposited simultaneously and not as a deliberate action on the part of a queen or fertile worker. I have never seen it stated whether the sting of a fertile worker has a tendency to curve as does that of a queen bee. If not, the former would be at some disadvantage, tending to irregularity in ovipositing.

In some places the bees preferred not to build out the foundation to its full extent, and instead they built what might be called fancy combs upon the glass. The clever way in which the cells, of every imaginable shape, and with their entrances pointing in all directions, were filled with honey and sealed, was extremely interesting, but a truly exciting moment was when a full grown grub suddenly appeared in one of these cells with nothing but the glass to protect it from observation. No egg had been laid there, and how the grub had worked its way into the cell I could not say; but there it was, with its head pointing downwards, or nearly so, and waving to and fro at the entrance of the cell, while it did its best to spin a cocoon. I could see the silk thread. It seemed as if I were about to have a chance never before vouchsafed to any observer, of watching all the phases of larval metamorphosis. Alas, it was not to be. At first two bees set to work to build in the mouth of the cell, and all looked promising; but I was called away, and returned only to find a bee sucking the last juices from the larva's rivelling skin, and before long that one disappeared with all my hopes.

It is not until one has watched a queen for several days in the breeding season than one realizes what a mere egg-producing machine a queen bee

is, and in watching her your sentiment changes gradually from admiration to pity, and finally dwindles—at least, mine did—into a lack of interest. It becomes a relief to turn away and watch the varied occupations of the hive. Pity one must feel, because, night and day, the unfortunate mother of all knows no peace. It is the fashion nowadays to say that the queen has no bodyguard, no band of attendants. And this is true, inasmuch that she does not appear to have a regular band of attendants told off to her. It would not be in the nature of bee life if she were so attended, for all through a hive the labor, if constant, is wonderfully desultory. Yet throughout the breeding season, wherever the queen may turn her steps, she attracts attention from the bees among whom she passes, and especially from the younger ones. Some of these do follow her for a time; it is they who throng around her while she is laying; they stroke her with their antennæ, lick her body with their tongues, by means of which they also feed her. Beyond question the young bee has an awe of the queen. On her coming near enough to one of them for it to become aware of her presence, it turns round at once to face her, probably advances a step or two and retreats suddenly, and if she comes in its direction the young worker bee backs briskly out of the way, running backwards, sometimes as much as an inch, to clear the road. An old bee gets out of the way more leisurely; but it is seldom that any bee remains near a queen without facing towards her.

(To be Continued.)

The "Praktischer Wegweiser" recommends as a removal of certain flavors in honey the method of inserting a heated iron into the same and allowing it to remain in the honey for some time.—B. B. J.

THE
CANADIAN BEE JOURNAL

Devoted to the Interests of Bee-Keepers,
Published Monthly by

GOOLD, SHAPLEY & MUIR CO.
(LIMITED)

BRANTFORD - CANADA.

Editor, W. J. Craig.

FEBRUARY, 1901.

EDITORIAL NOTES.

GOOD Queen Victoria is dead; the Empire mourns. The nations of the whole civilized world are touched with grief and vie with each other in their expressions of sympathy in Britain's sorrow and loss, and in praise of the beautiful and noble life that has passed away. In no part of the Empire is there more genuine sorrow than in Canada; here Queen Victoria is enthroned in the hearts of her subjects, and to them she is emblematic of everything that is pure and good. Our American cousins have shown the spirit of true friendship, and have spoken in a way that will not soon be forgotten by our people. We know, and the world knows to-day, that there is yet a strong bond of sympathy and kinship existing between the two great English speaking nations, a bond which we hope will never be ruptured by the petty prejudices or selfish ambitions of political partisans.

KING Edward comes to the British throne under the most favorable cir-

cumstances and after a long, wise and careful training as heir apparent, and with a genuine popularity based upon a long acquaintance with the people he is called to govern. He is gifted with much tact, a clear, level head, and a wide knowledge of the world, and every confidence is felt that he will prove a wise and acceptable ruler.

