

# ...The Canadian Bee Journal

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WHOLE No.  
445.

Annual  
Meeting

BEE-KEEPERS'  
ASSOCIATION  
OF ONTARIO

MANAGEMENT OF OUT-APIARIES AND  
PREVENTING OF SWARMING.

(Continued from page 176.)

Sibbald: In my paper I did explain fully that if a swarm is during your absence it get away for a few after because the queen is dead and the young queen won't been hatched; and if you come and find them in that condition very easy matter to destroy the cells and prevent them from away again. And then there are plans too which you all know it might be brought out in the session which can be used on a hive in condition to work again. Gemmell: How are you going now that a swarm issued unless examine the hive or someone them swarm?

Sibbald: A little further on in paper I intended that to be understood. A hive that has swarmed is swarming fever never, to me, to do anything like the work of a good hive working in normal condition will, and a glance at the

entrance will reveal the fact. Perhaps they are hanging out, not working. A look in the super will show you that the bees have not stored the amount of honey that might be reasonably expected, or that the bees in other hives along side are doing. You may not have time to go into the brood nest of every colony and you must adopt some quick method of getting over it, and if you are very observant I don't think you will miss many. You will soon catch a colony that is queenless or that has swarmed and the queen has returned after. They won't be doing anything; they are sulking, as it were.

I thank you for your attention.  
(Applause.)

The President called upon Mr. Smith to open the discussion on Mr. Sibbald's paper.

Mr. Smith: Mr. President, practically I am only a beginner in running out apiaries; I have a lot to learn in that line. I have done something, however; especially this last summer. There is one point I noticed in Mr. Sibbald's paper. He spoke of putting the first super on after the fruit bloom. In my experience with a good colony that would be too late; that is, they would be so crowded they would want to swarm before I would want them to. In an ordinary strong colony I find that they need

another set of brood combs probably at the beginning of fruit bloom. And when the honey season commences I very often take that brood off and distribute it amongst those that are not so heavy in brood and so equalize them, and then they are ready for the extracting supers. I find it necessary to have more than two supers to give them room enough. Of course I have to do it all myself, practically; I have no help. I have three yards and on some of them I put as many as four supers and that reduces the sense of swarming very materially and then at the end of the season I put on extracting supers and some comb supers.

If you choose those that have swarmed or furnished themselves with a young queen you can put sections on them without much risk of them swarming again, and by attending to them once a week they don't want a super much oftener than that.

You can't tell very much about them by just a glance at the entrance; that will give you a pretty good idea of the condition, but it does not in every case. We find we have to go through quite a percentage of them, but with a yard of 75 or 80 colonies we can get over all that is really needed through the height of the honey flow and if a swarm or two comes off at the end of the honey flow it does not matter much.

Then I have to do the most of my extracting after the honey flow. Some do it before but I find a good many do not have as well ripened honey as if they had left it till the end of the comb honey flow, and if you take it off then and at the end of the basswood flow you get it pretty well ripened before it flows again.

I find it difficult to get help at the right time. The principal thing is to have everything in the way of sup-

plies on hand at the out yard and a suitable building there.

Mr. Miller: I have a different system of management in my out yards. This season I visited them once in four days. I could run probably another yard and visit not so frequently and do all the work myself. But having the time I visited it once in four days. My hive is constructed that I can examine more quickly than to lift the cover or wait to examine at the entrance. I simply divide the brood chamber and in an instant I can tell the stage the cells are in and know just what to do from that. But the systems are quite different in the management and I don't think I could draw out any discussion.

Mr. Gemmell: Mr. Miller uses the Hedden hive.

Mr. Chrysler: I have not kept an out yard at all. I have a very simple apiary myself but I have been anxious to learn how to do a great amount of work or accomplish a great deal with a very little labor. I have a few Hedden hives. I have managed the Hedden hives for two or three years without a swarm from them, or I might say, even queen cells. I take probably three brood chamber sections when fruit bloom is on and when the queen has prepared well filled the two sections. I take the empty brood chamber and set under the other two, and take one of the upper ones and put a queen divider between it and the next one, course putting the queen below. When honey is gathered as a general rule will be put in the top brood chamber and as the bees are being hatched that will be filled with honey. By the time that is pretty well hatched you can generally put an extra under of extracting combs. But they were pretty well filled and I find I find no danger in putting

nd sections under it. You have then  
 not your bees thoroughly to work up  
 above and they never think of swarm-  
 ing, and they have a big space below  
 them that if they really have to have  
 more room below they can build on  
 those starters and before they get  
 them full your honey season is over.  
 isite that half of the brood chamber is  
 is solid with honey. It takes, in  
 ine locality, a kind of honey that is  
 covered fit for sale though it is fairly good  
 rance they for wintering.

amber Mr. McEvoy: Did I understand  
 a stag to say you put starters on?

it wh Mr. Chrysler: Very shallow start-  
 ers are sometimes none at all if I in-  
 gement to scrape them out again and do  
 aw away with the combs at the bottom.  
 they occasionally will breed enough  
 uses that it is inconvenient to scrape  
 so I put starters below them.

kept that extra half brood chamber is  
 y sm with solid honey which I save for  
 re be wintering. I put that in the empty  
 a great chamber underneath for winter-  
 mple They have all sealed stores and  
 labor queen very seldom lays in them  
 I know the winter is far advanced; and  
 for to think with that system, followed  
 arm fr that way, a person has to need  
 in que look after their apiaries so often. I  
 ee bro as far as I have tried, that it  
 it blo work satisfactorily.

as pre Smith: How much surplus  
 s. I would you give those colonies?

nd set Chrysler: Of course I would  
 ke one adding supers underneath the  
 queen half chambers for brood and  
 ext one only I might set it away. I have  
 low. on the whole season through;  
 neral this warm it will keep ripening  
 d char and more until it becomes like  
 hatched that is, the honey will get so

money well Dickenson: You say you keep  
 extra supers underneath?

bs. Chrysler: Yes, underneath, on  
 ed and the queen excluder.

in p Frith: One question in regard

to these out apiaries. Are they a pay-  
 ing concern; do they bring in a  
 sufficient revenue to warrant us in  
 investing along that line?

Mr. Laing: Ask Mr. Sibbald.

Mr. Frith: I will simply ask all  
 those who have out apiaries.

Voices: Yes, yes, yes.

