

# The Canadian Bee Journal

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Reports that have come to us thus far give the pleasing assurance that bees are coming out of winter quarters in splendid shape. It is to be hoped that the weather from now on will be favorable for rapid breeding. The heavy and continued snow of this winter, and its manner of melting this spring, was most favorable to the hay and clover crop, in that the frost has not done much heaving, the snow remaining as a protection right up almost to the first of April. The indications all point to a bumper year.

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Mr. Jacob Haberer, of Zurich, reports that his bees had a good flight on the 25th of March, after about four months' confinement. Quite a few colonies showed sentery, with more than an average number of dead bees, and more than an average consumption of stores. No colonies dead, but a number very weak. An earlier spring than last year is needed, as spring dwindling will do much harm. Bees in the cellar are fairly quiet, with more dead bees on the floor than usual. Those entirely buried under the snow during the winter seem to be about as good as any. It also appears that the sugar colonies are better than the others. He is sorry he did not feed more. He is of the opinion that there is no other point which bee-keepers are more universally agreed than that of sugar feeding for winter stores. This, he says, is especially so in Germany.

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The cut appearing on the first page of this month is a display of honey made by John Bailey, Sr., at the Bracebridge

Exhibition. It is a very nice display, and proves Mr. Bailey to be a bee-keeper of some enterprise. He writes: "Your page of 'Dont's' by Mr. Anguish was very good. Don't forget to attend to the entrances of the beehives wintered on their summer stands. My plan is to place a small box about 6"x6"x12" close to the front of the hive. It won't clog with either dead bees or ice. If covered deep in snow all winter, so much the better. What do you think of the honey bee exhibited as a curiosity? I showed an observatory hive of bees competing for a prize as a curiosity, and it was rejected as such. I am much pleased with the C.B.J., and appreciate the index for last year very much." [We do not see why exhibition authorities should reject the exhibiting of an observatory hive of bees. It is not usual to offer prizes for this, but a more interesting thing than a hive of bees to the public could scarcely be imagined. Possibly in this case no prizes were offered. Mr. Anguish's "Dont's" seem to have taken hold. He promised us some more. Possibly he has dug himself out of the snow by this time, and we may hear from him yet.]

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Mr. Wm. Beuglas writes that he fears he has not made quite clear to the reader what his thought was in the last three lines on page 92. He says the idea he wished to convey was to shut the old entrance of the top hive so that the only exit would be down through the queen-excluder to the lower entrance. This is why the paper was torn at this point, to allow them to pass down.

We are very pleased to announce that the Rev. C. A. Procnier, M.A., of British Columbia, has undertaken to send us items of interest from the French bee journals. This will keep us in touch with what is going on in France in reference to beedom. We might say to him that if he has anything that would be of particular interest to our French readers in Quebec, he might clip it out and send it to us without translation, and we will reproduce it in French. Something of this kind might often be appreciated by them.

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The Irish Bee Journal, of March, refutes at considerable length Dr. C. C. Miller's statement in Gleanings that the split section is objected to by the English consumer. The opinions of many of the most prominent bee-keepers are given, to the effect that they have never heard of any objection to split sections on the part of British buyers, nor of any depreciation of the value of comb honey marketed in such sections. Mr. D. M. Macdonald, Banff, a well-known authority, says: "Honey in split top sections does not get penalized by a deduction in price because of the split top. Instead of there being any prejudice on the market against split tops, I have no hesitation in saying they are the popular section. I would judge that well over eighty per cent. on the market are split top. My statements are confirmed by the experience of an extensive dealer."

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A. McGill, Chief Analyst of the Dominion Government, has submitted a report on Honey in Bulletin No. 148, in which he gives the results of examination of 253 samples of honey. Its special interest lies in the fact of collection during the winter, in deference

to the suggestion of the Bee-keepers' Association of Middlesex. It is to be presumed that this Association held that there would be greater likelihood of spurious samples being found on the market during the winter months. It is gratifying to state that the report now submitted shows that strained honey, as found throughout Canada, is mainly a genuine article, true to name. The following synopsis will bear out this statement:

	Samples.
Found genuine.....	135
Found doubtful.....	3
Found adulterated.....	2
Sold as compound.....	1
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This is a very gratifying report, and speaks well for our bee-keepers of Canada as an honest lot of men. It is not the actual keeper of the bees and the producer of honey that does the adulterating.

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We were pleased to receive a call from Mr. R. L. Paterson, of Alberton, Ont., on the 19th of March. Mr. Paterson is a man well up in years—somewhere around the seventies, we would say—but he is yet hale and hearty, and is looking forward with pleasure to the task of getting out his seventy hives of bees. He reports that they have wintered well, and that prospects are looking good.

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It appears that the resolution of the Norfolk Bee-keepers' Association is causing considerable criticism. We cannot understand how the resolution came to be passed. In the C.B.J. for February (page 45), Mr. John L. Grosgean, of Cobourg, wrote as follows: "But you should give the bee-keepers the right view on foul brood. There is none in the eastern part of Ontario. There has been

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no foul brood found east of Northumber-land County, with the exception of a few hives, and they were found to have been shipped in from the west." To this we replied as follows: "We do not quite understand your expression about foul brood. Our whole desire is to give the right view on everything. But in this matter, as in everything else, men's opinions differ widely. Some think foul brood is bad—very bad; others do not think so. Some judge the conditions of the whole country by the condition of some district. If our readers would write to us, stating the conditions in their counties, we would then be able to present the 'right view,' without conjecture or guess-work. We believe also this would aid very much the work of the inspectors. It is the desire of all of us to get at the facts, that the ravages of the disease may be lessened." Mr. Grosgean's statement may be true or not true; we do not know. We think, however, we said all there was to say in reply. If there was any objection to his statement, it should come from those living in the district to which he referred. They were the proper parties to make criticisms and explanations. Why our good friends in Norfolk should seize upon the statement of Mr. Grosgean as a basis of their resolution is very difficult to understand. We expect, however, that explanations will be forthcoming next issue. No doubt Mr. Beaupre can give us some justification. We have a suspicion, however, that the resolution was not born in the minds of any of our Norfolk friends. We rather think it was suggested to them by some one who had questionable motives. It is unfortunate that such a resolution should have been passed and sent to the Minister of Agriculture. It is not likely to impress him with our intelligence, harmony or solidarity. Mr. M. B. Holmes is the inspector for the district in question, than whom there is no more able, gen-

tlemanly or fair-minded man in the Association. His report to the last convention ought to have been sufficient to convince any one of the utter absurdity of such a resolution. We believe our friends in Norfolk will be able to clear themselves of any evil intent in the matter.

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Our readers are indebted this month to Mr. McEvoy for a very valuable paper on spring management. No one can go wrong, be he beginner or old-timer, who follows his plan or takes pointers from his methods. His plan of putting a frame of honey on top of the brood-nest has been tested by Mr. Shaver, of Cainsville, who pronounces it a great success. Mr. Shaver has christened it the "pancake." It is a capital method of assisting the bees early in the spring with a minimum of disturbance.

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We trust our friends will appreciate our efforts this month. We think this C.B.J. is full of good, solid bee-food for the bee-keeper. We have recently installed a Linotype typesetting machine. By its aid we are able to give you more matter, with a considerably improved appearance. Canada is developing. The keeping of bees will develop also, and we promise you that, with a fair support, we will put forth every effort to develop the C.B.J.

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Just before we went to press Mr. D. Anguish sent us something on spring management, which appears in another column. He says he attends to his spring management in the previous fall. In this he is in accord with the best authorities. Nature has provided the bees with sufficient instinctive knowledge to take care of themselves, provided we give them abundance of food, and the least handling they have up to fruit bloom the better.

## Notes and Comments

(By J. L. Byer)

S. D. Chapman of Michigan is certainly a "lightning operator" when it comes to hunting queens out of full colonies, near the close of the honey flow. He says that with an assistant it only takes five or six hours to find the queens in one hundred colonies, many of these colonies having a brood nest of sixteen to twenty-four frames (see page 107, C.B.J.). Reckoning on the five-hour basis, that would mean twenty colonies per hour, or three per minute, and in that time operators would have to lift off heavy supers, replace same and do other incidental jobs, in addition to looking for the queens. While the writer in a game of that nature would be handicapped by large hives and frames and dark queens, yet with smaller hives with Italian queens, at the season of the year that Mr. Chapman mentions, I have an idea that I would be away behind his record. Now, I have great respect for Mr. Chapman, and am not for a moment insinuating that I doubt his word, and as his record in queen-hunting is so phenomenal, I feel sure he will pardon us for thus commenting. I suspect difference in race of bees, locality, etc., makes the difference, but his system of requeening will not work here in York County. Such a wholesale slaughter of queens would mean a lot of swarming, and, again, it is impossible to calculate just when our clover flow will cease, so it would be a lottery as to choosing the proper time to kill the old queens. For instance, I have seen the prospects excellent for ten days' flow from the alsike, when a hot wind would in a day stop all the nectar for the season. At other times, when we have thought the flow just over, showers, accompanied with necessary atmospheric conditions, would cause the clover to revive and yield splendidly for some time. Returning to the

matter of hunting the queens out of full colonies, when supers heavy with honey are on the hives, with conditions in my yards, as previously outlined, I really wouldn't want to wager that I could find the queens out of thirty colonies in a day, to say nothing of one hundred.

We have had very little experience in the matter of cellar wintering, but having read a great deal of other bee-keepers' views and experience on this question, naturally we are much interested in the subject. While there are a great many contradictions, seemingly, in matters apicultural, the difference in opinions of cellar winterers are exceptionally pronounced. That a cellar in which bees are wintering should stand at about 45 degrees Fah. is quite orthodox teaching, yet there are some who want a lower temperature than that, while others, notably the late Mr. Barber, of New York State, aimed to keep the temperature at 50 degrees or over. Among those who favor a temperature lower than 45 degrees is Mr. J. F. Davison, Unionville, Ont., one of our most successful bee-keepers. He usually winters about one hundred and sixty colonies, half the number outdoors, and the balance in the cellar, and nearly always both lots of bees are in perfect condition in the spring. His idea as to cellar wintering is to keep the temperature as near the freezing point as possible. Some three miles from home I have twenty-five colonies in a farmer's cellar, and during one of the very severe cold snaps in February he told me that by leaving a window open too long the thermometer got down in the thirties for a few hours. As soon as I heard this Mr. Davison was called up on the 'phone and asked whether so low a temperature would do any harm. As I rather expected, the reply was something like this: "No, not a bit of harm; wish I could keep my cellar that cool all the time."