God Save the King.

We have just been favored by a visit from Mr. James Armstrong, Cheapside, 2nd Vice-President of the Ontario Bee-Keepers' Association. Friend Armstrong is looking hearty and speaks cheerfully of the season's prospects. The winter has been exceedingly moderate up to this date and reports from a number of districts say that bees seem to be doing nicely.

We understand that adulterated honey continues to be dealt out to the unsuspecting public by some of Toronto's unscrupulous grocers—right under the nose of the law. A couple of ½ lb. packages of this stuff were placed on the table for inspection at the Ontario Bee-Keepers' Association meeting at Niagara Falls. The mixture we presume was mostly glucose with a very small percentage of honey—just enough to give it aroma. The half-pound glass package with the screw top containing it was what is ordinarily used for honey. The principal feature of the deceit, however, was wrought out in the label; we could give a fac-simile of it;

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presented the words "Pure Honey" across the top. The picture of a straw skep with the words "and contents" in small pearl type around its bottom edge, decorated the centre like a trade mark, but evidently for the purpose of protecting the manufacturer and the seller in case of trouble. What are we going to do about this sort of thing? Shall we allow it to continue and yet have a law to protect ourselves and the public?

January 31 that the "Old Reliable" has taken up new quarters at 144 and 146 Erie St.

Mr. C. P. Dudant has been favoring the American Bee Journal with a very interesting series of "Notes on European Travel," taken in connection with his visit to the Paris Exposition last year. Speaking of the Exposition, he says:

"The apiarian exhibits were scattered over a great deal of ground. This is because each country had a special exhibit, in which all its products were gathered, while there was also a general exhibit for each special industry. If I am not mistaken, the different exhibits of America were scattered in some 35 different spots. But the American exhibit of apiculture was confined to three manufacturers as far as I could find—The A. I. Root Co., The W. T. Falconer Mfg. Co., and our own firm. It consisted solely of apiarian implements, sections, foundation, a few smokers, an extractor or two, and some hives—no honey, no beeswax! No individual or collective exhibit of the products of the bee!

It is true that these exhibits had been considered worthy, for they were each rewarded with a medal, and the few goods that were there were certainly superior to what they have in Europe, so much so that I wondered whether the people who saw them would realize that they were only fair samples of what is made in America, for the mechanical finish of what they use in bee culture is very inferior. But, nevertheless, I felt that we were outdone by Canada, for they exhibited in their own building a stack of the finest honey that it is possible to see. This was evidently under the auspices of the Ontario

"On New Year's day the office and floor occupied by the American Bee Journal, bee supply and honey business, was made almost a complete wreck by floods of water coming down from the upper floors where a big fire broke out about two o'clock in the afternoon. There was something like 20 fire engines throwing water through and on top of the building in an endeavor to put out the fire, and of course practically all of that water came down through our floor. Fortunately the issue of the Journal for mailing on Wednesday, Jan. 2nd, was still in the office of the printer, and thus was saved, as were also the forms from which it was printed. Through the kindness of one of our former partners we were able to mail the Bee Journal in his office, thus preventing any delay in getting that number off."

We take the above from the American Bee-Journal of January 10; Brother York has our sincere sympathy in his misfortune, and we can more readily sympathize with him on account of having had a similar experience ourselves not quite three years ago. We note in the issue of

Bee-Keepers' Association, and intended to show to the world what Canada could do. But the names and addresses of the producers were attached to all the samples. They may be less practical than we are, individually, but they take more pains, collectively, to bring their products forward."

This is a neat little compliment to Canada and our O.B.K.A.; evidently Canada alone represented the sweets of the American continent at the great exposition.

THE GRAND TRUNK RAILWAY CO. v. COMB HONEY.