Mr. Smith: I can give one illus-  
 tration where it didn't pay. A year  
 ago we had a very light crop in the  
 city and I was under the impression  
 if I got those bees moved into the  
 country they would be sure to do  
 better. It so turned out that the bees  
 I moved didn't do nearly so well as  
 the yard I left in the city this year.

Mr. Firth: Was it a losing concern?

Mr. Smith: No.

Mr. Hall: It simply proves that  
 Mr. Smith is not a prophet. He does  
 not know until after the thing trans-  
 pires. I have kept out apiaries and  
 if I had to do away with my out  
 apiaries I should have to do away  
 with my bees and do something else  
 for my bread and butter. They have  
 given us much more honey than the  
 colonies in Woodstock.

My friend Sibbald is a little mis-  
 taken about the clover. It is an  
 autumn plant; it dies through  
 August. Don't say winter White  
 clover is a northern plant.

Mr. Sibbald: I don't know that; I  
 speak of Alsike clover.

Mr. Hall: White clover won't  
 be winter killed.

Mr. Sibbald: You may be right  
 about it being killed in the fall. It  
 is killed between the seasons.

Mr. Hall: It gets roasted. Before  
 the cows were shut off the commons  
 we had land in this vicinity that flow-  
 ed with milk and honey, and a lot of  
 honey too; but they have shut off  
 the cows and they don't get so much  
 pasture, and it gives you precious  
 little honey; we have to move out to  
 get it.

Mr. Craig: There is nothing in the statement then that clover is winter killed?

Mr. Hall: You can't kill white clover in the winter.

Mr. Brown: It appears to be winter killed here and summer killed with us.

Mr. Byer: If Mr. Hall was in York County he would't get five pounds a year from white clover. Our surplus all comes from Alsike. It does occasionally winter kill. Two years ago it was a total failure; it was nearly all killed in the spring. The night frost heaves it up and gets against the roots and it is dead.

Mr. Sibbald thinks we should all be able to tell by going through a yard just the state of the colonies. Mr. Sibbald is an expert and he may have succeeded. If I was to depend on that I am afraid I would make a huge failure of it. From what experience I have had I find it pays me to have someone there. It don't cost much to hire a boy to look after the yard for say seven or eight days when the swarming is likely to come on. It is no small thing to have a colony swarm just in the height of the honey season. Last season we got a large surplus and it was all in about two weeks. I think the most of us would get a little astray if we relied on observations. I know I wouldn't depend on my observations alone.

Mr. Hall: Mr. Chrysler's plan succeeds with him but if he comes to Oxford County it won't succeed.

Mr. Gemmell: If he comes to Stratford he won't succeed. I have had them swarm with the queen having the use of five of those half hives as you call them; and on a half story of foundation, giving them all the room they wanted. I have had them swarm in eight days from that. Circumstances alter cases.

Mr. Hall: You can give no regular

rule for any locality. We have bees in three localities; if the man that ran the east one would run them the same as the other two he would run them into the ground, and they are only nine miles apart. We are all of us considering what we will do with our bees and what they will do with us, but we never take into consideration the locality, and, sometimes, it is the race of the bees.

As far as our friend Miller is concerned, we can look in a Langstroth hive or one of the old hives as easily as we can in the Hedden. We can take out one comb and we can take from one or two combs at the most what is to be done. You can go through them pretty nearly as quick as you can with your Hedden hives. In your case if you have got five pounds on top you are not going to lift it up, and I am not going to lift it up; and if you have a pretty good stock of bees you want that. It goes on just as well with that as with a fashioned hive and I can get just as much surplus honey and we can keep them down in the swarming time about as well as we can in the Hedden hive. The locality is never taken into consideration. The man is a small factor in it.

Mr. Pettit: In the distance of ten miles how do you account for the difference?

Mr. Hall: Simply in the flow of honey. We have no flow of honey in Woodstock after the 21st of August, and our big flow nine miles east commences on the 9th of August. The reason they should be kept different is because we can take every ounce of white honey from these bees; the others we have to learn to live on through the winter.

Mr. Miller: Mr. Hall speaks of the Hedden hive as being used for a couple of hundred pounds surplus.

Mr. Hall : 100. Did I say 200 ?

Mr. Miller : Up until the time there are two supers on them I never remove the cover, which I think will make a great difference. Every man using the Hedden hive acquires a system of management, adopting short cuts as he finds those necessary. I never remove a cover up until there are two supers on, therefore I claim I can open two hives and find out the condition while you are examining one. Even with 100 pounds on I can lift off the two top supers and simply put them down. I lift the other two down and make my examination without removing the comb and I can do it more quickly than you can lift your supers ; and it is the time that is essential in examining. I have handled my yards alone. I handled the three yards and would have handled another, possibly go up until extracting time ; but I couldn't do so with the hanging frames.

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### THE HOME MARKET.

By A. E. Willcutt.

This is one of the important subjects which many bee-keepers fail to give proper attention to. Many producers make little or no effort to dispose of their crop in their own locality, but will rush it off to some market, which is already overstocked. This helps to lower the price on their own crop and that which was already on the market. I know there are many localities where it would be impossible to dispose of all the honey produced locally. To such places this article has reference, but only to those places where there might be a demand sufficient to consume all the honey produced, and in many instances there are many rural districts

in which very little honey is consumed. One reason for this is that it hasn't been presented to the people as an every-day article of food. In many such places it is looked upon as a luxury. We should try to dispel this idea from their minds. There may have been a time when honey could rightly have been considered a luxury, but I believe that day is in the past, for at the present price it seems that honey should find its way to nearly every table or home in the land. In some of these localities there has already been established a good market, demanding thousands of pounds annually, and at a much better price than could be obtained of the city dealer.

Many bee-keepers fail in trying to create a demand for their product in their own locality. Now there must be a reason why they fail in their effort. One of the worst things a person can do, who is trying to build up a home market for his honey, is to sell a poor quality of either comb or extracted honey.

When I first began selling honey I disposed of some dark and strong grades ; I soon found this honey was hurting my trade and I stopped selling it. Right here let me emphasize this one fact—don't sell poor grades of honey for family use. "Well, what shall I do with it?" Dispose of it to some bakery ; make it into vinegar ; dispose of it at "any old price" rather than spoil your home market with it. One more thought in closing ; be sure and give all a "taste" ; it's the best way to advertise your honey.

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### Honey Jumbles.