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As before stated, we can testify to his uniform success, so I suppose we will have to infer that his cellar is an extra dry one. Last fall, when fitting up the bees for winter, at one yard a mere nucleus with a young queen was found, and as they had not a pound of honey, we calculated not to pay any attention to them. However, when we came home the hive was put in the buggy, with the thought that possibly some use might be made of the queen. Not needing the queen, the bees were crowded to one side of the hive and fed about all the sugar syrup they would take. Later on they were carried in our home cellar, placed in one corner, with an old rug wrapped around the hive to keep out some of the light. Now this cellar, when compared with what a good repository should be like, is about the poorest place possible to try to winter a strong colony, let alone a weak nucleus. It is dug in a gravelly clay and always somewhat damp; there is a great variation of temperature, as the windows are generally open, with the air kept as cool as possible without freezing, for the sake of the vegetables and fruit in the cellar. However, when the hive was carried out on March 31, the bees were apparently in as good condition as they were in November last. The point I wish to make is that good stores is about the whole thing for successful wintering, either indoors or outside. Had this nucleus been provisioned with poor stores with an excess of pollen, no doubt the bees would have perished, and the cellar blamed for the trouble. With first-class stores, bees will withstand adverse conditions in wintering outdoors or in the cellar to a wonderful extent, when under like conditions, and the bees having poor stores, things will turn out disastrously. This winter we have had some pointed experiences in this matter, of which we will have more to say, if spared, in a future issue of C.B.J.

During the past the writer has frequently had considerable to say relative to wax rendering and wax presses. As many will have noted, I am quite partial to the Hatch-Gemmill press, the most of our wax for some years having been rendered by aid of that style of press.

The slum-gum has been saved for the last four years, and quite recently a lot of this stuff has been treated in one of the hot-water presses built on the principle of the one advocated by Mr. Sibbald at the last convention in Toronto. The press in question is a very powerful affair, and with the two-inch screw and a crowbar for a lever an enormous pressure can be applied. Not having yet tried the press with comb, we hardly feel qualified to pass an opinion as to its merits. However, there is no question but that it is a slower process than when using the Hatch-Gemmill press, and should I purchase one of the hot-water machines, I have an idea that I would first use the old press and afterwards treat the slum-gum in the other machine. Abundance of hot water and lots of time are essentials in the use of the hot-water press, and we found that even when working in a hot room it was almost impossible to flood out the wax, as the wax when rising to the surface would harden at once. In this respect, I suspect the Hershiser would have the advantage, as this machine sits right on the stove, and it is only natural to suppose that the water would keep hotter than is the case in the other machine. From the three hundred and eighty pounds of slum-gum treated (that amount of thoroughly dry slum-gum is quite a bulk), fifty-four pounds of inferior wax was obtained, and from this three hundred and eighty pounds, five hundred and twenty pounds of wax had previously been extracted. In other words, about nine and a half per cent. of the available wax is left in when using the unheated press. As we spent four days and used

the range and coal oil stove all the time in securing that fifty-four pounds of wax, it is easy to see that there was not much money in the job. Some of the slum-gum was heated and badly decomposed, so our reference as to poor quality of wax obtained is no reflection on the hot-water machine, as from the same slum-gum, no matter what press or other means was used to get the wax, I believe the resulting product would necessarily be of poor quality. In saving slum-gum for future treatment, it should be thoroughly dried before storing away, otherwise it will mold and heat, and when this occurs the wax is bound to deteriorate in quality and shrink in quantity. Just a word before closing regarding Mr. Sibbald's recommendation to work over the old-style Gemmill press into hot-water machines. From my experience with the press during past week, I have an idea that the Gemmill presses in use are not built strong enough to stand the heavy work that is required in the hot-water machines when three or four cheeses are pressed at once. Certainly, a press to do good work in treating old slum-gum needs a heavier screw and frame than any I have yet seen in the Gemmill presses.

### SPRING MANAGEMENT

(By Wm. McEvoy)

This work begins in the summer before, by running every colony in the apiary with young queens and keeping up brood-rearing until well on in September, and then fitting up every colony with abundance of well-ripened stores of the best kind. Where this work has been rightly done, colonies will require but very little care in early spring, because they had plenty of young bees when going into winter quarters to last until more bees are reared in the spring. But we will always find a difference in the amount of stores that some colonies will consume

more than others, and along this line we must pay very close attention, because it means profits or loss in how we manage this part of the work. My colonies are all packed on their summer stands, and as each colony is packed in a winter case of its own, I can quickly examine every colony in the apiary by shoving back the packing and taking a glance at the top of the combs. About the first week in March I take a look in on the top of the combs in every colony, and where I see sealed stores in the centre combs I close up and pass on until I find a colony with no sealed stores in the centre combs. These are usually among the best colonies in the apiary, and, having prolific queens, brood-rearing was carried on more in these colonies than in the others, and this caused the bees to use up all the stores in the centre combs, because these were the warmest and nearest to the brood. These colonies will have more or less stores in the outside combs, but as these stores are colder and farther from the brood, the bees will not in early spring carry enough stores from the outside combs to feed all the larvæ, and then some of it will die one day and some another, and so on, and then these colonies will gradually weaken down and some will "peter out" if they are neglected in early spring after the stores have been consumed out of the centre combs. These colonies, with the very prolific queens that have bred up so as to consume all the stores out of the centre combs by the first week in March, can be made to grow and boom and give the largest yields of any colonies in the apiary if properly treated. When I find any colony with the honey consumed out of the centre combs in early spring, I take a warmed comb of all capped stores and place it flat like a board over the cluster, and then put on the cover and pack well. The heat from the cluster will keep this warm and the bees will carry down the

honey and feed another comb later on, I lift a full one in it est, simplest at that can be for always brings carry over a stores to deal o need help in e I find from five less that I treat every colony to have capped stores are placed over stimulate, nor rearing before of 1878 was the Ontario, and ear fruit bloom, I s best colonies up each of these eve pound of sugar so as to bring ing condition for perimental schem much on did not This work of try to build up very and caused them suitable weather rapid rate, and g for the loss of a ones. This experi stimulate any m spring. One very when stimulating to tell well-fed la poorly-fed and st closely examined th fed and in those r difference to be ve ones not fed, son had no milky food wells, and some of t days old had spac centre of the coil t in in, through no

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honey and feed all the brood well. If another comb of stores should be needed later on, I lift off the empty one and put a full one in its place. This is the quickest, simplest and by far the best method that can be followed in early spring, and always brings good results. I always carry over a quantity of well-capped stores to deal out to any colony that may need help in early spring. Some springs I find from five to ten colonies more or less that I treat in this way, and in nearly every colony treated the outside combs have capped stores when the full combs are placed over the cluster. I never stimulate, nor do I try to rush brood-rearing before fruit bloom. The spring of 1878 was the earliest we ever had in Ontario, and early in that spring, before fruit bloom, I stimulated twenty of my best colonies up to fruit bloom by feeding each of these every evening with about a pound of sugar syrup mixed with honey, so as to bring these colonies into booming condition for fruit bloom. This experimental scheme that I had counted so much on did not pan out right with me. This work of trying to rush the colonies to build up very fast excited the old bees and caused them to fly too much in unsuitable weather and wore them out at a rapid rate, and gave me one young bee for the loss of about three or four old ones. This experience taught me not to stimulate any more colonies in early spring. One very valuable thing I learned when stimulating these colonies was how to tell well-fed larvæ in all stages from poorly-fed and starved larvæ. I very closely examined the larvæ in the colonies fed and in those not fed, and found the difference to be very great. In the colonies not fed, some of the small larvæ had no milky food in the bottom of their cells, and some of the larvæ four and five days old had space enough left in the centre of the coil to stand the head of a pin in, through not being fed enough.

All the small larvæ in the fed colonies had plenty of milky food in the bottom of every cell, and all the larvæ four and five days old was that plump and fat that no space was left in the centre of the coil. I started experimenting again that spring by feeding during wet weather in fruit bloom and after fruit bloom was over. I found that the colonies that had plenty of unsealed stores then fed the larvæ well, while those with capped honey but no unsealed stores let some of their larvæ starve. By experimenting along these lines in 1878 I found the most profitable system of spring management, and have followed it up ever since. I carry over plenty of capped combs, and if any colony needs help before fruit bloom, I place one of these over the cluster and cover it over. This is all that I do before fruit bloom, and every colony that I ever fixed up this way came through in first-class condition. From fruit bloom to clover I want more or less **unsealed stores** in every colony, and to keep colonies in this condition requires feeding to be done when the bees fail to gather honey enough from fruit bloom, dandelions and thorn bloom to keep the colonies supplied with **unsealed stores**. In the **evenings** between fruit bloom and clover I uncap honey right after every check in the honey flow, and also at times when the bees are gathering but very little honey. I do this so as to keep the colonies well supplied with **unsealed stores**, which causes the colonies to brood up faster and feed their larvæ better. When I find outside combs with a good deal of capped honey in them I take these out and put empty combs in their place. I then spread a cloth over the brood chamber and turn the corner of it up so that the bees can come up. I then put an empty super on and uncap one of these outside combs I lifted up from below and hang it in the super; the bees will rush up and rob this comb and carry it down. After all the honey has

been uncapped in every colony I feed sugar syrup to any that need feeding. This system brings forward immense quantities of bees of the most vigorous kind, and by it we get much larger crops of honey.

### LEGISLATION FOR BEE-KEEPERS

(By Wm. McEvoy)

#### Our Spraying Bill Was Very Sternly Opposed

When the Ontario Bee-keepers' Convention was held in London in January, 1892, I moved that Messrs. Allen Pringle, F. A. Gemmill and E. D. Smith be a committee to wait on the Minister of Agriculture to get an Act passed to prohibit the spraying of fruit while in bloom. Some of the best speakers in our convention opposed me on this, and after my motion was carried it was protested and put the second time and again carried, and again protested and carried the third time. After that the yeas and nays were called for, and then the fourth vote was taken, and again it carried. Mr. Pringle was President of our Association then, and Mr. Gemmill was Vice-President. Mr. E. D. Smith was a nurseryman and an extensive fruit-grower. I put Mr. Smith on the committee on account of being a fruit-grower and one that was widely and favorably known. I thought that with his help we would not be opposed by the fruit-growers. The committee met in the Hon. Mr. Dryden's office, and after a careful consideration of the matter he gave them a favorable promise. As soon as Mr. Dryden introduced the Bill into the House it met with a very stormy reception, and on a motion was sent to the Legislative Committee, who, like a jury, were to decide on this from the evidence brought before them. Messrs. Allen Pringle, F. A. Gemmill, Wm. McEvoy, C. W. Post, Professors Fletcher

and Panton, and seven fruit-growers and nurserymen, were called to give evidence. We were all in favor of the Bill but one fruit-grower. After hearing the evidence the Legislative Committee reported the Bill all right, and then we thought that it would pass easily, but we were mistaken, because as soon as it was brought up in the House for the second reading it was opposed in the sternest manner and challenged to a vote. I was much pleased when it was carried by a majority of 27, because we needed an Act of this kind very much then to save the bees from being poisoned by the spraying that was being done in many localities while fruit trees were in bloom. No spraying is done now in any part of Ontario while trees are in bloom.