The local freight agents of the G.T.R. have received the following official notice regarding honey in the comb, dated Montreal, January 18th, 1901: "There has recently been presented to this company loss and damage claims in connection with honey comb in boxes, and we are satisfied that the alleged damages were due to the fragile nature of the goods and the packages used. This class of traffic will not safely stand ordinary transportation by freight train and agents are hereby instructed to decline to accept the same for forwarding in freight trains in future. Such commodities should be forwarded by express companies."

This is rather an inconvenient condition of affairs for those who are dependent on the G.T.R. The C.P.R. and other lines not connected with the Grand Trunk continue to accept shipments of comb as usual and we cannot

understand why the Grand Trunk should have special difficulty in this connection. We have shipped many thousands of pounds of comb honey by ordinary freight, much of it by the Grand Trunk, and always with the greatest possible success. Apart from the saving in rates we prefer freight for the reason that the packages are more carefully handled than by express. This may seem a queer statement to some who have not noted the hurried and very unceremonious way in which goods are shoved in and out of express trains.

Shippers should make an effort to meet the requirements of the railway company in packing, boxing, crating, etc., each package should be properly marked with a "caution label" and provided with handles so as to enable the railway employees to handle it carefully and easily. If these conditions were complied with we think that the railway company might be induced to alter their decision.

Wax Ointment.

"Wax ointment is highly recommended for the treatment of wounds, more especially of burns. It is made in a few minutes and is better when used fresh. To make this ointment a piece of pure beeswax should be melted gently, and then fluid rape oil slowly added until thoroughly incorporated; the mass when cold should be of a consistence to be easily spread. This should be laid on linen and applied to the wound."—*Bienen-Wirtschaftliches Centralblatt*.—*Germany*.

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Feeding Bees in Winter.

By G. M. Doolittle.

This is something I am asked about often, those asking generally wind up with "Can it be done?" Yes; it can be done, but it is not best to put off feeding for winter, where the bees are lacking for stores, longer than to the end of the last expected honey flow. If the bees have not enough then, you will know that they can only lose in stores the longer they wait. Then why wait longer? I would like to have the procrastinating ones try to answer that question, for in the trying they would be brought to the conclusion that to wait longer "would be a sin" If from sickness or otherwise we find our bees short of stores in winter or cold weather, they can be fed, but as a rule, such feeding has a tendency toward unsuccessful wintering, though not so much so as would running the chances of their starving, when very light in stores.

WHAT TO FEED.

Knowing that we have colonies which are very short of stores in mid-winter, the question first arising is, what shall I feed? In this locality there are only two things that look towards success. The first is frames of honey which we have stored away during the summer, or those from very heavy colonies which they can spare. If the latter, they can be taken out at any time when it is so cold that the bees in forming their cluster have receded from the outside combs, which are those the most likely to be heavy with honey. Take them out carefully, so as to disturb the colony as little as possible. If you do this as you should, the colony will not break the cluster at all, and be none the worse for your work with them. It is best to have a board fitted so you can slip it in the hive in place of

the frame of honey taken out, so that no vacant place is left for a draft or circulation of cold air. Having the combs of honey, they are to be put in a warm room for a few hours to become so they will not chill the bees when put in the hive. Remove one, two or three of the empty outside combs in the colony needing food, or those the colony which needs feeding is not clustered on, when the warmed combs are put in the hive, spreading the combs of the hive apart till these warmed combs come in contact with the cluster on one or both sides. Otherwise, the bees might starve without being able to reach the combs you set in.

SUGAR FEEDING.

The best way to feed bees in winter, that next to frames of honey, is to feed them with candy, such as is used in shipping queen bees. This candy is made of XXX powdered sugar (do not use the kind called confectioner's powdered sugar, as that is not pure sugar, it being a mixture of sugar and starch, the starch being likely to give the bees the bee diarrhoea, and honey, the formula for making being as follows: Put the desired quantity of sugar near the fire till it becomes a little more than blood warm, and set the honey (any kind of extracted honey that is fit for bees will answer) on the back part of the stove, till it is as warm as you can bear the hand in. Now stir the sugar in the honey until you can stir it no longer, when you are to knead in more sugar, very similar to the way a woman kneads up flour for bread, kneading in and kneading in, until you have a loaf of candy which will retain its shape when placed on any flat surface in your warm room. Having it thus, make up as many loaves containing the needed amount for each colony,