2 quarts flour, 3 tablespoonfuls melted lard, 1 pt. honey,  $\frac{1}{4}$  pt. molasses,  $1\frac{1}{2}$  level teaspoonfuls soda,  $\frac{1}{2}$  level teaspoonful salt,  $\frac{1}{4}$  pt. water.  $\frac{1}{2}$  teaspoonful vanilla.

## A DUFFERIN COUNTY APIARY.

By  
**GEO. WOOD,**  
Dufferin  
County.

Your letter of 21st inst. is to hand, in which you ask me to give a little history of my bee-keeping. I will try to comply with your request.

My first attempt at bee-culture was much the same as the primitive man's soil culture—with a stick. I don't remember the circumstances but my parents have often told me how I cultivated an acquaintance with a colony of bees in an old straw hive by poking a stick in the entrance. The acquaintance was too intimate to suit my two-year-old curiosity and the next ten years I was out of the business.

My first real interest in bees was roused by reading the old Canada Farmer, published, I think, by the Globe Company of Toronto, and edited by Rev. W. F. Clarke. I was a small boy at the time but I remember reading an article which said that the bee-keeper should know the exact condition of each colony as a farmer knew the condition of his cows and horses. This bothered me for a time, as I had never seen bees kept except in a small way in straw and box hives, and thought that they gathered just enough honey to feed them during the winter and no more, and that if the owner of bees wished to get honey he must first destroy the bees with sulphur and then cut the combs out. That was the extent of my bee knowledge at that time. I soon learned, however, that there was a method of examining the colonies

and that books were published on the subject. One was "Langstroth on the Hive and Honey Bee," and the other, "Quinby's Mysteries of Bee-keeping." The latter title attracted me for a mystery it seemed. I soon found a friend of the family possessed a copy of "Langstroth" and I promptly borrowed it. Needless to say I found it a mine of information and more fascinating than Robinson Crusoe. I was a bee man at once though still only in theory. The next event was reading a long article in the Toronto Globes entitled "Canadian Bee Farm." I devoured it. It was a description of Mr. D. A. Jones' bee yards in and around Beeton, and an account of his operations. The result of it all was that I engaged with Mr. Jones to spend a season with him. This was in 1882 when I had my first look into a colony of live bees. The next season I spent with Mr. Jones, having charge of the Richardson yard about three miles west of Beeton. It was in September of that year that one of the most pleasant events in my bee-keeping career took place—an introduction to the "Father of Modern Bee Culture," "The Huber of America," Rev. L. L. Langstroth, inventor of the movable frame hive and the author of that great work, "The Hive and Honey Bee." The North American Bee Keepers Association met in Toronto that year, and one day the convention

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in a body to the exhibition and there in the honey building, surrounded by a crowd of admiring bee-keepers from all over the continent, with A. I. Root and Prof. A. J. Cook as a sort of body guard, the grand old man held a reception. A number of Mr. Jones' men and students were present, myself among the rest, and all were presented to our "king." I was a proud youngster. The place, too,

But to proceed. The next season, 1884, I engaged with Mr. Wm. Nixon, of Granby, Quebec, and stayed in his employ three years. Mr. Jones offered me good inducements to remain, but I was disgusted with the vicious Cyprian and Holy Land bees, for which his apiaries at that time were the headquarters. The chance to see something of Quebec was also an attraction. In 1887 I commenced



MR. GEORGE WOOD'S APIARY, Dufferin County.

ed most appropriate for such a location. On all sides, made possible by through the use of his great quantity, was piled tons of honey. Jones, at that time known as "the Canadian Bee King," had an enormous amount of extracted honey; Hall a close second with tons of honey. Several other exhibitors combined to make an exhibit which never excelled.

business on my own account in my present location with a capital of less than \$400.00. As to my success, the picture I sent you, Mr. Editor, (which by the way was taken by myself) will give you some idea. I might say it was taken in the summer of 1898. Owing to fences, etc., it was not possible to show the entire yard. There was about 150 colonies at the time; the view shows only

about half of them. Most of the hives are the eight frame Langstroth, double story, unpainted, with stone and shade board on top. The yard is in ridges running north and south. A row of hives sets on each ridge facing east. The hives are in pairs with a two foot space between and six feet between each pair. The ground was seeded with lawn grass seed and kept clipped with a mower. The fringe at sides and backs of hives is pulled by hand when necessary and salt is used in front. The building with shingled sides is the wintering house, built on the surface with a two foot sawdust-filled wall. It has been successfully used for fourteen years. The entrance is through the small shed; also to the addition at the further side which extends the full length of the building and which is used as a workshop and store room. The windows are not shown, being on the farther side. Another building not shown in the picture is where the extracting is done. It is a neat frame building, 25 x 16, 1½ story high, on a stone foundation. The main part is used for an extracting room and for storing honey and combs. The upper part is principally for honey cans, which are all home made, and lighter articles which are only occasionally in use. There is usually on hand at the beginning of the season 100 sixty pound cans and cases, 200 twenty-five pound pails and a few dozen of the smaller sizes. The picture also shows a back corner view of my residence, built by the bees. The lady among the hives is my mother. She is very much afraid of bees but bravely stood her ground till the picture was taken, but not an instant longer. There are no trees or any obstructions in the yard to interfere with the work, but for swarming purposes plum trees have been planted along the fences on two sides

and a row of apple trees on the other two sides. The machine in the foreground is an Alpaugh solar wax extractor. Your humble servant is not shown for two reasons; first, for lack of beauty; second, he was manipulating the camera.

[Thank you, friend Wood, for the photograph of your yard and your very interesting experience. We hope that some fine day when you are busy among the bees some one will turn the camera upon you so we can present our readers with a picture of the owner of one of the neatest apiaries in the Province of Ontario. We have made up our mind that the possession of such good taste cannot help but be good looking.]—ED.



FOUL BROOD.  
 BACTERIA AND THEIR RELATION  
 TO DISEASES.

IV.

The comb frames should not be placed in the hive in such a way as to favor the growth of the bacteria. If a farmer in putting a dozen sacks of corn in his barn placed half of the sacks against the wall and the other sacks up against them, it is more than likely the rats will cut the sacks and eat the corn, and if the sacks remain long enough make more rats. Scholars of the Tyndall School would say that rats exist potentially in the corn, but we will not pause to consider that question. If the farmer had placed the sacks of corn away from the walls of the barn with space around each sack for the rats to run, and the cats attend

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to their duty, the rats would most likely have been diminished in number, and the corn preserved. If the combs are placed in the hive in such a way as to prevent the bees reaching and carrying away all particles of organic matter that may happen to lodge about the interior of the hive, the bacteria will get the advantage. And if the surface area the bees are required to keep clean and free from bacteria growth is too great for the strength of the colony at a time favorable to the growth of the bacteria, the bees must go under. The strength of the colony fluctuates very quickly owing to the short life of the worker bees in the busy season.