#### Mr. Gemmill's Foul Brood Act of 1890 Came Very Near Being Destroyed in 1905

In amending the Foul Brood Act in 1905 a few changes were made, and one among them was to take the power away from the inspector of being the sole judge and giving the right to any one to appeal against the judgment of the inspector to a scientist to decide whether it was foul brood or not. This had been passed by the Board of Directors in this form, and right after it was submitted to the convention for approval. Professor F. C. Harrison was the chief advocate to allow appeals from the judgment of the inspector to a scientist, and he did do his best to get the convention to make the change. I appealed to the convention not to allow any appeal from the inspector to a scientist, but to restore the clause as it was, making the inspector the sole judge so that he could force a clean-up without any delay where other apiaries were in danger. I also said that if appeals were allowed that every "crook" would dispute the judgment of the inspector as

(Continued on Page 153)

### THE ENEMY

(By

Probably the man who this keeper asks is out of it?" tion of apiaries cult to answer ing price of h of management on the cash re total number of itably handled: give facts and i ject, but those very illuminatir In considering, not lose sight o two schools of motto of one be while the other tum, "Keep few better," or, at half of this ada much gain in dis of either method, success of either man, one man h things on a large the genius for tak plan may, of co absurdity. Nobo make a living by the highest state than anybody thin starting more out, sibly attend to. I venture to thin detailed statement either system of m ple are tempted to cause the initial c returns, as reported are, in many inst holds good so long are kept, and no required. But the co



## THE ENEMIES OF BEE CULTURE

(By Wm. L. Couper)

Probably the very first question the man who thinks of starting as a bee-keeper asks is, "How much can I make out of it?" Probably there is no question of apiarian management more difficult to answer. Locality, seasons, varying price of honey and supplies, method of management, all have their influence on the cash receipts per colony. On the total number of colonies that can be profitably handled: Most of the text books give facts and figures relating to the subject, but those which I have read are not very illuminating.

In considering this matter, one must not lose sight of the fact that there are two schools of apiarian economics, the motto of one being "Keep more bees," while the other pins its faith to the dictum, "Keep fewer bees, and keep them better," or, at all events, to the latter half of this adage. There would not be much gain in discussing the pros and cons of either method, as it is obvious that the success of either depends entirely on the man, one man having talent for running things on a large scale, while another has the genius for taking infinite pains. Either plan may, of course, be reduced to an absurdity. Nobody supposes that he can makè a living by keeping one colony in the highest state of efficiency, any more than anybody thinks he can make one by starting more outyards than he can possibly attend to.

I venture to think there is need of more detailed statements of profit and loss in either system of management. Many people are tempted to start bee-keeping because the initial cost is so small and the returns, as reported in the trade journals, are, in many instances, so large. This holds good so long as only a few colonies are kept, and no special buildings required. But the cost of the plant of ten

increases far more rapidly than the profits. Building an extracting house, with its tanks and other conveniences, is by no means a small item, with lumber at its present price, and yet this often has to be done, when the profits of the apiary hardly seem to justify it.

Personally, I am very well satisfied with my bees as an investment, but I should like to see definite statements from bee-keepers of either school on the following subjects:

1. The average amount of honey per colony through several seasons.
2. The number of colonies that can be handled by one man.
3. The value of plant per one hundred colonies.
4. Working expenses, such as labor, feeding, etc.
5. Average price of honey.

Question No. 3 is perhaps misleading, as the plant necessary to run 100 colonies would in some respects be sufficient for two or three times that number, a point in favor of the "keep-more-bees" school. On the other hand, each colony with its supers represents so much money invested, and the man who believes in keeping fewer bees and keeping them better can point to the fact that his money is earning a larger interest.

In writing this I have purposely omitted my personal opinions on the subject, since my experience is insufficient to make them of value. My sole object has been to provoke discussion on a point very material to commercial bee-keeping, which I think has hardly received the attention due to it.

May I be permitted to thank Mr. McEvoy and Mr. Balmer for their helpful suggestions in response to my letter in a former issue.

[Here is an opportunity for some of our thoughtful readers to develop the financial side of bee-keeping. It ought to be possible to get down to some definite

basis of cost. How many bee-keepers take an inventory of their stock when they are through packing in the fall, and balance up accounts? When should the bee year end? This latter question has given us some difficulty. We have, however, arrived at this conclusion—the bee year should end when bees are unpacked or taken from the cellar in the spring. One then knows positively how his year has ended, as well as positively knowing with what it starts. Let us suppose you winter one hundred colonies. In the spring you find you have but ninety. Hence you start the new year with ninety, and so on. Another advantage of this is that by spring you are pretty sure to have disposed of all your crop. If you should sell bees in the spring, that, too, would be included in your year's revenue. The adoption of a business method of this kind would prove profitable and interesting. Profitable, because it would disclose the leaks; interesting, because it would furnish data that may be at present difficult to get. We would be very pleased if some of our readers would look into this matter this spring and let us have a report of a general character, not necessarily disclosing their private affairs.—Ed.]

#### CANADIAN PICTORIAL—EASTER NUMBER

The April issue of the ever-popular Canadian Pictorial may well stir with pride the heart of a true Canadian. The "Noted Canadian of the Month" is the Lieutenant-Governor of Manitoba, Sir Daniel McMillan, and a picture of Lady McMillan is given in the Woman's section. Winter scenes of varied beauty, including ice formation on Lake Huron, the muskrat's winter home, exquisite views, just taken, of Niagara in winter garb, well represent the season in which Canadians delight, while scenes of budding spring are not wanting. A couple of fine

pictures show Ontario's two great hydraulic lift locks at Kirkfield and Peterboro, either of which has twice the capacity of the largest work of the kind anywhere else in the world. Another picture is of Alexander Graham Bell, of telephone fame, who grew up in Canada, and installed his first working telephone in Brantford. A remarkable view, taken 700 feet underground, shows a couple of brawny miners in an Ontario gold mine near Kenora, and the new electric engines on the G.T.R. for the St. Clair Tunnel will be of special interest. Besides these, and many other Canadian pictures, there are pictures from across the water, such as a huge English telegraph exchange, the Thames frozen over, a winsome group of a schoolmistress at 85 and her pupils, etc., etc., all of them of interest to Canadians.

Weddings of the Month, Fashions, Toilet Hints, Care of the Baby, Wit and Humor, News in Brief, serve to complete a delightful number. The Canadian Pictorial is a pleasure to look at, a pleasure to touch. No home should be without it.

To Canada or Great Britain a club of three new subscribers at half-rate.

Ten cents a copy, one dollar a year, to all parts of the world.

The Pictorial Publishing Company, 142 St. Peter Street, Montreal.

#### BEEES WINTERING WELL

Mr. Editor: Dear Sir,—Enclosed you will find photo of part of my apiary, nicely fixed up in clamps, packed in dry sawdust. We fixed up last fall ninety-four colonies in this way. All bees had a cleansing fly March 11th. Not one dead, so far as we can learn. Bees have wintered well in Lambton County, especially around the vicinity of Arkona, where a good many bees are kept.

GEORGE OTT.

Arkona, Ont., March 24, 1908.

## SPRING

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## SPRING MANAGEMENT

Paper by **GEORGE OTT**

The first work the bee-keeper should look after in the spring is to clean dead bees and litter from the bottom of the hives; but this should not be done until one week after the bees have been taken out of cellars or clamps. By this time the bees have had a good cleansing flight

Next blow more smoke under the bottom of your hive, and turn it up, and should there be any dead bees clogged between the comb frames near the bottom, with a case knife clean them out. Now replace your hive on its own bottom, and go to the next hive and do the same, and so on until your hives are all cleaned. Now **close the entrances of all hives to admit only one or two bees at a time.** This is to prevent robbing. Should you find any



Apiary of George Ott, Arkona

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GEORGE OTT.  
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and are settled down quietly, and have marked their locations. Now get your smoker ready, and blow a few puffs of smoke in the entrance of your hive, and the bees will move up out of your way. Loosen the bottom of your hive and set your hive in front on a platform. Now scrape all the dead bees and litter off the bottom of your hive into an old tin pan.

dead colonies, remove them at once out of your bee yard and take out all the comb and store it away until you have time to run it out into beeswax. Next clean out your hive and sandpaper it and wash it out with hot water, and also clean the comb frames the same way and put them in the hives. Close up the hive, so no moth millers or mice can get in,

until you are ready to use it. I am no advocate of using old black combs on which bees have died. Better chuck it into the wax extractor and run it out into wax to be made up into foundation comb.

To hive bees so that not one out of a hundred will go to the woods, always be ready when swarming season commences. Before a swarm of bees issue from a hive, the bees fill their honey sacks with honey. They carry a load of honey with them out of the old hive to commence in their new home. After flying around for a few minutes, they cluster somewhere near the hive they issued from. Natural swarms always cluster before going to the woods, and should be hived at once. If left to hang in the hot sun, they will sometimes leave in a short time and go to the woods. If the swarm should cluster in a shady place, they may hang much longer before leaving, yet it is safer to hive them at once. Get your hive and place it on a board under the cluster of bees. Raise your hive one inch in front and slip a one-inch block under it to give the bees plenty of room to enter the hive. Next get a tin pan in one hand and a turkey wing in the other. Hold your tin pan under the cluster of bees, and with your turkey wing loosen the bees, and you can get most of the bees in your tin pan the first attempt. Bring them to the front of your hive and empty them very carefully in front. The bees fly around the front of the hive and commence to enter it. If you have not got all the bees the first time in your tin pan, try the second time and get a few more bees, and you will soon get all the bees of your swarm in the hive. Should a few bees be clustered on the outside, brush them down with your turkey wing. They should all be made to enter the hive, so as to be sure to get the queen. Now let your swarm remain where you hived it until next morning, then move your old hive to

some other part of your bee yard and place your new swarm on the old stand. When changed thus, most of the old bees flying out of the old hive to the fields, not noticing they were changed, return to the old stand and work with the swarm. This makes the swarm a very strong one, and it will most likely store you a nice lot of white honey.

If you should happen to have a few after-swarms, hive them and return them the next morning to the parent hive by first cutting out all queen cells in the parent hive. It happens sometimes colonies lose their queens in swarming season when there are no eggs in the hive to raise a queen, and the bees dwindle down and the hive is robbed out. You will notice bees running up in front of the hive and around the side of the hive, and some bees flying around the back of the hive hunting, as it were, for their queen. When you see this commotion around a beehive, you may be sure the queen is lost, and if you do not remedy the evil you will lose the colony. If you have no queen to introduce, go to one of your best hives which has a laying queen, take out a frame of brood with fresh eggs in it not over two days old; exchange frames with the hive which has lost its queen. As soon as the bees find out eggs are in the hive they commence constructing queen cells in which to raise young queens. About sixteen days after the bees will have a queen, and the colony is thus saved. This never should be done late in the fall after the bees have killed off the drones, as it would be impossible for the young queen to meet the drone for fertilization, and she would become an infertile or drone-laying queen. In this case a laying queen would have to be introduced. Some bee-keepers are much annoyed by millers lurking about the bee yards, and no wonder, because of the slipshod way they keep their bees. Some years ago I visited a farmer who kept a lot of bees in the woods. I tried to sell him my movable hive. He told me that the moths and millers had destroyed nearly all the bees in the hives were eaten by the millers except those hived before swarming. He said that he had lost the hives with a sight!—a boxful of bees in the evening and hundreds, tumbling down and putting me to wonder this bee-keeping business was going to in two years, at the best. I never saw a hive with moths and bees in your bee yard near the things we are doing when commencing to set up the bees.