as you have colonies which need feeding, when you will press them down into a flattish oval form, of the right shape to lay on the frames over the cluster of bees which needs feeding. With a little smoke, keep the bees down so they will not crawl up over the tops of the frames while you are laying the candy where needed. Having the candy on, cover it and the top of the hive over with any old garment, grain bag, piece of old carpet, or anything of the kind, so that all may be as warm and comfortable as possible and the work is done.—Progressive Bee Keeper.

Bee Paralysis.

A writer in the Australasian Bee-Keeper telling of his successful treatment of bee paralysis by feeding a mixture of sulphur and honey, recommended by the editor of that paper says: I am pleased to report that after two doses the colony shows no sign of the disease, and appears to be perfectly healthy. It is now six weeks since I gave the second dose, and not a bee shows any sign of disease at the present time. The method I adopted was to mix a teaspoonful of sulphur with three teaspoonsful of honey, made thin by heating, to cause it to mix easily. I worked the sulphur right through the honey, and by simply raising the cover, I poured the stuff across the top of the frames, so that it would run down among the bees and cause them to eat it. I used no smoke so as not to cause them to fill themselves with the honey of the hive, and the bees were thus more prepared to take it, and it would take more effect. I gave the first dose on Thursday, at 7 p. m., and on examining them on Saturday, at about 3 p. m., I found

only about 25 bees dying of the disease. I then gave them the second dose, the same as the first, and on examining ten days after, I could not see any sign of the disease, and none died of paralysis afterwards, and they have been quite clean ever since. Previous to giving the sulphur honey, the diseased and dead bees covered the ground outside the hive every morning. I believe the cure is due to the treatment.

A Change for Canadian Talent.

With a view to encouraging the development of a literary spirit in Canada, THE LADIES' MAGAZINE, Toronto, is offering cash prizes for the best short stories by Canadian writers. The competition is well planned, any further particulars are given in the January number of the Magazine. A photographic competition is also announced, and cash prizes offered.

CARRIER BEES.—The latest proposal for military reform is that bees should be used to discharge the functions of carrier pigeons. The mail-bags could, of course, be kept within reasonable dimensions by means of micro-photography, and they fly straight, and are too small to be easily picked off by hostile marksmen.—Daily News (British).

In a small village called Plangwerbach (Germany) lives an old bee-keeper who is in possession of an ancient skep, dated 1767, and which carries the name of his grandmother. The colony of bees is said to have existed in this hive all the while, as also the combs, now 133 years old.—B.B.J.

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Questions and Answers

[Questions to be answered in these columns should be sent to us not later than the 15th of each month in order to insure their answer appearing in the following issue. We wish to make this department as useful to our readers as possible and a reliable source of information. For the present at least, the replies will be procured from various sources.]

QUESTION:—

1. I have 20 hives of bees in cellar, temperature varies from 40 to 50°, usually about 41°, is that right? Bees are quiet.

2. On taking off the cover from one of the hives a few days ago I noticed that the underside was covered with moisture, so much that when held up it ran off in streams. What caused the moisture in this one hive and not in the others? The bottom board was also damp; would this hive "winter" in this condition?

R. L. Todd.

New Brunswick.

ANSWER:—

1. I should judge from what you say that your bees are wintering quite well. They are quiet; and the temperature is about right, if the thermometer is accurate and hangs about the centre of the room. Mine hangs about half way to the floor from a hole in the ceiling. This gives the average temperature of the air in the cellar and the thermometer is not affected by the temperature of a wall or door, as it would be if hung by a nail. It is also convenient to saw it up from the room above and read the temperature at any time without entering the cellar.

