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The Canadian Bee Journal

Devoted to the Interests of Bee-Keepers

Vol. 17, No. 3.

March 1909

\$1.00 Per Annum



MR. J. L. BYER AND FAMILY

That Pile of Old Combs

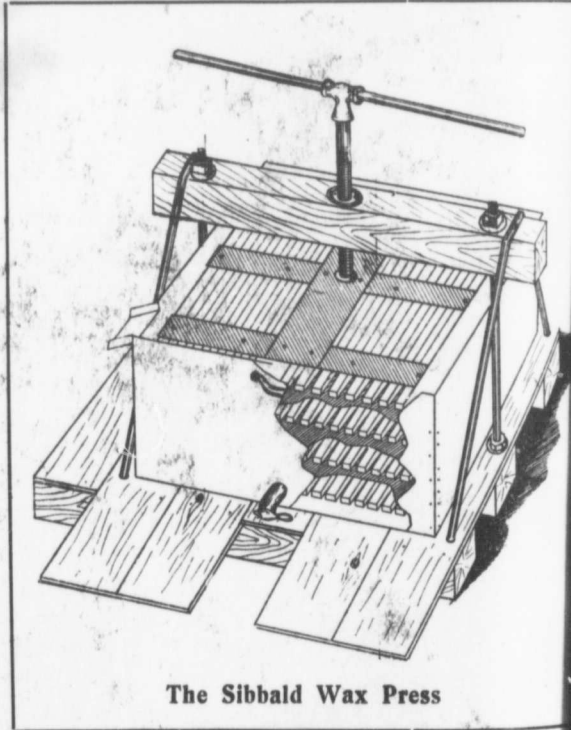
THE Honey Season over, and the bees snugly packed away for the Winter, the Bee-keeper will be able to turn his attention to the accumulation of old and broken combs in the honey house and other places. To the careful Apiarist this accumulation represents so much extra cash over and above his honey crop, and will be treated accordingly. He uses a Wax Press, of course—the latest and best.

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The Canadian Bee Journal

Devoted to the Interests of Bee-Keepers

JAS. J. HURLEY, Editor

Published monthly by
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Brantford, Ont.

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Vol. 17, No. 3

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Mar. 1909

The Canadian Bee Journal

PUBLISHED MONTHLY

JAS. J. HURLEY, EDITOR, BRANTFORD, ONTARIO, CANADA

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Vol. 17, No. 3.

MARCH, 1909

Whole No 529

A strange pathological problem was brought to our attention recently. A bee-keeper who is a personal friend of the writer, and for whose reliability we can vouch, says that his wife cannot handle section honey—not even to sell on the market when there with other farm produce. It appears that the handling of it immediately affects her hands, face and eyes. The hands break out in a rash; the face round about the eyes becomes similarly affected; the eyes shed water and grow dim. She can extract honey—that is, she can uncap it and work about the extractor, but the moment she handles comb honey exclusively the above symptoms present themselves at once. She describes the affection as being somewhat like salt rheum. She is positive the affection occurs only when handling comb honey, and has experienced it several times. What can be the cause of a cutaneous affection of this kind arising from the handling of comb honey? The matter is entirely new to the writer, but perhaps some of our readers may know of other like instances. Dr. Bohrer somewhere says that the poison from the sting of the bee is upon the capping of the comb. We paid little attention to this when we read it in a recent discussion he had with Dr. Miller in A.B.J., but now we are willing to sit up and do some thinking. There is a cause—what is it?

* * *

The British Bee Journal announces the death of Mr. W. Broughton Carr, known to readers of that journal as "W. B. C." Mr. Carr was an associate editor of the A.B.J. He occupied a very distinguished place among British bee-keepers, and his death is much regretted.

At the recent convention [O.B.K.A., Ontario] "almost all, if not all, the inspectors stated that they had found more disease than they expected. One inspector had found 41 per cent. of the apiaries he visited diseased." This is a very serious indictment. It would almost read to me as if the system followed has a weak point, and, personally, I hold strongly the fault lies in the fact that simple shaking is depended on as a cure. We in this country would never trust to this alone. Every hive where the disease is even suspected should be thoroughly cleaned and conscientiously disinfected before being again used.—D. M. Macdonald, in British Bee Journal.

We entirely disagree with you. The difficulty does not lie with the method of shaking. This has long since been proven to be a success. Its existence to such an extent as above indicated lies rather in the entire absence of any treatment. With the appointment of more inspectors and the greater efforts to search it out, its existence has been more thoroughly disclosed. Its existence in many places was entirely unknown to the owners of the bees. If the shaking method (the McEvoy method) is properly applied the cure is most effective and thorough and renders disinfection not only unnecessary, but entirely useless.