#### Paper by

I am requested to be your spring manager until the apple trees are in full bloom. That be early in the month of May. Prepare bees for hiving in the first part of August of previous year. In the first place, select the best of all queens that you can get; they should be; and in the best colonies, the best of the best, regardless of whether they are not count with you or not. Secondly—About as soon as brood is set, we weigh all the stores and



bee yard and the old stand. I tried to sell him an individual right to use my movable comb frame patent bee-hive. He told me it was no use; the moths and millers would eat up and destroy nearly all his bees. He took me out to the bee yard. He told me all his hives were eaten up with the moths and millers except two hives. This was just before swarming season. I turned up one of the hives with no bees in, and what a sight!—a boxful of moths and millers. Millers flopping all around the beehives in the evening and into the house by the hundreds, tumbling into the lamp chimneys and putting out the lights. No wonder this bee-keeper said it was no use keeping bees. I have kept bees for fifty-two years, and never knew a swarm of the hive, and going to the woods when I was in my the back of the bee yard. I never had any colonies eaten for their queen up with moths and millers. Always keep motion around your bee yard neat and tidy. This is one remedy the queen is of the things we should look well after when commencing bee-keeping, and there will be no danger of moths and millers one of your best eating up the bees.

#### Paper by D. ANGUISH

I am requested to give my method of spring management. It may surprise a great many when I say that I have none until the apple trees come out in bloom, to raise young that be early or late. The time to days after the prepare bees for honey harvest is in July he colony is the end August of previous season. In the first place, I examine all of my have killed off a good young queens, and pinch the heads be impossible for all queens that are not what I think at the drone they should be; and requeen from my ould become the best colonies, the ones that have proved queen. In this be the best, regardless of color, as that ld have to be in bees not count with us. It is honey that eppers are much are after.

Secondly—About middle of September, as soon as brood is nearly all hatched their bees. Som at, we weigh all colonies to find out rmer who kept how much stores are required. Then we

feed up as rapidly as possible, so that each colony has nothing less than thirty or thirty-five pounds of the very best of food, for there is nothing too good for our bees, as we want to succeed with them.

Thirdly—In fore part of October we pack all of our bees away in cases holding four colonies each, taking off tops of hives and putting cotton or canvas quilts over frames and filling case all around hives with chaff or forest leaves to the thickness of about four inches, and eight to ten inches on top, and one or two in bottom, with passageway for bees to come out when weather is favorable. Then we give them a severe letting alone until the apple trees begin to bloom the following season.

Fourthly—Now we are coming to the time when there is lots to do, as our bees are getting quite strong, and they are wanting more room, and still in winter cases with clusters of bees hanging out of nearly every entrance. We now pull off our coats and set our smokers going to prepare for honey harvest, for we know that it is not far distant. We now take bees and hives out of winter cases, moving winter cases to one end of yard, leaving bees in groups of four, the same as they were standing all winter, all facing different directions. There is no mixing up, as there would be if they were all facing one way, and more bees can be placed on the same amount of land. As our bees have been wintered in a small hive, we find it necessary to put on one extra super or body, and let queen have possession of both. We clip all queens' wings also at this time. There is a period of a couple of weeks between apple bloom and clover when there is nothing to get. This is the time to do some stimulative feeding, as every egg that the queen is induced to lay at this season is going to be a honey-gatherer. As there are so many ways of accomplishing this, I will

not give our method at this time, but may do so in the future if desired.

#### Report of Winter Loss

We put into winter quarters last October one hundred and seventy-five good strong colonies of bees and five nuclei. All are alive up to date excepting one nucleus, and everything looks favorable, as the clover has wintered as well as the bees.

#### SOCIÉTÉ D'APICULTURE DE LA PROVINCE DE QUÉBEC

Mercredi le 5 février, mil neuf cent huit, avait lieu à St. Hyacinthe dans la salle de l'Hotel de Ville, une réunion d'un nombre assez considérable d'apiculteurs de la Province de Quebec, dans le but de se constituer en société.

Parmi les personnes présentes, nous avons remarqué messieurs : Chs. Péloquin, M.C.A., de St. Hyacinthe, et trois de ses fils, Pierre, Lionel et Joseph ; Onésiphore Fontaine, de St. Guillaume ; Hector Béland de Louiseville, Luc Coté de St. Germain de Grantham, Pierre Brouillard et Hormidas Fafard de Ste. Hélène de Bagot, R. T. Laroque de Notre-Dame du Bon-Conseil, Michel Dufault de St. Joseph de Sorel, Dr. A. O. Comiré et son fils Oscar de St. François du Lac, et un bon nombre d'autres.

Monsieur Chs. Péloquin fut élu président de l'assemblée, et A. O. Comiré agissait comme secrétaire.

Monsieur Péloquin expliqua alors à l'assemblée, le but de la réunion et sur sa proposition, il fut résolu unanimement :

1. Qu'il soit formé dans la Province de Québec, une société d'apiculture, qui sera connue sous le nom de La Société d'Apiculture de la Province de Québec et qui sera composée de toutes les personnes intéressées dans l'apiculture et qui deviendront membres de la dite société en payant au secrétaire, la souscription de une piastre par année.

2. Que le bureau de direction de la société, soit composé de neuf membres.

3. Que les personnes suivantes soient nommées directeurs, savoir : Mrs. Chs. Péloquin, Hector Béland, Théodule Cloutier de l'Islet, Napoléon Gaudet de St. Simon, F. W. Jones de Bedford, J. A. Camirand de Sherbrooke, Dr. L. J. Comiré de Yamaska, Michel Dufault de St. Joseph de Sorel, Onésiphore Fontaine de St. Guillaume.

4. Que Mr. Péloquin soit nommé président et A. O. Comiré, secrétaire-trésorier.

5. Que l'Honorable Jules Allard, Ministre de l'Agriculture, soit prié de faire passer, à la prochaine session, une loi pourvoyant à la formation légale des sociétés d'apiculture dans cette Province, une autre loi pourvoyant aux meilleurs moyens à prendre, pour protéger les apiculteurs, contre ce terrible fléau qu'on appelle LA LOQUE qui a fait son apparition dans la Province et qui menace de l'envahir toute entière.

6. Que copie des présentes résolutions soient transmise à l'Hon. Ministre de l'Agriculture.

A. O. Comiré, Charles Péloquin, M.C.A.  
Secrétaire-Trésorier. Président

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## INTEREST

(Translated)

### History and

The first s history and t France, and s useful in time of war they c swords into t

"Here are, from our local peremptory l ity of hives i owes its actus its present ex the legendary found it neces on this village, De Montbrun, attempt the d of the place stil arrows, the sto —nothing was the soldiers of At the end of t point of seeing through the bre habitants imme siegers full hive

"The latter, of the bees, wl wigs, flew at toj devil with thy h ming and, above panied them to So it was necess arms of the villa of bees at the : tower—ever recal its citizens.

"And again, so say many histe When in 1573 th lacked by the Hu renewed the same

## INTERESTING FRENCH ITEMS

(Translated by C. A. Procunier)

## History and Tradition.

The first selection is evidently on the history and tradition of the honey bee in France, and shows that bees are not only useful in times of peace, but also in times of war they can bravely carry their sharp swords into the battlefield.

"Here are," says the writer, "taken from our local traditions, two deeds which pre-emptorily bear witness to the prosperity of hives in this period: Mormoiron owes its actual name, and perhaps even its present existence, to bees. It is in the legendary times of noblemen, who found it necessary to renew their attack on this village, and were led by the Count De Montbrun, who was brave enough to attempt the demolition of the ramparts of the place still called 'The Brech.' The arrows, the stones, and the melted pitch—nothing was able to abate the valor of the soldiers of the Count De Montbrun. At the end of their resources, and on the point of seeing the enemies penetrate through the breach already open, the inhabitants immediately threw on the besiegers full hives of roaring bees.

"The latter, more sensible to the stings of the bees, which flew into their long wigs, flew at top speed, crying: 'To the devil with thy humming!' But the humming and, above all, the stinging accompanied them to their retrenched position. So it was necessary to adorn the coat-of-arms of the village of Mormoiron—a hive of bees at the summit of an embattled tower—ever recalling the remembrance of its citizens.

"And again, St. Romanet also owes, so say many historians, its safety to bees. When in 1573 this little village was attacked by the Huguenots, her inhabitants renewed the same tactics of defence of the

Mormoironnians. It is this which recalls the two Latin verses:

"Quis dubitet contra hæreticos a numine motas, Romani muros ut tuerentur, Apis."

"Who would be able to doubt that the bees were moved against the heretics by the Divinity, for the defence of the walls of St. Romanet?"

## Winter Preparations.

After speaking of exterior preparations and precautions, with which we are all more or less familiar, the author says:

"For the interior, one ought to be assured that the colonies have at least five or six kilos (equal to 11.024 pounds or 13.229 pounds) of supplies, and in case they have not, distribute a syrup of sugar, very thick, or sugar in bread just to concurrence."

## Wintering—Necessary Nourishment.

"If the bee-keepers who have read me, and have taken all the recommended precautions in autumn—if they have comfortably arranged their colonies, from the viewpoint of housing and feeding, they will be able to sleep soundly and await with confidence the springtide.

"In normal winters, having suffered from neither cold nor hunger, their hives will be ready in the nice weather to enter the campaign, and they will be happy, having followed the counsels based on the practical experience of many years.

"But there is no lack of carelessness in our confraternity, and I know many of them who, relying on the natural strength of the bee, will not allow in a sufficient degree the bare necessities to their colonies. If the cold is slight, the hives should pull out of the trouble, and come out a little late in the spring; but if the winter is either very mild or very cold, they will have to register total losses of many colonies. Many novices have asked

## REVIEW.

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Président



me why the colonies perish which are little provisioned when the temperature is very soft. Their question was not astonishing to me, for it is based on the idea, very true elsewhere in ordinary cases, that a living body has very much less need of nourishment (laden with the production of heat) in a medium temperature than in a cold air. Here, however, it is not the same. Really, when it is cold, but not too severe, the bees, clustered and, as it were, immobile, eat little; they maintain their heat as much by cohesion as by the nourishment they consume. Suppose, now, the temperature becomes very mild, the cluster scatters little by little, the bees go out of the hives in great numbers, and take an unusual amount of exercise, gaining an excellent appetite. Result—an increased consumption of food.