One of the best indications of how the bees are wintering is the noise

they make, or do not make. What Mr. Doolittle's friend said, "Why, Doolittle, your bees are all dead," should be the maxim of cellar wintering. They should seem to be all dead. There is no "contented hum" in the bee cellar. Mine often hum when I have been pounding in the shop overhead, or they are too warm or are uncomfortable for some other reason; but they are perfectly contented only when the silence presses on you like the darkness when you enter the cellar without a light, and that is usually when the thermometer stands at zero outside and well down to 40° in the cellar.

It is very necessary to have good ventilation. The system which my father arranged, and which I at present use, is briefly: Inlet at the windows, which are arranged to admit air freely but exclude all light; outlet through a six inch stove pipe, taking air from the floor and opening into the pipe of a stove in the room above. The windows are one on the west and one on the south, (there is also a ventilator in the door at the east) and the hives fill the cellar, leaving only a narrow walk around the wall and one down the middle. To prevent currents of air striking the hives a curtain of burlap, reaching from near the ceiling to a few inches below the lowest hive, is hung along the south and west next the lines having the passageway between it and the wall. Then on windy days the window on the windward side is closed or nearly so. One should study little ways of keeping the bees quiet in order of making them comfortable.

2. You do not say, but I presume your cover fits over the frames without any cloth or honeyboard between. The colony whose cover and bottom board are damp is probably weaker than the others and is not so able to generate heat enough to keep the

moisture of their breath from condensing in drops on the cold boards. To help conserve the heat of the hive and keep the cover from becoming quite so cold, you should place a warm cushion of chaff on the cover of each hive. It would have been better to have replaced each cover by a cloth and cushion last fall, but it is too late to do that now, as it would disturb the bees too much. If the hives are two or three inches higher at the back any drops which may form on the under side of the cover will run to the front of the hive, then down the side and out the entrance. I would also raise each hive from the bottom board at the back and slip in a piece of lath to give more hive ventilation. The hive you mention would probably winter fairly well if not disturbed. I do not know how much disturbance removing the cover caused, but I do not think it a good plan.

Morley Pettit.

Belmont, Ont.

Introducing Queens with Tobacco Smoke.

By Henry Alley.

I have read the thousand-and-one methods given in the bee-papers for introducing queens, and none of them, it seems to me, are at all practical. They all require too much work and trouble, and, so far as I know none of them are reliable.

I never have practised but one method for introducing either fertile or unfertile queens, and it is always attended with the best of success.

To be successful in introducing a queen, a colony must be put in shape to realize thoroughly their queenless condition and this can best be done by letting the bees remain queenless 72 hours. This applies to colonies to which fertile or unfertile queens are

to be introduced. At the end of three days cells will be started, but not capped, and then is just the right time to introduce a queen and make it a success.

When a queen is received do not put the cage near the colony to which the queen is to be introduced. This is a bad practice and a mistake a good many bee-keepers make. When a colony has been queenless three days, place the cage over the frames in such a way that the bees in the hive can have access to the food in the cage, and in the course of a few hours the food will be removed, and everything being so quiet the queens walk out and take command of the colony, and all goes well.

Now, to make the introduction doubtly sure, just blow a quantity of tobacco-smoke in at the entrance of the hive—enough smoke so that all the bees will feel it. The best time to do this, and to introduce a queen is just before dark.

Now, I can not use tobacco as a good many people can; that is I can not smoke a cigar or pipe, so I was obliged to perfect some arrangement whereby I can fumigate the bees with tobacco, so I made a tin pipe in this way:

The body of the pipe is made of tin $\frac{3}{8}$ in diameter, and about 5 inches long; then a wood stopper at each end. A hole is made through each stopper and the one placed in the mouth shaped to fit the mouth. The stopper at the other end has a small tin tube run through it so that the smoke can be directed to any particular point. The pipe is held between the teeth and the hands are then at liberty. Fill the pipe with fine, cheap tobacco—tobacco such as chewing cigars are made from is strong enough for bees, while the common tobacco used for chewing and smoking

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If too much smoke is given, and the bees commence to tumble out at the entrance, throw some grass on the alighting board, but not enough to stop ventilation.