As bees located in chimneys and garrets dispense with frames around their combs, and also with floor boards, with known advantage to their health so far as foul brood is concerned, it is important that these dependages to their home should interfere with their welfare as little as possible. If we must use frames they should present the smallest possible area of surface for the bees to keep clean, and if the bee-keeper must use floor-boards he should, for obvious reasons, clean and disinfect them frequently, and particularly when he fears that his neighbor's bees are coming from foul brood. "Perfect elasticity" in the hive is of no advantage whatever, but sometimes a relative evil—chimneys and garrets are no elasticity. Perfect control over the floor-boards is of the greatest advantage and no hive is perfect without it.

The treatment recommend in guides for foul brood, when the disease has reached an advanced stage, is to shake and brush the bees off the combs into a skep or box, and leave them for forty-eight hours before allowing them to commence re-building. This treatment orig-

inated in America over thirty years ago, and, about ten years ago, a noted bee-keeper in Canada modified it, as he considered, with advantage. He did not confine the bees, which is objectionable, but he allowed them to build combs on "foundation starters," which he took away after forty eight hours, and let the bees commence again on new foundation. The object aimed at in this treatment is to compel the bees to consume, that is, to eat all the infected honey they have carried with them from the combs they were brushed off. The great majority of the old bees can eat the bacteria causing foul brood with impunity, but the young bees cannot. When foul brood is prevailing in an apiary, numbers of bees, principally young, may be seen crawling on the ground in front of the diseased hives. These bees have been fatally attacked by the bacteria. If the majority of the bees could not eat the bacteria with impunity, bees could not exist in Ireland.

The great majority of the human inhabitants of Ireland can dispose of the tubercle bacilli without any risk. About one-fourth, however, cannot dispose of them with impunity—the bacteria proving fatal to a great many. In about an eighth the bacteria attack successfully for a time, often to the extent of bringing about hemorrhage of the lungs or other evidence of consumption; but the bacteria get defeated, and the attacked individuals become healthy and strong. The resistance to the disease increases with time, so that we find that the old are not nearly so apt to be affected with the disease as the young.

Every observer must have noticed that it is not those most exposed to consumption that are the most liable to be affected with the disease, As a rule it is just the contrary; the strong

and healthy are the most active, and must, therefore, encounter more bacteria than the delicate and less active, and still the strong and active are rarely affected with the disease.

The bee-keeper is interested in knowing whether the bacteria causing foul brood are abundantly disseminated as the bacteria causing consumption. There is every reason to believe that the bacteria causing foul brood are much more abundantly disseminated. The bacteria causing consumption are difficult to cultivate, and gave their discoverer some trouble to find a suitable medium in which to cultivate them. The bacteria causing foul brood, on the contrary, are easily cultivated; will grow in any culture medium, even on cut potatoes, although bee-larva is a richer soil for them. They have been found growing in the human mouth. They must be everywhere, but the conditions everywhere are not favorable to their growth. In damp countries, favouring fungoid growth, bees must be continually exposed to the bacteria causing foul brood, but every colony of bees is not vulnerable to their destructive attack. Every child is exposed to the bacteria causing consumption, but every child is not affected with consumption.

It will interest the reader to notice, very briefly, the different ways bacteria act in diseases. In smallpox they attack the strong as readily as the weak, and we can make use of the bacteria to protect the strong and the weak from the disease. The duration of the disease is limited, and immunity to the disease is quickly established. The growth of the bacteria, like the growth of the annual plants, is not continuous. In consumption the disease is not limited in duration. The bacteria cannot attack the strong, and we can make no use of the bacteria to protect the weak. The

weak do not keep up a continuous resistance to the continuous growth of the bacteria, and immunity to the disease cannot be quickly established. The tubercle bacilli are perennial plants.

We find many bee-keepers stating that they had no foul brood in their apiaries before they introduced foreign queens, and that soon after introducing the queens foul brood of a virulent type broke out, necessitating the destroying of many colonies, and even sometimes the burning of the hives. The inference is that the foreign queen brought the disease into the apiary, and caused the destruction. The queens may have brought no disease into the apiary.

If an Irish bee-keeper imports a foreign queen from a locality where no foul brood has been known to exist for half a century or more, and if all the bees accompanying the queen come alive to hand, there is no probability of the bees bringing the disease. If the bee-keeper at the same time gets a queen from some locality where foul brood has existed more or less, as long as men living there can remember, and the queen has been taken from an infected colony, and half or more of the bees accompanying her have died on the way, there is every probability of the bees bringing the disease with them. Now, if the bee-keeper introduces these queens into colonies, the results will be strangely different. The queen from the infected colony will start foul brood, while the queen from the healthy colony will start foul brood of a virulent form, and difficult to control. What did this queen bring to start the disease? She brought a progeny with her that were not resistant to the disease. Her bees do not plaster holes, crevices, or seal in the hive, nor carry out scattered pollen-grains. There was no necessity

for it where they came from. The bees there dreaded no evil from open seams, scattered pollen, or dirty floorboards, and the queen's progeny soon became a prey to the bacteria. The queen from the infected colony brought with her, or in her, if you will, a progeny of crack-plasters and disinfective-cleaners, and they gave the bacteria no chance to prey upon them.

When bees are changed from a locality unfavorable to the growth of bacteria to a locality favorable to their growth—from a dry and warm to a cold and wet climate—there is always a danger of disease. It is like taking a lot of children, not vaccinated, into a locality where a case of smallpox crops up now and again, and when the epidemic breaks out, the children are blamed for bringing the disease. The children brought something worse than the disease, but they did not bring the disease. They brought a box of gunpowder for the explosion, but they did not bring the match.

In all localities in which foul brood is likely to prevail, manipulating the bees is always attended with some danger, and in some localities manipulating alone will start the disease. Making a struggling family into a critical maniacs is not the best way of helping the family to resist disease. As a general rule, the less manipulation that is used in the apiary the better it is for the bees, and the more they will collect. Of the two evils, excessive manipulation, and no manipulation, the latter is to be preferred.