"The condition of colonies with little provision is not then so bright, and if one does not come promptly to their aid, one runs the risk of seeing them idle. It is very much too late for the giving of syrup. One ought to give to the poor hives a paste composed of honey, powdered sugar and a little flour. This mixture will not harden. In certain treatises it is recommended to give sugar on a plate, but I have rejected it after experience, the bees finding it almost inaccessible."

The Hurley Printing Co. would be glad to hear from any bee-keepers who may be in need of business stationery or labels of any kind. It is our intention to prepare a special label for ten and five-pound pails. We would be very pleased to receive a few samples of labels from those using them, in order that we may have a better idea of what may be required in this line. We can supply immediately letter heads, bill heads, envelopes, or anything in printing that you may need.

## WHAT SHALL BE DONE AT THE NEXT NATIONAL CONVENTION?

(By W. Z. Hutchinson, Secy' N.B.K.A.)

We have laid the foundations for the next National Convention. We have selected the city (Detroit) in which it is to be held, secured the Wayne Sun Parlor for holding the meeting, and decided upon the dates—October 13, 14 and 15. We know where and when the convention is to be held, and can begin to lay our plans accordingly.

The next step is the arrangement of a programme. Of course, the burden of this work will fall upon the Secretary, but he can be greatly assisted, and the convention made vastly better, by the help, hints and suggestions of the members. It is with this end in view that I am going to outline briefly what I have in my own mind, then, as is the case at a convention, when a motion has been made, we will have something "to talk to."

I would suggest that the first session be held in the evening and wholly devoted to a discussion of diseases of bees. I have made application to the authorities at Washington to send a scientist to the meeting, probably Professor White, who can take up the matter from a scientific standpoint, show how these diseases are studied by the use of cultures, and illustrate the matter with a stereopticon if possible. Then have some one of the inspectors tell how a practical bee-keeper can detect foul brood. He, too, might use stereopticon pictures in giving his description. Ernest Root has promised to furnish the stereopticon, if one is desired. Next, let another inspector give the best methods of treating diseases. Then wind up the evening by a general discussion of the subject.

Another feature that has been suggested to me is that of having at least one debate during each of the day sessions. I

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believe this is something that has never been attempted at any of the meetings of the National. Suppose, for instance, we take up the size of hives. Let us say: "Resolved, That a twelve-frame Langstroth hive body is more desirable, in the production of extracted honey, than an eight-frame hive body." Get some experienced, competent man to take the affirmative, and some other equally good man, who believes in the eight-frame hive, to take the negative; let these men be chosen early in the season, secure their consent to thus enter the arena, then they can have months to prepare for the contest, and we common folks can sit back and enjoy the "flow of words and the feast of reason."

As a rule, I think that most of our conventions are held down too closely to the steady grind of hard discussion, session after session, from beginning to end of the meeting. I think at least one evening session might be very profitably and pleasantly devoted to something in a lighter vein. I suppose that a banquet, followed by responses to toasts, would be in this line, but there are objections. First, the cost, which would not be less than \$1.00 a plate. This is not really serious, although there might be some difficulty in determining in advance how many would participate, so that preparations might be made on sufficient scale. It may be old-fashioned, but the real objection, in my mind, is the late hour at which we would be compelled to begin our responses. The regular supper would have to be out of the way before the dining-room could be used for spreading the banquet, which would require some little time. If we finished our feast at half-past nine we would be fortunate indeed, and it is likely that midnight would find most of us out of our beds. To persons accustomed to late hours this would mean nothing, but most of us beekeepers are plain country folks, accustom-

ed to early hours, and to be up half the night means extreme dullness, possibly a headache the next day. To attend a convention at some distance from home is more or less of a strain at best, and every precaution ought to be taken that the members should feel just as well and as bright as they possibly can, otherwise there is little enjoyment. My idea is that we cut out the banquet part, the feast at nine or ten o'clock at night. Just take our usual supper at the usual time, then meet at the usual time, 7.30 p.m., or whatever time we think best, and begin at once the responses to toasts or sentiments, finishing up at nine or ten o'clock; then the next day we will feel as well as ever, ready for business and discussions, and able to enjoy ourselves. I would suggest that eight or ten of our best speakers be chosen, and appropriate topics be chosen for each, early in the season, that there may be plenty of time for thought and preparation. I would announce the topics in advance, also the list of speakers, but I think I would leave it a secret as to which speaker each topic would be assigned, until the announcement has been made by the toastmaster. I think the speeches ought not to exceed ten or fifteen minutes—the right man can say a lot of good things in fifteen minutes.

Another feature for which I shall put forth my best efforts is to secure the greatest possible attendance of bee-keepers' wives. It may be just a little out of the line of bee-keeping, but I hope I may be pardoned for saying that, naturally, business takes men out into the world. A man has the incalculable advantage of a great variety of experiences and freshness of view. He is continually coming in contact with new people, new things, and being molded by a vast number of forces which never touch the wife in the quiet home. I believe most women feel this terrible depression of the monotony of their lives, the lack of that stimulus which

comes to man from constant change. Let us begin now to plan for the making of a big break in that monotony next October. There is a saying that good works and charity ought to begin at home, so I have secured a promise from Mrs. Hutchinson that she will accompany me to the convention next October. Then I secured a similar promise from my brother's wife. Then I wrote to a few near acquaintances, such as Manager France, President Hilton, ex-President Aspinwall, and asked them if they would bring their wives, and all replied that they would do so. My friend Muth of Cincinnati also writes me that he will bring Mrs. Muth.

I think I would have at least one good essay each session, then the debate, as already mentioned, and finish up with the question box, which I hope will be contributed to from all over the country, by those who are so unfortunate as to be unable to attend.

One other little point: As everything promises to be on a larger scale than usual, I have already made arrangements for the use of a camera that will take a picture 14x17 inches, and I hope to make a group picture that every member will be proud to hang upon the walls of his home. I shall see to it that each person in the group has a number upon the lapel of the coat, and a printed list giving numbers, names and addresses, will accompany each picture, then all can see who is who.

What I have written simply gives a glimpse of the programme in embryo. Nothing is definitely settled. I shall do my most to make the convention one of the most enjoyable, the best and most really helpful, that the Association has ever held, and I earnestly request every one who has any interest whatever in the matter to write me a letter full of advice and suggestions. Tell the subjects you would like discussed, and the persons you would like to have discuss them. Suggest

topics for responses to toasts or sentiments and the men you would desire to hear respond. Tell me what subjects you would like to hear debated, and the men you would like to hear do the arguing. If I have suggested something that does not please you, let me know, giving reasons why. Take hold, right now, and do your share in making the coming convention a grand success.

### BEGINNERS' DEPARTMENT

(By E. G. Hand)

"April is the month to let the bees alone," say the experts, and the beginner cannot do better than follow the rule, unless it be to add: "So is May, especially the first half of it." There is more injury done by tearing the brood nest open in the early part of the season, when there is no occasion for it, beyond a curiosity to see what is going on, than the beginner is aware of, or would think possible. Mr. Beginner, when you feel that irresistible hankering to "open the hive" in the spring months, remember that every interruption to the work of the colony, and every degree of heat wasted by the process of opening the hive, means a reduction in the returns to be expected from that colony this season. Of course you are anxious to see how things are going on, and to help them along if possible. Well, if you want to do the most possible to help the bees along, after you have ascertained on the first warm day that they have plenty of honey to carry them through until the clover blooms, and a good laying queen, let them alone. Instead of pulling off their cover and taking out the frames, leave the cover on. If you have to do something to the hive, put more covering on it, instead of pulling off what little they have. Then you may take a block or two of wood and close the entrance until there is just room for the working bees to go in and out without

crowding, a break, place thing else in such a position wind from g or blowing in note to a suc as much feed necessary, ar cannot be too they are raisi And remembe to take care many they ca better than y don't try any business. It the day that temperature up, J the cold of the all you can.

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crowding, and if there is no natural wind-break, place some pieces of board, or anything else that will answer the purpose, in such a position that they will keep the wind from getting a sweep at the hives or blowing in at the entrance. The keynote to a successful spring is, first, twice as much feed in the hives as you think is necessary, and then warmth. The bees cannot be too snug or too well fed while they are raising a "several small family." And remember, too, that they know how to take care of their babies, and how many they can take care of successfully, better than you or any one else does, so don't try any of this "spreading brood" business. It is not only in the heat of the day that they have to keep the temperature up, you must remember, but in the cold of the night as well. Help them all you can.

When I first began to take an interest in bees, I had an idea that the honey season commenced first thing in the spring and lasted right through until freezing-up time, and that the bees would store honey all that time if they were in good condition, or "strong," as it is generally called. A great many beginners have the same idea, for I have sometimes "dropped in" on neighbors whom I knew had just contracted the bee fever, and found that they had placed supers on some of their hives in April. They had the idea that, simply because the hive was full of bees (or because it looked so to their inexperienced eyes) that all they had to do was pile the supers on and get them filled. This is a wrong idea. The mere fact of a hive being crowded full of bees is no sign that they will store honey in a super. The point the beginner overlooks is that the supply of honey to be obtained by the bees in the spring is very scanty—seldom enough, except in very favorable weather, to supply the family needs of the hive, which, when a large amount of brood is being reared, are much more than the

beginner would imagine. Before clover blooms, which is usually about the first of June, the only time an average colony is likely to make any noticeable gain on its daily needs is for a few days during the height of fruit bloom, and any gain made at that time is very likely to be needed to carry the bees over a shortage in the flow, which usually occurs between the time fruit bloom ends and clover commences to bloom. On just one occasion have I known bees in this locality to store honey before clover bloom, and that was ten years ago this spring, when we extracted about one hundred and twenty pounds of dandelion honey from a few extra strong colonies.

Thanks, Mr. Editor and Mr. Byer, for all the bouquets. Permit me to suggest, however, that when you have more of the same kind to dispose of, you put them at each other. It were more appropriate so. And just a word of advice to the aforementioned Editor, and to all other beekeepers. If it should ever transpire that our friend of the Notes and Comments page should come your way for a day's fishing, when you hear him coming, run as fast as you can and charter Noah's Ark for his accommodation, for he is liable to disappoint you by refusing to take chances in any less "stable" craft. True, I persuaded him to risk his precious life in a neat little ten-ton skiff, but the way he kept watching the shore and mentally measuring the distance between himself and it made me almost wish it had been an Atlantic liner, so that his peace of mind would have been greater. Pity he hadn't learned to paddle his own canoe before embarking for life in a catamaran. All the same, though the fish were not biting the day we went down the river, we had some sport catching bait, and I hope friend Byer, the next time he happens up this way, will bring along those scissors with which he says he can clip a queen "on the wing," and prove himself



by practising the trick on a few grass-hoppers. He might find it an easier method of bringing them to his way of thinking than doing it a la Longboat. And I will try to arrange with some of the Sturgeon Lake fish to be on hand, good and hungry, so that our "green" friend, who has never had dealings with anything more formidable than a ten-inch trout, may see the sense of using "pig-hooks" to fish with.