* * *

We had the pleasure of a call a few days ago from Mr. Isaac Balmer of Burlington. He reports wintering conditions good. His bees are outside. Mr. Balmer raises his own queens. He first buys a very select queen and then breeds from her. He impressed us as being a very able bee-keeper, and we regret that time did not permit a more extended interview. Read what he says in another column.

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A subscriber writes us as follows:

"Yes, the C.B.J. has improved greatly, but has still one fault—it does not come often enough. It should be semi-monthly. You know, I look forward to the time when our one Canadian Journal will out-rival the best of the American bee journals. Another improvement I would suggest is that you use the printed address labels, with date subscription expires, so that subscribers can see at a glance when subscription runs out. Then, I think it would be interesting if you would give a write-up of the apicultural lives of some of our foremost bee-keepers, describing their system of management, hives used, etc., with cuts of apiaries, if possible. You know it would help us beginners to get acquainted with them, and possibly to avoid some of their mistakes. Wishing you success in your march forward, I am, etc."

That is certainly an ambitious program, and one which we have in view. But Rome was not built in a day, sir. There are perhaps five or six thousand bee-keepers in Canada. If we had one-half of them as subscribers we could do all of the above, and more. But it takes money to publish a Bee Journal, and during the last year it has taken more than we received. We are simply gambling on the future. The response that we have been receiving thus far has been most encouraging, but there will have to be a most decided improvement in the support of our Canadian friends before we can attain to your ideal. Printed labels bearing the expiring number will be adopted soon. We thank you, however, for your kind interest and valuable suggestions, and have much pleasure in giving them to the public, in order that it may comprehend the task that lies before us. Some of our friends allowed their subscriptions to expire at the end of 1907. This year we notified them of their arrears. Some remitted promptly and with pleasure. Others found fault because we did not notify them last year when their subscription ran out. Others have not yet replied. We did not care to press our friends last year, for fear they might think we were unduly pressing them. We preferred to give them

their own time to remit. Some have misconstrued our kind intentions. Our readers will, no doubt, take a hint from this, and not make it necessary for us to perform an unpleasant duty in reminding them of arrears. It is doubly unpleasant to us when it is found that it is unpleasant to them.

* * *

Mr. Sibbald's address to the recent Brant Convention appears in another column. He very ably sets forth the advantages to bee-keepers in cultivating their local market. If this were done to the extent it should be, the consumption of honey would be very much increased. And be it remembered that price is always determined by the strength of demand.

* * *

"These little things have more to do with success in bees than luck." Friend Alpaugh was not placed in Eden for nothing! In his short article of this issue he talks a heap of common-sense. A little artificial pollen and abundance of water placed near the bees in the early spring will, beyond the peradventure of a doubt, save the lives of thousands of bees. Thoroughness in any business is simply another word for close attention to all detail, however small. Water in the early spring is one of the great requisites of the bee, and it is much better that they be given the pure article near at home than to be allowed to wander off and get it from barn-yard drainings. This is no bit of imagination. We have seen them working in just such a place, and taking up water that we would ordinarily consider very unclean.

* * *

We would advise caution in the removal of bees from the cellar this spring. We know nothing about the weather that is to come, but we believe the indications are that spring will be somewhat backward, owing to open winter we have had. The last week of March and the first week of April may be very rough and cold. After that the removal of the bees may be done with safety.

I want to subject—when bee-space at Chalmers' O. ber of C.B. above, and good men—agree with t ever, who do tion in Chi World's Fair There was a course," but low the fram such a differ many things supers are all the frames, an that if I had t have the same I will give y them this way after both side want you to de In the first above the fram a specially-cons allow for a bee-space belo "In a pinch" an —or two, if on does for a botto Again, when so pers with a bee place does, where you have to set will be killed frames. Even wh shaken from fram lest some are over untimely end in t when top bars of of propolis or bu easier and better d is below and top the top of the h obvious. Again, wh touch the sides of

BEE-SPACE ABOVE OR BELOW FRAMES—WHICH?

I want to have a debate on the above subject—which is preferable, to have the bee-space above or below the frames? In Chalmers' Observations in February number of C.B.J. we are told to have it above, and I know that there are many good men—yes, a great multitude—who agree with this. There are some, however, who do not. When at the convention in Chicago, at the time of the World's Fair, this question came up. There was a prompt reply, "Above, of course," but immediately after, "No, below the frames." Why is it there is such a difference of opinion regarding so many things apicultural. My hives and supers are all made with the space below the frames, and this is one of the things that if I had to begin over again I would have the same.