To advance apiculture in Ireland, in other words, to advance the art of robbing bees of their honey, we ought to take a lesson in statesmanship. A statesman studies the interest of the honey-makers, knowing that if the honey becomes abundant the government will manage to get a share of it in one way, without studying much

about it. The common robber never studies the interest of the robbed, and he has great difficulty in getting rich, and frequently comes to a sad ending in a short time. To rob the bees successfully, and for a length of time, we must study the welfare of the bees, and that is the only way by which we will ever succeed in getting rid of the bacteria, and shutting them out of the game.

As to the brimstone robber, he should be induced, in some way, to stop his cruel work, but I fear it is not likely to take place very soon. An old veteran near me declares that there was far more honey in the country before the new honey-robbing hives were invented, and he, for one, is ready to join in a crusade to burn them all up, as he had to do with his own. For, unless it is done, he says, there will soon not be enough honey in the country to cure a sick man's sore throat. He is in earnest, and believes every word of it.—A. W. SMITH, M. D., Donemana, in the Irish Bee Journal.

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### Honey Gems.

2 qts. flour, 3 tablespoonfuls melted lard,  $\frac{3}{4}$  pt. honey,  $\frac{1}{2}$  pt. molasses, 4 heaping tablespoonfuls brown sugar,  $1\frac{1}{2}$  level teaspoonfuls soda, 1 level teaspoonful salt,  $\frac{1}{2}$  pint water,  $\frac{1}{2}$  teaspoonful extract vanilla.

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### Ginger Honey Cake.

1 cup honey,  $\frac{1}{2}$  cup butter, or drippings, 1 tablespoonful boiled cider, in half a cup of hot water (or  $\frac{1}{2}$  cup sour milk will do instead.) Warm these ingredients together, and then add 1 tablespoonful ginger and 1 teaspoonful soda sifted in with flour enough to make a soft batter. Bake in a flat pan.—Chalon Fowls.

THE  
CANADIAN BEE JOURNAL

Devoted to the Interests of Bee-Keepers,  
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(LIMITED)

**BRANTFORD - CANADA**

Editor, W. J. Craig.

MARCH, 1902.

**EDITORIAL NOTES.**

"Toronto has voted \$133,000 for new buildings for the Industrial Exhibition." Good! Can't we secure one of them as a permanent honey building?

The bee case of Brock vs. Patterson will be heard at the Division Court, Lynden, on Friday, March 7th. The decision in this suit is very important to Ontario bee-keepers.

The few bright, mild days in the last week in February was a great boon to bees wintering outside, and has about assured their coming through in good condition. Reports are generally favorable.

Dr. Miller, in a "Stray Straw" in Gleanings, says about bees flying out when being removed from the cellar: "Open up your cellar the evening before and let it remain wide open all night and see if it doesn't quiet the bees so they'll not want to fly out till they are on the stand. If any are inclined to fly give them a little smoke. No harm if the cellar is full of smoke so long as all the bees will be taken out within a few hours."

Mr. Wm. McEvoy writes:—"We are having a very steady, cold winter here this time, with frequent high winds, which drift too much of the "beautiful" into my apiary and cause me to clean the snow away from the entrance of every colony oftener than I have had to do in other winters. When the entrances are left choked up with snow for some time the bees become restless; break cluster and then brood rearing increases and more stores are consumed. This extra labor thrown on the bees in unsuitable weather wears out the old bees at a rapid rate and is often followed by "dwindling" and "petering out" in spring. Bees keep quiet, remain clustered longer, consume less stores, and come out in spring in much better condition when the snow is kept cleaned away from the entrance of every colony all winter. I tipped up the front of every colony on the 6th of February and brushed off the few dead bees that were on the bottom boards and I never found a few dead bees under the colonies at this date. So far they are wintering fine."

Loose snow is not generally considered harmful, but it is better cleared away for the above reasons. Bees wintered outside suffer from neglect of this perhaps more than we have any idea of. Let the clearing be done gently, and as quietly as possible.

Irish bee-keepers are organizing an Association for the supply of bee-keepers' requisites and for the marketing of member honey. The scheme seems quite workable and may be worthy of the examination and consideration of the special committee appointed by our Ontario Association at Woodstock. We take the following

from their directors circular:—

"The Company will be immediately constituted as an Industrial Association on Co-operative lines. Bee-keepers in all parts of the country will be organized into Co-operative Associations with elected Local Committees of Management. Those Associations, when organized, will appoint a Central or General Committee, to which the Irish Honey Company will be transferred as a going concern, and such Central or General Committee will take up the management of the Central Depot and carry on the work which we have inaugurated, and which has already given promise of success.

The immediate result of this arrangement will be a considerable saving to the members in the cost of all requisites, and special facilities for the sale of their produce on the best terms that can be procured in the most favorable markets. It will be a great Union of Irish Bee-keepers for the protection and advancement of their own interests."

### Bee-Keeping as a Business— Good Advice.

By C. P. Dadant, Hamilton Co., Ill.

"Does bee-keeping pay as a business? and would you advise a young man to go into it as such? Where can I get a practical knowledge of the business from an experienced man? My experience is limited to the care of a few colonies on the farm.—R M. JACK.

It is rather an unpleasant task to give advice to a young man as to what he should do. Much of the success of an individual depends upon his aptitudes, his tastes, his education, and his inclinations. Many a poor mechanic might have made a good farmer, and many an unsuccessful

farmer might have made a good business man, if only his opportunities had been different. So, in the question, "Does bee-keeping pay as a business?" the aptitudes of the man must be considered. But if the question is asked, "Can bee-keeping pay as a business if properly managed?" the answer could be given in the affirmative by many successful bee-keepers.

Our location is not a very good one for bees, and yet we have often said that the average annual yield of a colony of bees has usually been with us about 50 pounds. The last ten years would probably somewhat lower this average, which had been more than made in the ten previous years, for the past few years have been very unfortunate, owing to the almost total absence of white clover in the pastures and roadsides in this part of the country. But this condition of affairs will certainly not last, unless there is a positive change in the climatic conditions of the Mississippi Valley, and a steady recrudescence of drouths, in which case not only the culture of bees but most other agricultural pursuits would suffer greatly.

I said that 50 pounds per colony would be a good average. This is counted as a low estimate by many apiarist living in favored regions. In many parts of Wisconsin, Michigan and New York, as well as in the new States such as Colorado, the average of yield by colonies in the hands of progressive bee-keepers I believe to be above 50 pounds per colony. In California it is perhaps several times that amount, but the low price of honey there in good seasons would counterbalance the larger crops.