### DIFFICULTIES IN THE WEST

(By Rev. Wm. Bell)

As I get your journal, and have for some time been on your complimentary list, I ought at least be willing to send you some occasional notes from this part of the country on my experience with bees. These you can cull out or publish, just as you please.

I was born in Ireland, and lived there for nearly twenty years, and as my father kept several skips of bees and managed them in the old-fashioned way—straw skips the year round, tin pans, brass candlesticks, etc., at swarming time, and burning sulphur in the fall—I in this way got my first experience with bees. I came to Canada in 1891, and from then till 1902 I might say I never saw a beehive. In the fall of 1902 I was living at Plumas, Manitoba, and made up my mind I would start a small apiary. I purchased four hives in the fall and lost one during the winter with mice. My neighbor took a great interest in these three hives when they were set out next spring. About the first of May we purchased eleven more and paid dearly for our experience, as the bees were weak and in bad shape. But, our experience being limited, we did not realize the true condition of affairs, and, the summer turning cold and unfavorable, things grew worse and worse. Instead of an increase of hives, by fall our plant was reduced from fourteen to ten. We

were not discouraged, however, so we put the ten in the cellar to winter, and fed them till spring of 1904. Two had died during the winter, so we had eight left. I put seven of these into one and destroyed the extra queens, and as the other one was strong, I had now two years' experience and two hives of bees. I might say that I had also a pretty badly discouraged partner and a great damper on my own bright hopes. Well, one hive gave me three good swarms this season, and the other one good one, so by fall I had six again, besides a small crop of honey. The next winter (1904-1905) I lost one in the cellar, brought four through and one poor one. My neighbor left me now, and left the country, so the bees fell back to me. In the spring of 1905 I gave \$90 for ten new hives, and launched forth again on my own hook. The season was favorable, so I had about fifteen hundred pounds of A1 honey and an increase of about one hundred per cent. in bees. In November I stored them all away, with lots of feed and in good shape, and next spring (1906) had twenty-nine hives. Spring dwindling reduced these to twenty-two. The summer of 1906 was hot and dry, and so a poor one for honey, but my bees increased to fifty hives. The hard winter of 1906-1907, however, made a bad job of these. My loss was heavy by spring. I had twenty-four colonies, and some of these very weak. I now changed my place of abode and took my bees with me to Abernethy, Sask. Last summer I had no increase, and practically no honey, but put away twenty-five colonies last fall in winter quarters, and now, while they are nearly all alive, yet I know I have many weak ones, and don't know how the spring may find me. My great trouble seems to be to get bees through the winter, and my great enemy, dampness in the hives. I have tried to winter with the bottoms on and with them off, with the tops loose

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and with them tight. Last fall I pierced each hive below the lid with a one-inch auger and put tin tubes in these, so that they turned up above back of hives, but still I find dampness almost as bad as ever. Here I have a first-class bee cellar, specially built, cement floor and walls, and so regulated by ventilators in the walls on the outside and also a heating pipe from the furnace in the adjoining room, and I am safe in saying that the temperature of my bee cellar did not vary more than three or four degrees all winter, and still I am afraid of the results. Another great trouble I find in this western country, where we have such cold, backward springs sometimes and practically nothing for the bees to gather, is spring dwindling. I have been using eight-frame, single-wall hives, and I don't consider them a success. At present I am getting an outside shell or double wall made for every hive that will leave a three-quarter inch air-space to be filled with paper or left without, at will. I think this will help, as neither the bright sun of a comparatively cold day, nor the cold of an ordinary night will have the same effect upon the bees if protected by a double wall.

I would be glad of news that applies to this country that will help me manage my bees in winter and in summer. Foul brood literature does not apply, as we have none, but spring dwindling and cellar wintering we are strictly up against. With best wishes to the Journal.

[We believe your difficulty lies in the excessive swarming you have had. In your cold climate and short season we do not think it wise to allow so much swarming. For example, your experience in the season of 1904—you say one hive gave you three good swarms. We fear a man of experience would say they were three "small" swarms. We cannot understand how they could be otherwise. We fear

your wintering results are traceable to this cause. Your swarms should be good and strong in the fall, and go into winter quarters with abundance of food. If they have not sufficient stores of honey (a condition most likely) they should be fed early in September or latter part of August with sugar syrup—two parts sugar to one of water. Spring dwindling is attributable to two causes—insufficient food, or lack of protection and insufficient warmth. If your locality is cold during the spring, the bees will suffer after being taken from the cellar, and more especially so if they are weak in numbers. Your cellar appears to us all right. We are of the opinion that the dampness is the result of a small cluster of bees in the hive, and their inability to maintain sufficient warmth. Your proposed outside shell will be a marked improvement, and you will find it a great protection in the spring—and this appears to be where your great trouble lies. Perhaps some of our readers with more knowledge of the western conditions than we are possessed of would kindly offer some suggestions that would be helpful to Mr. Bell.—Ed.]

#### DON'T GO IT BLIND

(J. B. Hall, in *The American Bee-Keeper*)

You wish something for your "Old Boys" edition of the *American Bee-Keeper*, and, as I suppose that I am included, being born in 1833, I will let your readers have something of my experience, and "don't's."

About two years since I cautioned your readers about going it blind for Caucasian bees, stating that I purchased two colonies of said Caucasians, May 24, 1884, and regretted doing so, and giving the reason why. But I think my caution was not heeded.

The inducement to me to purchase said Caucasians was that they were so "very

gentle." And I was surrounded by neighbors, so, not wishing they should be stung, invested thirty dollars in two nuclei.

Allow me to state that the season was a good one for honey. We took twenty-five thousand pounds from one hundred and ninety-eight colonies of bees. But those Caucasians did not store enough to winter on. I gave them combs of honey stored by other bees, and they proved to be splendid winterers in the cellar. I tried them the following season, and results were about the same. Their doom was pronounced, and I had to weed them out.

The "don't" I have to give to my apiarian friends now is, do not have anything to do with those African bees called "Punics," for my experience with them the past two seasons is more disappointing than my trial of 1884. (They were purchased for the same reason as the Caucasians—my neighbors.) These bees are called wonderful; so they are in many respects. A few of the ways are as follows:

Their disposition is all that any timid person could desire.

You need not have a tightly-made hive, for they will not fail to fill all openings with propolis and daub all the interior of their home with the same sticky substance—the stickiest propolis I ever saw.

Their wonderful brood-rearing may be all right in their native home, but with me it is a great detriment, as our honey flow ceases July 22nd. But said Punics keep on rearing both workers and drones well up into October, and by so doing use up all the store that should be retained for wintering.

For any one wanting plenty of swarms these bees should be satisfactory, as they beat anything I ever knew, also for the number of drones and queen-cells produced. In the season of 1907 a populous colony swarmed; and, not wishing any

more of their precious increase, I pinched the queens. Next day I opened the hive to take off queen-cells, and my assistant said: "Please, won't you count how many cells there are?" We counted one hundred and seventy-nine perfect cells, besides numerous others started. This record puts the Caucasians to the blush in that line.

Another wonderful thing is their capping of honey; they will not answer for the comb honey producers, as they cap right down onto the honey, making clover honey look almost black.

If any one sees these bees, he cannot mistake them for any other race, as they are as black as coal or the Africans from whose country they came.

I still say "don't."

#### INTERESTING GERMAN ITEMS

(Translated by Jacob Haberer)

##### Saltpetre

Like chloroform in the hands of a surgeon is saltpetre in the hand of a bee-keeper. He is compelled to perform certain operations on his bees. To make this saltpetre, get some calcium nitricum, dissolve in a little warm water; cut strips from an old bag, about 2x5 inches, and soak them in the solution; lay them on a board to dry, when they are ready for use. Put one of these rags in your smoker on top of the rotten wood. As soon as the rag catches fire it will burn up in a short time and produce a strong smoke and gas. By holding the nozzle in the entrance, the gas soon affects the bees, and after a short uproar they fall intoxicated on the bottom-board. It will be well to spread out the combs a little, so as to let the gas draw better through the hive. By shaking combs or hive a little, in a minute more you will have all the bees mo-

tionless on the main so for a minutes, but will be as live this process th ory entirely. You can put t and not a bee stand; they wi a new swarm. mer, will make as if intoxicat pain. In forn used in opera does not last l soon. With be give lots of air, not cause suffoc necessary to m ment, in some er than anyth throne-rearing co ng queen, pick saltpetre, add e queen, and even the old state is f wake as from ousekeeping af on of the old reatment; it ma heir stand, or istance, also in ractischer Weg

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## NEW ITEMS

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tionless on the bottom. They will remain so for about ten or fifteen minutes, but will soon recover again, and will be as lively as ever; but through this process they have lost their memory entirely. They start a new life. You can put them wherever you like, and not a bee will fly back to the old stand; they will start work again like a new swarm. This gas, if inhaled by men, will make them for a short time as if intoxicated and immune from pain. In former times it was also used in operations. This condition does not last long, and passes away soon. With bees, after two minutes, give lots of air, and the operation will not cause suffocation or any other bad results. Although it will not often be necessary to make use of this treatment, in some cases it will work better than anything else. In case of drone-rearing colonies (if a drone-laying queen, pick her out first), use the saltpetre, add a reserve nuclei or a queen, and everything is all right—the old state is forgotten, and the bees awake as from a dream and begin housekeeping afresh. Their recollection of the old stand is lost by this treatment; it may be used in changing their stand, or moving only a short distance, also in uniting colonies.—*Practischer Wegdeiser.*

### Railroad Blocked by Bees

Not very long ago, in Holland, a railroad was blocked by bees for several hours. In consequence of a slight collision, a car loaded with honey was damaged, and honey leaked from a few barrels on to the track. Very soon bees from a neighboring yard made work on the wrecked train impossible. Passengers who came to assist, as well as the station crew, had to leave the place, and the track could

not be cleared until darkness set in.—*Rheinische Bienenzeitung.*

### Eat Honey and Live Long

"If you want to live long, eat honey," is an old saying. Rev. Kneipp says: "It helps the old folks on the horse's back again." Indeed, honey takes a prominent place as food, on account of its heat and blood-producing nature. In olden times it was highly valued as medicine. Its food value is greater than that of meat, eggs or milk. P. Kalbeneyzer says in his "Apology" about the value of honey for men: "Pure, natural honey is, except milk, the healthiest nourishment, a strong preventative for numerous ailments, in sickness the most pleasant and best medicine, for convalescents a real life balsam, giving strength and health again. There is no other medicine that has in so many cases such a general good effect as honey, if used continually. It will not lose its nourishing and healing qualities, and no one needs to be afraid of bad effects otherwise.—*Rheinische Bienenzeitung.*

At the honey market in Berlin, Germany, from December 10th to 15th, only 600 pounds were offered for sale, and was sold at once, at 1½m. (35c) per pound, inclusive of the glass.—*P. Wegweiser.*

"I am much pleased in the decided improvement in the C.B.J., and wish you every success in the future."—*Almond Dulmage, Glenora, Ont.* [Thanks! Letters like this are very encouraging.—*Ed.*]

If any of our readers wish their *Bee Journals* bound up, we will be very pleased to bind them. The charge will be 50c. We have some of each month of 1907 left over, and will supply these bound for \$1.50.