All my queens are reared in full colonies, and are hatched in nursery-cages, and then the queens are introduced to nuclei in hives having four combs and frames 4x5 inches. These little colonies build up strong—so strong, in fact, that on hot days I will have nearly 200 of them with the bees clustered on the outside, and it is a handsome sight to look upon.

Each of these hives has a hole in the top, or cover, through which the food is given the bees. When I have 30 or 50 virgin queens to introduce, I place as many cages with queens in them in a box, and then get a plantain leaf for each hive. I then stop the entrance with the leaf, and blow a quantity of tobacco-smoke into the hive through the hole in the top, and quickly shake the queen from the cage into the top of the hive. It does not require over 30 minutes to introduce 50 queens, and, what is the best part of it, I never lose a queen.

Fertile queens can be introduced in the same way; that is, they can be shaken out of the cage just as soon as the colony has been smoked. I have the first method, as it will better suit most people.

Now, if any reader of this knows a better and more expeditious way of introducing queen-bees safely, by all means tell of it.—*American Bee Journal*.

Jogging him: Ello Slumpy! Wot's the matter wid yer face an' hans? Got no hives?"

"No, I got de bees."

—Australasian Bee-Keeper.

Mead.

Mead is prepared (as to barrels, fermentations, etc.) in the same way as other home-made wines. Only the finest extracted honey and water are used, in the proportion of 1 to 4. When the honey has somewhat melted, the whole mass is placed over a gentle fire and boiled slowly for several hours, skimming carefully. When fairly clear, pour into clean vessels to cool. Any sediment left in these vessels should be strained and used for filling up. The barrel should be kept in a warm place to ferment. When the first fermentation is over, a bent tube is attached with its end in a vessel of water, and the barrel must be filled up every few days. After about twelve weeks (when no more bubbles rise from the tube in the water) the mead must be drawn off from the yeast and placed in the cellar to complete the fermentation—at first lightly corked, afterwards securely bunged down.—*Illustrierte Bienen-Zeitung*. Germany

NOT A BEE-HIVE.

The following is told at the expense of an American gentleman who was recently stopping with his wife at Hotel Cecil. On their first evening there he happened to retire somewhat later than his spouse. Arriving at the door of what he imagined to be his room, and finding it locked, he tapped and called "Honey!" No answer came, and he called again more loudly, "Honey!" Still he got no reply, and, becoming somewhat uneasy, he shouted the endearing term with his full lung power. This time a reply came and in a male voice: "Go away, you blithering idiot! This is a bath-room, not a blooming bee-hive!"—*London Express*.

Communications.

Almonte, Jan. 29, 1901.

Editor C. B. J.,

Dear Sir,—I thought I would write a few lines to you to-day, and as it is the first since you assumed the management of our journal, I wish first to express my appreciation of the improvement in its make-up since it has come under your control. May its interest never grow less.

Bees appear to be wintering finely. I think those which were put away in good condition last fall are going to come out fine; I hope they will, for last spring was the worst I think that we have had for years. Beautiful winter, no frost in the ground, plenty of snow and plenty of zero weather but no prolonged, intensely cold weather like some winters, touched 30° below once and 15° to 18° below three or four times but right up again. More than a plenty of "La Grippe."

Yours, &c.,

J. K. Darling.

DISTRIBUTION OF SAMPLES OF SEED GRAIN AND POTATOES.

To the Editor of the Canadian Bee Journal:

During the past twelve years samples of those varieties of grain, etc., which have succeeded best on the several Experimental Farms have been distributed on application in 3-lb bags, free through the mail, to farmers in all parts of the Dominion. The object in view in this distribution has been to add to the productiveness

and improve the quality of these important agricultural products throughout the country, by placing within reach of every farmer, pure seed of the most vigorous and productive sorts. This work has met with much appreciation, and a large measure of success.