Counting on an average of 50 pounds, the net price of honey that is secured by the producers in an all-around business is certainly not less than 8 cents per pound, net of pack-

ages, cost of boxing, etc. This makes a probable profit of \$4 per colony, spring count.

This estimate is taken in a general way. It is impossible to make an absolutely reliable estimate of any farm crop, and the bees are not an exception to this. But if we take the reports of wheat acreage and number of bushels reported, we will come to a very fair knowledge of the entire crop of the wheat-producing farms, and, in the same way, the product of the bee is very nearly estimated.

A practical apiarist who makes bee-culture his business can easily take care of 200 colonies of bees in producing comb honey, and of twice that number, or more, in the production of extracted honey. And if he is wide awake, and does not manufacture his own hives, and manages to take a little cheap help at the opening of the season, he may be able to teach school during the winter, for five or six months, at least, during the time when the bees are not busy. An occasional Saturday will be sufficient to keep informed as to the condition of the apiary, whether wintered in the cellar or on the summer stands. If the man "grows" with his business, the outlay need not be very great, as the original cost of a few colonies of bees and that of the empty hives is a very unimportant capital. An industrious man will rear his own queens, and may even rear some for sale. Then he may sell a few bees, a colony here and there. The careful saving of all the broken pieces of comb, burr-combs, drone-combs, and cappings, ought very nearly to pay for what comb foundation is needed. There are very few lines of business—except perhaps chicken raising—where so few implements are needed. But poultry-raising is not to be compared with bee-

culture. The fowls need constant attention. They have to be fed daily. The bees feed themselves, except in unfortunate cases.

And yet there are many drawbacks—winter losses, spring dwindling, wet seasons. Our grandfathers used to count the bee-moth among the drawbacks. We have outgrown that. But foul brood seems to be more prevalent than formerly, though I must say that personally I have never seen a case of it. But the worst drawback of all comes from the possible neglect, or greediness, of the apiarist. Of all lines of stock-raising none requires more careful watching than bee-culture. "Know what is to be done and do it in time," is the most important motto of a successful apiarist.

But if you do not love to care for little things—to go into details, to watch the bees at work and keep an eye on their actions; if, above all, you are afraid of your bees, and cannot find pleasure in opening a hive full of bees and taking it to pieces for examination or for show; if you do not care to read a bee-book and get informed on the exact habits of these toilers, you would best keep out of bee-keeping.

My advice to a beginner who wants to become practical would be to go slowly. If he can find a position with a bee-keeper, who can give him a season or two of practice, this would be of great value. But such positions are hard to find. If you have to gather your information on your own responsibility, have half a dozen colonies more or less, and try to increase the numbers by following the method most recommended in the books. Your first few years will give you more information on how successful you can be with bees than could be imparted by a dozen articles on the subject. *American Bee Journal.*

## THE BUFFALO CONVENTION

OF THE NATIONAL BEE-  
KEEPERS' ASSOCIATION U. S.

### BLACK BROOD.

(Continued from page 181.)

Mr. N. D. West, one of the inspectors of black brood and foul brood, of the State of New York, read a paper on the subject. He said that the bee-keepers in several counties of eastern New York have had a hard fight with black brood. It started at Sloansville, in Schoharie County, some six years ago. It spread rapidly and whole apiaries died of the disease. It is very similar to foul brood, and the treatment for its cure is about the same, but it does not yield so kind to treatment and it spreads more rapidly. Italian bees do not get diseased as quickly as blacks and they stand it better when they do get diseased.

Diseased colonies of Italians, when very strong, and having a good, young queen, and the honey season favorable, the disease does sometimes disappear of itself, but this is seldom. But the season has much to do with the progress and curing of the disease.

Bee-keepers have been much more successful in treating their bees and detecting a cure this year than ever before, on the territory where I have been working. Bee-keepers should allow an colony to become weak and die or get robbed on their summer stand. All colonies should be strong during the summer, in the spring and fall seasons the colonies should be looked over, and weak colonies removed from the territory where disease exists.

Colonies treated for black brood, by shaking the bees into new hives (McEvoy method) should have plenty of honey in the field, or the bees should be fed with a syrup or good honey for some time after treatment. There is something peculiar about black brood; it does not show much with the first brood in the spring, but it will show more and more from May 1 to June 15. If the honey-flow is good after July 10 the disease in many strong colonies will begin to disappear, and by Aug. 1 will not show diseased brood, but often have a good, full brood of hatching bees, while other colonies go from bad to worse; these should be destroyed. Many apiarists have been studying various ways and means to bring about the best possible results and they are now very anxious to have the bee-inspector come and see their results, and have him instruct them and inform them of any new methods of treatment and the results in the hands of others.

Pres. Root: This matter of black brood is before you. Perhaps before we go on to the general discussion we should hear from Mr. Stewart, one of the inspectors.

Charles Stewart, of New York: I don't know as I have anything to add to what Mr. West has said, except that we find throughout the locality where black brood is at its worst that it is a case of the survival of the fittest. As he said, the yellow race of bees is in much better condition than the blacks or the Carniolans. Then, too, it is a survival of the fittest among bee-keepers. Those who were negligent or careless have lost nearly all their bees, especially those who have black bees, while those who have the Italians, or even those who have the blacks, and have watched them carefully, have reaped a very nice profit during the past season, and

their bees are in fine condition, also. I think the other inspectors will agree with me that the disease has not spread as it has formerly, owing to our work about April 1st, and our going about and cutting off all colonies that were weak, seeing that they were destroyed and put out of the way, and no robbing took place last spring, the result being that black brood has spread in my section but very little during the past season, and all who are practical bee-men are greatly encouraged and feel that they now have it under control, so much so that many talk of buying bees again and going back into the business.

Pres. Root: It is very gratifying to know that this disease is now being got under control, and I believe is now under control. A question I would like to ask is this: Do you have any difficulty in distinguishing black brood from foul brood, or is there a difference? and, if so, what is the difference between the two diseases?

Mr. Stewart: There is a difference, you will notice, particularly in the stage in which the brood dies. In the late autumn, foul brood—a large percentage of it—dies after it is capped and it is usually ropy or stringy. I am speaking now of the foul brood. Black brood lacks that ropiness, and it dies before it is capped, the greater part of it, not much dieing after it is capped. Occasionally you will see a combination of black brood and pickled brood, and so we have sometimes a confusion of diseases, but the main difference between black brood and foul brood is the time at which the larva dies, and its ropiness; and also that the black brood is much more contagious than the old-time foul brood. We sometimes find a place where they have had foul brood for five or six years, and, perhaps,

it has not spread to adjoining apiaries; whereas if it had been black brood, it would have spread over a whole county, showing that the black brood is much more contagious than the foul brood.