### COMMENTS FROM A WISE OLD BEGINNER

As a beginner in bee-keeping is always seeking for knowledge, and a friend, knowing my dilemma, handed me the March number of the C.B.J. as a guide to the fountain of all knowledge, and after going carefully over its pages, I came to the conclusion that it is not a bad little journal at all for a beginner. My friend told me the Editor was always glad to hear from new bee-keepers as well as those old dyed-in-the-wool fellows, therefore I took the hint, and here I am. Looking at that beautiful frontispiece (I mean that fine residence of Mr. Smith), we think we see him standing at the right with Mrs. Smith and child near the centre. Long may they live to enjoy this beautiful home.

Page 85—Strikes me that Mr. Dickinson might find an odd dead bee among those fourteen hives if he looked a little closer.

That's right, Deadman, nothing like the truth, and let the people know you are not dead, but very much alive.

Surely it was enough to stuff the French down that fellow called Byer, without shoving German, Russian and Italian at him also.

And so the Grim Monster has visited another bee-keeper's home. Mr. D. Nolan has the sympathy of all the bee-keepers in his sad bereavement.

We are patiently awaiting York's and Root's comments on that Russian foundation (page 86).

Yes, Mr. Editor, it makes us sad when we read all the good things a man has done during his lifetime, after the coffin lid is sealed. Why not give us more about the man while he still lives—vide F. A. Gemmill article.

Again we notice that the dark shadow of Death doesn't confine itself to our Canadian homes alone, but has crossed the imaginary line and snatched from

the home of Mr. France his aged and respected father.

Right you are, Mr. Dadant, one queen per colony is enough for me.

Not so with me, Mr. Storer.

A Bee-keepers' Association for the Province of Quebec? Good! My prediction is that it will not be similar to the Ontario Bee-keepers' Association, but will lead it in the very near future.

Page 87—That's right, Byer, keep your knife sharp, even if you have to use an old scythe stone.

Page 93—Oh, how we do like to look at pictures, just the same as any other little boy! Well, Gemmill, how the years do roll by! We are getting there, all right, and we are sure to follow our venerable Father Langstroth one day.

We have passed over some well-written articles for very good reasons, but may take up some of them later on, with your permission, as we are in a hurry to catch the train for (page 115) the Norfolk Bee-keepers' Convention at Simcoe. Truly, the advice given by some in attendance was of great interest to us beginners; and now it is plain that we are all in favor of that resolution, of taking all the inspectors east of Northumberland County up to Norfolk County to stamp out foul brood there. The only trouble with the resolution is that it did not go quite far enough, and say Toronto, and not Northumberland. There should have been a rider added also to cut off all members east of Toronto. Mr. Editor, that resolution reminds me of the story about the good man when he called at the house of one of his flock and asked the head of the house to lead in prayer; whereupon the following prayer was repeated in loud clear tones: "God bless me, my wife, my son John—us four; no more. Amen."—

NOTES AND PICKINGS FROM A BEGINNER.

[This seems to be a wise old head for a beginner. If Mr. Byer and Mr. Han-

will take a fishing trip pleasure of i an old hand Byer? His c solution is ric of Norfolk wa within their did not comp is done. It's their say. F the grandest t age. We mus "Beginner." years of usef Grim Reaper

### PRODUCTIVE EXTENT

(By E.

Since the in honey extractor tion into Amer proportion of States has bee extracted. For free from comb honey and strai doth. This is ' same name still to the article re centrifugal force tracted honey : on the part of the production o several advantag principal reason more generally States than for found in the inc for taking and considerably mor put on the mark The ease with may be adultera the general publi for table purpose



will take a holiday this summer for a fishing trip down east, we will have the pleasure of introducing him. Seems like an old hand with a new glove on it—eh, Byer? His comment on that Norfolk resolution is rich. We fear the good people of Norfolk were ill-advised by a stranger within their gates, whose motives they did not comprehend. However, no harm is done. It's best to let everybody have their say. Free speech and discussion is the grandest feature of our British heritage. We must have some more from this "Beginner." We hope he has many years of usefulness before him ere the Grim Reaper cuts him down.—Ed.]

#### PRODUCTION AND CARE OF EXTRACTED HONEY

(By E. F. Phillips, Ph. D.)

Since the invention of the centrifugal honey extractor, in 1865, and its introduction into America, a constantly increasing proportion of the honey of the United States has been put on the market as extracted. Formerly honey was rendered free from comb by mashing full combs of honey and straining the liquid through a cloth. This is "strained honey," but the same name still clings, in some quarters, to the article removed from the comb by centrifugal force. The production of extracted honey requires much less labor on the part of the bee-keeper than does the production of comb honey, and it has several advantages over the latter. The principal reason why extracted honey is more generally produced in the United States than formerly may probably be found in the increasing demand for honey for baking and confectionery purposes; considerably more than half of the honey put on the market is used in this way.

The ease with which extracted honey may be adulterated has, however, made the general public skeptical as to its use for table purposes; glucose, cane sugar,

invert sugar, and other adulterants have been very extensively used, and are still used to some extent. However, the passage of the Food and Drugs Act of June 30, 1906, and the recent work of this Department in the inspection of the honey market, have resulted in much good, and persons who have openly adulterated extracted honey in the past are now generally obeying the law. While there is still some cause for complaint, the percentage of adulteration must gradually decrease. The effect of pure-food agitation cannot but result in great good to the honest honey producer and bottler.

The chemical detection of honey adulteration has been made more certain by the recent investigations of Dr. C. A. Browne, of the Bureau of Chemistry, and because of the improved methods advocated by him the detection of infringements of pure-food laws will be easier in the future. For a discussion of this work the reader is referred to Bulletin No. 110 of the Bureau of Chemistry, entitled "Chemical Analysis and Composition of American Honeys."

Some of the common practices of beekeepers are, however, open to serious question, and it is primarily to call attention to these that the present paper is presented. It is possible to treat pure high-grade extracted honey so that on chemical examination it would be condemned or called in question. In the past there has been some trouble in cases where chemists have declared honeys, to which nothing has been added, to be adulterated; part of the fault possibly lies with the use of poor methods by chemists, but not all of it. If a bee-keeper treats pure honey so that its chemical composition is changed, it is no longer honey, and should not be sold for such. Several of the most widely circulated text-books on apiculture advocate very questionable practices.

There are several text-books giving detailed information as to the production and care of extracted honey. It is not the purpose of this paper to replace these, but to point out the main principles to be observed, and especially to call attention to a few points which do not seem to be understood by the majority of honey producers. Many details which are apparently unnecessary in most cases are omitted, since the writer believes that each bee-keeper must find out many minor details in his own experience, and less important phases of the work may better be learned from other sources.

#### The Advantages of the Production of Extracted Honey

It is not the purpose of this paper to advocate the production of extracted honey as preferable to that of comb honey, nor would it be at all desirable to have the production of fancy comb honey diminished. For the benefit of the honey market, however, it could not result in anything but good were the poorer grades of comb honey to be sold as extracted. The discolored ("travel stained") and irregularly or partially capped comb honey found on so many markets is a poor advertisement for the bee-keeper who tries to produce a fancy article.

The production of extracted honey means considerably less labor for the bee-keeper and also less work of certain kinds for the bees, for it is not necessary for the latter to secrete so much wax. Since it takes several pounds of honey under most conditions to produce one pound of wax, the surplus per colony is greater with extracted honey than with comb, but this is compensated by the fact that comb honey of equal grade universally sells at a higher price.

In the production of extracted honey it is much easier to control swarming, since the brood chamber is not contracted so

much and the queen has an opportunity to work to her maximum capacity. On the other hand, the colony is usually stronger, with more field bees; this is probably a large factor in the increased amount of surplus obtained from a colony run for extracted honey.

When the honey flow begins, the bees can at once commence to store honey in extracting combs, provided the bee-keeper is careful to put them on in time, but in comb honey production it is first necessary for the bees to secrete a considerable quantity of wax before there is room for honey in the surplus boxes or sections, and honey is consequently stored in the brood chamber; if much honey is stored here, the queen is cramped for room to lay. The novice at extracted honey production should be careful not to extract so much of the honey in the hive that the bees will not have enough to live on. This is a very common error until the bee-keeper is taught by experience how much to extract. It is better to extract too little than too much.

#### Method of Producing Extracted Honey

##### THE HIVE

The hive used for extracted honey production should be at least as large as ten frames. However strongly the advocates of eight-frame hives or even smaller ones may urge the advantage of a contracted brood chamber in order to crowd the surplus honey into the upper stories, certainly these small hives have little place in the production of extracted honey. The queen should have at least ten frames for brood-rearing, if the bee-keeper is to expect the maximum results. The use of large hives is up held by the practice of the largest and best extracted honey producers of the United States, and the small hives have small sale among extensive producers.

#### BROOD

In the production of extracted honey, if the honey flow is full, the gathering of the brood normally increases the honey flow, especially but this brood producing honey it may be desirable at the beginning of the queen or even brood. On the other hand, it is not possible to see to it that the flow is not too intensive for several weeks. The flow is expected about by stimulating the cautious spreading of this procedure. A careful study of the necessary before production.

T

Before, or just beginning of the honey flow, it is exactly similar to that of the comb honey. It should be given to the bee-keepers put on in a ten-frame hive with a ten-frame brood chamber so that the surplus honey is stored in the upper stories. The thickness of the comb is not so great as in the case of the comb honey, but the same time it is necessary to secrete some wax. The queen's secretion is very important in the production of extracted honey, but probably wax is secreted in greater or less quantity during the honey flow, and the wax is saved to the frames of the hive. As the frames of the hive become filled, the honey is extracted at once and

BROOD MANIPULATION

In the production of honey, either comb or extracted, it must be remembered that if the honey flow is short, only those bees which are fully developed at the beginning of the flow are of any value in honey gathering. The amount of brood reared normally increases at the beginning of a honey flow, especially with Italian bees, but this brood is rarely of much use in producing honey gatherers. In many cases it may be desirable to retard brood-rearing at the beginning of the flow by caging the queen or even by removing frames of brood. On the other hand, it is advisable to see to it that brood-rearing is extensive for several weeks before a honey flow is expected. This may be brought about by stimulative feeding and by the cautious spreading of brood in the colony. This procedure usually pays well. A careful study of locality conditions is necessary before planning operations of this nature.