Under instructions of the Hon. Minister of Agriculture another distribution will be made this season. Owing to the very large number of applications annually received, it is not practicable to send more than one sample to each applicant,—hence if an individual receives a sample of oats, he cannot also receive one of wheat, barley or potatoes, and applications for more than one sample for one household cannot be entertained. These samples will be sent only to those who apply personally, lists of names from societies or individuals cannot be considered. The distribution will consist as heretofore of samples of oats, spring wheat, barley, field peas, Indian corn and potatoes.

Applications should be addressed to the Director of Experimental Farms, Ottawa, and may be sent any time before the 1st of March, 1901, after which date the lists will be closed, so that the samples asked for may all be sent out in good time for sowing. Parties writing will please mention the sort of sample they would prefer, naming two or three different varieties of their choice. Should the available stock of all the varieties named be exhausted, some other good sort will be sent instead.

The samples of grain will be sent early but potatoes cannot be distributed until danger of injury in transit by frost is over. No provision has been made for any general distribution of any other seeds than those named.

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Wm. Saunders,
Director Experimental
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Ottawa, Dec. 27, 1900.

A CORRECTION.

Join the Bee-Keepers' Union, &c.

Dear Editor,—In your issue of January Mr. McEvoy is reported as having said at Niagara convention in talking about lawsuits between bee-keepers and others, that "Mr. Deadman, of Brussels, had a case similar; the lawyer on the opposite side was bound he would move Deadman, bees and all, and after he started the case in the court Mr. Deadman got two men to help move part of the bees. Complainant then said the nuisance was only partly gotten rid of and had the case tried." Now I do not know where Mr. McEvoy got hold of this, the very thing that I was determined that could never be truthfully said. "The lawyer wriggled out of it by saying as I had moved part of my bees into the country the nuisance was abated," etc. Now I did only what I had been doing other years, viz.: put some swarms in the country for the summer and still leaving some 160 colonies out of 200 in the home apiary. The Union undertook to defend my case and as the lawyer referred to, who was also the complainant, found out he could not scare and that he had a bigger contract on his hands than he could handle profitably he dropped the case and paid my lawyer's charges as well as any expense of his own. In view of what the Union is doing not only in defending bee-keepers against such, but in fighting adulteration, I consider that it is the duty of every bee-keeper in the land to become a member. Let the member-

ship be increased ten-fold. I regret I was unable to attend the convention at Niagara.

G. A. Deadman,
Brussels, Ont.

THE O.B.K.A.—SOME PRACTICAL SUGGESTIONS.

Editor C. B. J.,

Dear Sir,—It seemed to me on my return home from the O.B.K.A. meeting at Niagara Falls as though the time there had passed all too quickly. I have attended meetings of the association in the years gone by when the sessions were so taken up by a few long-winded speakers that the bee-keeper who attended to learn something about bee-keeping, would be tired out or leave in disgust. A great change for the better has taken place and I am sure that when this becomes generally known the meetings will have a large attendance. I am sure if many bee-keepers had had any idea of what they might have seen and learned at the Niagara meeting, they would have made an effort to have been there. Among the best things were Mr. E. Root's stereoptican views of prominent bee-keepers, their apiaries, methods of raising the best queen cells, measuring bees tongues, (with a view to producing bees to work on red clover) etc., etc. Mr. Root must have been at very considerable expense and trouble to make these views the success they were.

The papers or lectures of Professors Harrison and Fletcher were intensely interesting, so also was Mr. Fixter's paper on wintering experiments, illustrated with a hive prepared in several different ways, etc. Some bee-keepers will no doubt say: Oh, we shall read all about it in the Bee Journal; but it is not the same. You may read of successful bee-keepers

and perhaps would like to learn some of their methods, but have not the same opportunity that is afforded at conventions.

Mr. Coggshall, who is one of the most successful bee-keepers in New York state, made a remark in this connection that is worth repeating "I would not have had sixteen hundred colonies to-day if I had not attended conventions."