Pres. Root: Is it necessary to disinfect the hives in the case of black brood?

Mr. Stewart: We always advocate that, using corrosive sublimate or naphthaline, or something of that character, but it is possible to get rid of it by simply shaking them once on starters in the same hives, and they are healthy up to date; but this, perhaps, it is not a wise thing to advocate among bee-keepers, because some of them are a little careless and they would not be successful, and we would be censured for it, so we advocate skaking twice and also disinfecting the hives. We think it is safer to be over-careful than not to be careful enough.

Edwin B. Tyrrell, of Michigan: Does the black brood spread in the same manner as the foul brood?

Mr. Stewart: It is spread by the honey being robbed from one colony by another, but sometimes it is spread we hardly know how. I have had an instance called to my attention in a locality where the bees were all healthy, you might say, and found only one or two cases; and within a short time a man that had a large apiary found combs of honey near him that somebody had thrown out for the purpose of infecting his bees. You may have an enemy, or someone you have never injured in any way, yet he feels that he has lost his bees and is a little envious of yours because yours are in a flourishing condition, and, occasionally, it spreads in that way. It is something I don't like to mention, but it has been brought out and such a case occasionally occur. But, it is spread



in some other way, because it will spread quite a distance, two or three miles, when you can discover no robbing. Possibly it is by drones. Possibly the germs may be carried by the bees to the flowers and other bees get those germs from the pollen. What we know we are able to tell you, but what we don't know, that is something no one can tell.

A member: I would like to know something about the treatment.

Mr. Stewart: Our most successful treatment has been shaking them on to comb foundations, and in about four days taking those combs away and skaking the bees on to another set of starters, and by disinfecting the hive, or using another hive. The bees from that time on will be healthy unless they reach some infected honey.

F. J. Miller: Do I understand that it is simply the McEvoy treatment for foul brood?

Mr. Stewart: With the difference that we recommend being on the safe side by disinfecting the hive by boiling or the use of some strong disinfectant.

Mr. Case: How can you manage to get the bees from the combs or the starters on which you first shake them, on to the foundation that you are going to leave them on, without killing themselves with the honey that is fed?

Mr. Stewart: That is a chance you have to take. Of course, it would, perhaps, be better to confine them in a box in the cellar until they have thoroughly used up the honey in their honey-sacks, and then put them on comb foundation. Of course, you will, occasionally, but the chance is small, have a colony infected by taking honey even a second time; that is why we use a second treatment, in order to do away with all the germs in the honey, and usually are success-

ful, although once in a great while there may be an exceptional case; so perhaps it would be better to confine them in a box in the cellar for 48 hours, or something like that.

N. N. Betzinger, of New York: They usually retain the honey that they take with them 14 days before they let go of it.

Mr. Callbreath: What time of the year is best for treatment? Should the same treatment be given when they are not gathering honey?

Mr. Stewart: The better time is when they are gathering honey. In that case we recommend using something like formaldehyde in the honey.

Mr. McEvoy: I think that Mr. Stewart and I could agree on most points, but speaking of putting the bees into the cellar for four days, it kind of unfits them for business; they become lean and poor and have to be built up by feeding afterwards to get them into good condition. The four days upon the starters, and after that the new foundation will answer every purpose. There is nothing like feeding the bees; give them plenty.

Mr. Stewart: Yes, I do.

Mr. West: There is one thing in regard to this black brood business, and with the treatment, and the shaking the first and second time, that I think is a little different in some cases from what it is with the real, old-time foul brood. Our black brood, when shaken the first time and let remain four days, and then shaken again, and put upon foundation, I find in the hands of other people who are doing this work, that the bees are very reluctant about staying in their hives so many times, and swarm out and sometimes go to the woods, and if this is done in the swarming season, when bees are swarming, they may swarm with other colonies that have a young queen, notwithstanding that these bees may have their queen

caged. Notwithstanding, all this, when other swarms issue, they have a tendency to draw these bees out of the hives and they unite on the wing and mix with other bees and thereby spread the disease to other hives. Now, I prefer, with a good many men that haven't real experience, to put them into the cellar and continue to feed them for four or five days. I have had very good results this year; and if I find strange bees are put together, it improves the work, and I find, too, that the colony does better when treated in the swarming-time, if it is moved from the apiary some ten or twelve rods, out of the reach of the others. It is best, in my experience, to cure this disease in the swarming season, or when you have a continuous flow of honey, and if the colony, after shaking, has been carried off some ten or twelve rods from the rest of the apiary, when swarms from the apiary come out, the others are less inclined to leave the hive, and if they do, and the queen is caged or clipped, they return without spreading the disease.

Mr. McEvoy: I agree with Mr. West on that point, when he puts them in the cellar he feeds them.

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#### Looking Ahead.

As the time draws near for the removal of our little pets from their winter quarters we naturally ask ourselves "How shall we work our bee the coming season so as to secure the best results?" In my mind the bee-keeper who would look forward to such should have his bees in first class condition the previous fall. My plan is to examine each colony about the first week in August and see that each has a good laying queen (young queen preferred.) About first week in September contract all colonies

them with a division board. By doing so we crowd our bees into compact space; thus leaving less space for moisture to lodge during fall and winter, and keeping them warmer during the early spring. After the bees are contracted each hive is weighed and weight marked on the hive and if light, fed amount required. About middle or toward last of November the bees are placed on stands in the cellar, each hive blocked up behind  $\frac{3}{8}$  to  $\frac{1}{2}$  an inch from the bottom board, placing them in such a way as to have each hive back on its old stand the following spring. During the winter they will need very little attention except to keep the dead bees swept up and see that the temperature is all right. In removing them from the cellar take them out as quickly and quietly as possible, marking the light hives and later give them combs of honey saved from the previous fall. Lacking the combs of honey I fill combs with thinned honey or a thick sugar syrup, for a shortage at this time means a heavy loss in the returns for the year.