TIERING

Before, or just at the time of the beginning of the honey flow, a hive body exactly similar to the brood chamber should be given to the colony. Many bee-keepers put only eight or nine frames in a ten-frame hive body used as a surplus chamber so that the bees will build thick combs. Since in uncapping the honey the comb is cut down to about normal thickness, this gives a place for the immediate storing of surplus honey, and at the same time permits the bees to secrete some wax. The physiology of wax secretion is very imperfectly understood, but probably wax is always secreted, to a greater or less extent, during a heavy honey flow, and by spacing wide this wax is saved to the bee-keeper. As the frames of the second hive body become filled, the honey may either be extracted at once and the frames returned

to be refilled or an additional hive body full of frames may be put directly over the brood chamber and below the first surplus body. Bees go unwillingly through combs of sealed honey to empty combs higher up, but the new combs should be between the first two hive bodies. The reasons for tiering up hives rather than immediate extraction will be discussed under the heading of "Ripening honey." This operation may be continued as long as room is required, and the bees should never be unduly cramped for room. On the other hand, it is usually not desirable to give too much room at one time for surplus, for the honey may be spread over all the combs, and, as a result, the cells capped when not drawn out well. It is sometimes desirable in the early part of the season to give only two or three frames for surplus at first, gradually increasing the number as necessity arises. This is particularly the case in uncertain weather or in a light honey flow.

When the surplus combs are first put on, one or two frames containing brood with the adhering bees are frequently placed in the second story and empty frames put in their place in the brood chamber. By this means the bees at once get into the second story, and this manipulation is a very desirable thing where brood frames are used for extracting. When only clean combs are used, these brood frames may be returned to the brood chamber in a day or two, for by that time they are usually no longer needed. Of course, care must be taken not to lift the queen to the second story above the perforated zinc.

Some bee-keepers prefer the use of shallow extracting combs of a depth about half that of the ordinary brood frame. The advantage of such a size of frame is, briefly, the possibility of putting on a smaller amount of storing room at one time, in consequence of which the honey

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is capped over in a better manner. In other words, the forcing methods of comb honey production are carried over into the production of extracted honey. It would certainly be unwise to recommend or condemn this system in general, for its use should be governed by local conditions of the honey flow. In this case, as in many others, the maximum results may not be expected without a careful study of local conditions. Bee-keepers talk a great deal about "locality differences," and, as generally used, the term "locality" is only an excuse for a lack of information as to the true cause of various observed facts. It is nevertheless most true that there are scores of local differences which are great enough to bring success or failure, according as they are studied or neglected.

#### PERFORATED ZINC

The use of a perforated zinc queen-excluding board between the brood chamber and the surplus bodies is gaining in popularity. Without this zinc the queen is likely to go into the second storey, or even higher, particularly toward the close of the season. Some bee-keepers prefer to use combs for extracting which have never been used for brood, and if this plan is followed the perforated zinc is absolutely necessary. Honey extracted from dark combs which have been used for brood is darker in color as a rule than that produced in combs which have never contained brood. This is doubtless due to the fact that a certain amount of the larval skins and larval excreta which are packed at the bottom of brood cells becomes dissolved in the honey. These deposits in the cells are usually spoken of as "cocoon," but certainly only a small part is really the silk of the cocoon. If this really were merely a cocoon, no possible objection could be made to the use of brood combs for extracting.

It would probably do little good to advocate the universal use of only such combs as had not been used for brood-rearing in the production of extracted honey, but a strict regard for cleanliness would most assuredly demand it.

#### REMOVING HONEY FROM THE HIVE

Honey should not be taken from the hive until fully "ripened." When the time comes to extract, the frames should be lifted from the hive and the adhering bees shaken or brushed off. They may be brushed off with a regular bee brush, many styles of which are manufactured or a bunch of grass or weeds will usually answer as well. The only advantage of a regular brush is that it is always ready for use.

If the honey flow is over or the bees are hard to manipulate on account of their stinging, a tee escape is desirable. The escape is so arranged that the bees can pass down to the story below with comparative ease, but cannot get back. Within a few hours the upper story is cleared of bees and the frames of honey may be removed easily. If the queen is in the upper story, however, as she may be if no perforated zinc is used, she will not desert the brood, and there will still be bees on the combs. Escapes may be put on by quickly lifting the upper story and inserting the board the evening, and by the next morning the upper story will usually be entirely clear of bees.

After the combs are removed from the hive, they should be kept covered so the bees in the air will not begin to re-examine. The manner of carrying them to the extracting room will depend on the number of combs to be carried and the arrangement of the apiary. Tin buckets holding five combs at a time may

used; an extra with a handle entire hive body cart or otherwise

#### THE EXT

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#### LEGISLATION

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#### Every Man's Pro

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used; an extra hive body is often fixed with a handle and cloth cover, or the entire hive body may be carried in on a cart or otherwise if it is free from bees.

THE EXTRACTING ROOM

The place where the honey is extracted should be so arranged that no bees can enter it when attracted by the odor of the honey. The windows should be so built that if some bees do enter they can easily get out through bee escapes or frames so constructed that no other bees will be able to find the opening. Bee escapes may be used, but usually a bet- ter plan is to have the windows covered

(To be Concluded)

LEGISLATION FOR BEE-KEEPERS

(Continued from Page 132)

keep the disease until all fine apiaries near them would get ruined. I then moved that the clause making the inspector the sole judge be restored. Mr. B. Hall promptly seconded my motion, which was put and carried.

Every Man's Rights Should be Protected

I noticed a little movement to try and the inspection work stopped in the western part of the Province. I was surprised at this, and cannot believe for one moment that a motion of this kind would carry in any bee-keepers' convention if they had known the number of diseased colonies that I found in Eastern Ontario. I found foul brood apiaries in the Counties of Hastings, Prince Edward, Carleton and Prescott. Several of these were about the worst lot of foul brood apiaries that I ever examined. I received samples of diseased combs by mail time after time down there. I cannot think it right for any man to go around trying to get things made when everything is working right.

GERRYMANDER

Permit me to say that the action of the Norfolk Bee-keepers in memorializing the Department of Agriculture to "cut off the apiary inspectors" seems not only iniquitous and unjust, but is the basest kind of a gerrymander. In ordinary gerrymandering some are hived with Grits and some with Tories, but the Norfolk apiarists "go a ten or so" better, and simply annihilate our inspectoral district or blot it out altogether. Their plea that there is but little foul brood east of Northumberland (see March number of C.B.J. (page 115) is not sufficient reason; it is hardly an excuse. There certainly is too much foul brood, and but for our inspector there would have been more.

Again, if there is but little, now is the time to stamp it out and totally eradicate the evil.

If there is need of more inspectors in Western Ontario, by all means let them be appointed. The Provincial treasury is surely not deplete, and the Department is not too poor to combat this foul brood evil without discriminating against our district.

We fear that there are other reasons for this untoward resolution, and hope that there is no glare of a green eye beneath the purple attire of King Economy.

FAIR PLAY.

Leeds, April 10, 1908.

[The above reached us just as we were going to press. Fortunately, we were able to make room for it.—Ed.]

Mr. D. Meuser writes: "Bees here had a good cleansing flight on March 12th, but none since. All were living at that time, but it is too early to say much about them. We will at least hope for the best, and look for a good season."

Try a small ad. in the Want and Exchange column. It will pay you.

## Letters to the Editor

### THAT NORFOLK RESOLUTION

Dear Sir,—It was with considerable surprise, and also indignation, that the writer read that marvellous and nervy resolution in the March C.B.J. that was passed by the Norfolk County's Bee-keepers' Association, viz.: "That they earnestly solicit the Minister of Agriculture to cut off the foul brood inspectors east of Northumberland County, and that more be appointed for the West." I presume around Norfolk County. Note that word "inspectors." You would imply that we are fairly loaded down here with inspectors, when, as a matter of fact, we in the East have just **one solitary inspector** for the thirteen counties in the territory alluded to. Not much territory, that, for one man to cover in one season! Where did the idea originate that there is little or no disease in these thirteen counties? Certainly not from Mr. Holmes; for he, nor no other man, could investigate 25 per cent of the apiaries in these thirteen counties in one season. Yet, forsooth, after **one** season's work they would call off our one inspector and appoint another in the West. Surely the originator of this resolution is not a bee-keeper, or else he must have given the matter very little thought. Wonderful Provincial protection this would be! What if there is not much foul brood in the eastern part of this Province? All the more reason why our inspector should be left with us. If an infectious disease, such as diphtheria, breaks out in a few families in any of our towns, do our health officers say: "Oh, well, there is not very much of it. I guess we will let it go just now till it gets worse, and then we will centre all our energies on it." Do they not rather use every means in their power to curb it and prevent it spreading? And I hold, Mr. Editor, that the same means should

apply in the case of the disease known as foul brood. I hope, sir, that the inspection for this district will be left as it is, at any rate till we are absolutely sure that there is none of the dread disease left.

A. A. FERRIER

### NO LADDERS

To the Editor of C.B.J.:

I noticed a valuable article from the pen of George W. Strangways, of Elora, headed "No Ladders in This Yard." I read it with much interest, for that is just how my yard is run, and has been for the past five years. His plan is somewhat the same as mine, only I use a box instead of a pail and a pole, say, about twenty feet long, with a small pulley attached to the top, and a quarter-inch rope double the length of pole, with a small snap to one end, and the rope over the pulley at the top of pole. The box is made of very light material and long enough to take one comb in the centre and an entrance the same as the hive and a bail at each end to take the end tip off. The cover is left loose, so it can be lifted off and placed on top of the hive already on the stand, minus one comb. Now here is the course of my procedure. When a swarm issues and flies about for a little, I take the pole and snap the small snap in both bails and pull the other end thus raising the box up to the bees, and wind the rope around a five or six-inch wire spike driven through the pole at convenient distance from the ground, and hold the box there. The sooner the box is up to the bees the better. I have never failed in a single instance to get them this way in five years. When the box is thus placed, if you have anything else to do, go and do it; if not, hunt a nice comb place to sit or lie down for a few minutes till the bees go in; then go and loosen the rope and let them down steadily, and unsnap the rope and carry to

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hive, as mentioned above, and strip the top and lift off the cover with all the bees that will adhere to it, and place on top of the combs. Then lift the comb out of the box and put in the empty space above mentioned. By this time the bees will have about all run down from the cover. Remove it, and place the quilt on, and by the time this is done put the cap on, then shake the balance of the bees on a board two and a half or three feet square placed in front of the hive, and the work is done. The queen is almost sure to be on either the comb or cover, most likely on the comb.

GEO. ROGERS.

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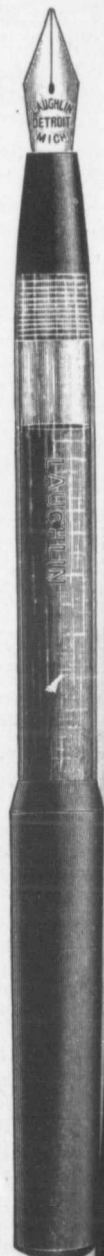
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