Mr. Editor, I have a suggestion to offer that I think, if acted upon, will make our meetings even more profitable than in the past, and that is for every one who is likely to attend our next annual meeting at Woodstock, to make some experiments in practical bee culture during the coming season that will readily suggest themselves, such as "Starters, or full sheets of foundation in sections," "Cleated or non-cleated separators," "Bee space or no bee space above sections," "Wireing frames," "Different weights of foundation," and many other things that might come to mind, and not only make the experiment and note the results but take some of the examples with you to the meeting and compare notes with others. It will be some little trouble but you will probably be well repaid by seeing the results of other experiments.

I venture to say if everyone who attends will do something along this line we will have one of the most interesting meetings ever held since the O.B.K.A. was first organized.

R. H. Smith,

St. Thomas, Ont.

Jan. 24th, 1901.

Honey as a Daily Food.

Some farmers are in the habit of selling off the best of anything raised, letting the family worry along with the leavings. It is pleasant to believe that in many cases honey

forms an exception; that the farmer with two or three colonies of bees does not think of selling any of his honey, but leaves it all in the hands of his good wife, to do with when and how she will. Very wise indeed is such a farmer. Indeed, if he is wise enough, he will have honey on the table daily, even though he should be obliged to buy it.

It is good for the health to use honey, it is the product of pure air, sunshine and flowers. What could be more healthful. Many a poor mortal is to-day living a life of lingering torture or cruel self-denial, to whom the doctors have forbidden the use of all sugar and all foods abounding in starch. And the trouble came about from over-indulgence in sugar. This nation has a wonderfully sweet tooth. It is said that the average man, woman and child of the American Continent consumes more than a pound of sugar every week of life. Some more than that, some less; more than a pound a week is the average. Before that sugar can be worked into flesh and blood, it must be changed from cane sugar to grape sugar. When too much of this work is thrown upon the stomach there comes trouble, sour stomach, headache, and all the varied ills that come from bad digestion. The stomach turns over the job to the kidneys, and when the kidneys have more than they can do, having no one else to turn to for help, they break down with disease.

The use of honey satisfies the craving for sweet without the dangers that attend the use of sugar. The sugar in honey is already grape sugar all ready for assimilation. Give a child the choice between sugar and honey, and see which it will take. For too many children, bread and honey is a treat, a luxury, instead of being an article of daily food. The

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old man or women of eighty, as well as the child, finds the daily use of honey both pleasant and healthful.

The average family of five persons would be considered as using a good deal of honey to use fifty pounds in a year. Many do not use ten. But the average of sugar for such a family is about 300 pounds a year. If half of that or even 100 pounds were replaced by honey, it would be for the betterment of the health of the family, and it is by no means an expensive luxury, the price seldom exceeding ten cents a pound, and so small a quantity satisfies, a little goes a long way. It should make part of one meal at least each day, and to our mind that should be the breakfast meal.—Farmers' Advocate.

Brace-combs attached to separators are cut loose with a thin-bladed saw when discovered by F. Greiner before making the section from the super. M. Deolittle does this work with an old long-bladed bread knife, the edge of which has been made rough by running it hurriedly over a coarse rasp.—American Bee-Keeper.

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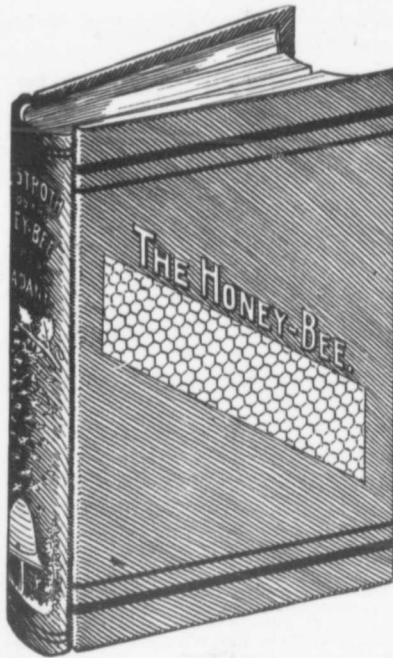
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