With the bees contracted to six or seven frames and entrance blocks on, we may safely leave them for a month until the young bees are hatching nicely and pollen is coming in freely. I then give them a general examination, looking into each hive carefully, but quickly, noticing the brood, honey supply and exact condition of each hive. If the bees do not cover the combs take one or two away. Crowd the combs together, brood in the center, putting a well filled comb of honey on each side. I also place a comb or two containing honey outside of the division board. This stimulates brood rearing and also aids in more generous feeding for the larvae. During the willow and maple bloom they will need more room and my plan is to take one or both of these

combs, scratch the surface of the sealed honey and place them next the brood; repeating it from time to time as needed till the hive is full. By so doing we keep the bees crowded so that the brood is well cared for and at the same time secure solid combs of brood as we go along.

During the fore part of fruit bloom go over the hives and scrape the frames and clip the queens, for during this time the bees are engaged in the trees and the searching for her is greatly reduced. By the end of fruit bloom each hive ought to contain eight solid combs of brood and two of honey. Now place the combs containing honey in the centre of the brood nest, one first the other 3 or 4 days later, and the bees will at once remove the honey, this will stimulate and encourage the queen and she will deposit eggs in the cells as they are emptied, making ten frames of brood in the hive and in fine condition for the honey harvest.

Of the summer work I would say, leave the hives, foundation and everything in readiness for the rush of the busy season and if there is honey in the blossoms we are bound to secure

J. H. THOMSON.

Britannia, Feb. 26, 1902.

#### Fowl's Honey Cookies.

2 teaspoonfuls soda dissolved in 2 cups warm honey, 1 cup shortening containing salt, 2 teaspoonfuls ginger, 1 cup hot water, flour sufficient to roll.

## Questions and Answers

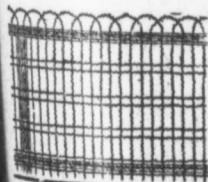
[Questions to be answered in these columns should be sent to us not later than the 15th of each month in order to insure their answer appearing in the following issue. We wish to make this department as useful to our readers as possible and a reliable source of information. For the present at least the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

I would like to ask a question; I think it was once brought up at the O. B. K. A., but I don't remember how it came out. The question is "Bee space or no bee space above the sections." Please answer in C. B. J., and oblige,  
J. C.

ANSWER—If you use solid separators the bee space should be above the sections, otherwise there will be a tendency for the bees to leave pop holes or openings in the section to pass from comb to comb. If you use separators with openings in them, slots or round holes, you need not have a bee space above the sections. Again, when the cloth fits down on the sections the hives should be scraped free from propolis, otherwise the bees may stain the wood where it joins the cover or cloth.

R. F. HOLTERMANN.

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## Notes by the Way

By G. A. DEADMAN.

### BEE-KEEPING IN MANITOBA AND THE TERRITORIES.

I regret that lack of time prevented me from visiting some of the apiaries in Manitoba. Various reports and the native honey to be had in some places would indicate that bees are kept there with a fair measure of success. What I saw and sampled at the Winnipeg Exhibition on a former visit I would compare to a mixture of fruit bloom and white clover. Those who are accustomed to this kind of honey prefer it for the same reason that many New Yorkers do buckwheat, or the Scotch that from the heather. I think it goes without saying that no one will ever go to Manitoba expressly to keep bees but I am not so sure but that they will yet supply considerable for the home market. I think there are very few to be found in the Territories, although some. If I remember correctly there have been reports from Edmonton. I was told when there that there were bees in that district. The only redeeming feature when one gets away up there is that they save freight if no more. When we include freight on the package and packing it costs 5c. to lay a lb. bottle of honey down at Edmonton. I do not remember seeing any white clover in bloom there, although plenty at Portage la Prairie, and at Morris in Southern Manitoba I saw native comb honey that was too white to be from anything else. When visiting the Experimental Farm at Indian Head some five years ago there were some

four or five colonies there. The manager gave me to understand that the wind, which is ever present in that country, is against our favorite pursuit. There was quite a rise in the grass along one side of the walks; on enquiring the reason of this the agent informed me that it was due to the wind blowing the fine dust from the walk, but so gradual as not to interfere with its growth. It goes to show how constant the wind is in that country.

By the way, Mr. Editor, why not have reports from year to year, not only from the Experimental Stations at Brandon and Indian Head, but from all in Canada. While there are many farmers who grow nothing but grain, and who have to buy their butter, mixed farming is considered safer. If one understands keeping bees and goes into stock raising their success is assured. Stock raising is sufficient without the bees and is much surer and safer than growing grain exclusively.

I had an idea that the fall shows in that country would be a good time and place to advertise and dispose of honey. I found, however, that these shows or fairs, would, in almost every instance, have ceased long ago but for the support of the government. The farmers are usually too busy to attend. Last year was, I suppose, worse than usual, but I was told that there is never much of a crowd. Winnipeg and Brandon very wisely have theirs in midsummer before harvesting begins. It is very difficult to reach the consumer in the west and you must pay a license to sell to them. Merchants want large profits than they do with us so they do not buy at all. Corn syrup lessens the demand for honey and there is an immense quantity of it sold. It gives the merchant a handsome profit

75c. for a 10 lb. pail. What I refer to is put up in Chicago and the manufacturer explains that it is composed of 10 per cent cane syrup and 90 per cent glucose. Many, I suppose are led away by the name "corn syrup," and do not know what it is made from nor how injurious it is. We, of course, talked it down but education is what is required. What a mistake ever to place such stuff before a family; I pity the poor children who know no better and who have parents that do not and will not take the trouble to find out what is harmful and what is not. All are agreed, however that honey is a healthy sweet. We believe that it is the best of all sweets, so we can conscientiously recommend it.

**DON'T JAR!**

All late and early manipulations in and about hives should if at all possible be avoided. Disturbance of any kind is detrimental to the bees' well-being during the season of repose, and digging or necessary work, even in their neighborhood, should be done gently and quietly so as not to jar the hives. Bees, both in late autumn and early spring, are extra sensitive and careful of the mother bee, some distinct informing them that all their life is well-being depends entirely on her. Therefore, they often hug her to death from the very desire to save her life—thus killing her with kindness—when untimely disturbed. The technical term is they "ball" their queen. When this happens then good-bye to any profit from that colony. I lately saw several hives roughly roused unseasonably, and was very much surprised if several of them are not minus their queens.

—British Bee Journal.

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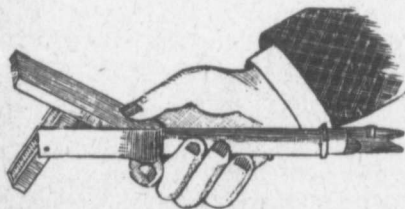
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