I will give you my reasons for having them this way, and then, Mr. Editor, after both sides have had their say, I want you to decide.

In the first place, when bee-space is above the frames, you must always have a specially-constructed bottom-board to allow for a bee-space below, whereas with a bee-space below any flat surface does. "In a pinch" any board, if long enough—or two, if one is not wide enough—does for a bottom-board.

Again, when setting down hives or supers with a bee-space below, any old place does, whereas with bee-space above you have to set them just so-so, or bees will be killed under bottom bars of frames. Even when bees are brushed or shaken from frames care has to be exercised lest some are overlooked and come to an untimely end in the same way. Again, when top bars of frames require cleaning of propolis or burr-combs, it is much easier and better done when the bee-space is below and top bar comes level with the top of the hive. I think this is obvious. Again, where end bars of frames touch the sides of the hives the bees

have a better opportunity of "sticking them tight" when the bee-space is above the frame. I know the top bar should not touch in this way, and I would not tolerate a hive that permits this, yet we know that most of them—or, shall I say, many of them—do. No, no. Give me a hive with bee-space below the frames, although friend Chalmers and a host of other men possibly as good prefer the other. I am open to conviction, however.

Until that man Chalmers began his Observations I thought we had most things in common, but I discover there is another thing we differ on. It is that all-zinc queen-excluder without any framework. I want a queen-excluder that is easily handled, always has a bee-space, and never gets out of shape. It seems to me that the wood-zinc queen-excluder is the only thing that can fill these requirements. I know that in this matter also there are many who think as does friend Chalmers. I would like to see this question debated also.

On "How to Serve Honey" our mutual friend is not "far astray." To accomplish much good this educational process should be conducted through other papers than our bee journals. Could not something be done along this line? It would tend to advertise our goods, and at some time may induce some to know more about this by practical experience.

G. A. DEADMAN,

Brussels, Ont.

[We like a bee-space at the bottom, but in no case would we dispense with the bee-space on top. With a bee-space on top the bare sheet of excluding zinc can be used, and, judging from our experience of the last two seasons, we would prefer it. It is more useful in the long run. If it has the wood frame its period of usefulness is shortened; the frame soon goes to pieces, and then the zinc is too small to be of use. Mr. Deadman raises two nice points, and we hope they will be thoroughly discussed.—Ed.]

Have you renewed your subscription to the C.B.J.? Do not wait for us to notify you.

**WHICH WILL GIVE BEST RESULTS?
Feeding Up in October on Foundation, or
Giving Sound, All-Capped Stores?**

[By Wm. McEvoy]

The sound, all-capped stores will give best results every time, and cost less money. Mr. Byer reported through the Canadian Bee Journal for February that my method of treatment for curing diseased colonies of foul brood in the fall had failed to cure his colonies. How could it fail if the honey in his combs was sound and all capped? I positively declare that it would be impossible for it to fail, because the bees would not have any place left in the all-capped stores to hold any of the diseased honey which they took out of the old combs, and after the bees consumed the honey they had in them the cure would be complete. I get more or less foul brood colonies cured in many apiaries every fall, and where the people are old and their sight is poor I go back in the fall and do the curing myself.

This fall treatment of mine is the simplest, cheapest and by far the best ever offered to the public. I have followed this fall treatment of mine since 1875, and made perfect cures in every case, and never in all my long experience did I have a single failure. I have treated hundreds of colonies in my time by shaking the bees off diseased combs and giving all-capped stores in the fall. Mr. Byer says that it is very difficult to get all-capped combs. Oh, my, no! It won't be if people will only follow my instructions—and this they should do—and get the combs all nicely capped right down to the bottom of the frames—a thing that any man can do for very little cost by placing Miller feeders with sugar syrup in on brood chambers about the last of August, when the hives are pretty full of brood and the outside combs pretty well filled with honey, the bees will rush the syrup into the remaining space in the outside combs and will cap every cell right down to the bottom of the combs, and when this is done each of the fed col-

onies can spare the outside combs, and in evenings in October fine cures can be made by shaking the bees off diseased combs and putting in six combs all sealed, which have been fed up for this purpose, and then put in the division-boards, and in the spring take out the division-boards and put in the full set of brood combs. These colonies with choice stores and plenty of pollen in their combs to keep up brood-rearing will come into spring in booming condition.

The colonies fed up in October on foundation (which cost more to fit up) will fall behind at brood-rearing through not having enough pollen in their combs, and by the middle of spring will be weaker in bees than my colonies which had plenty of pollen in their combs. For several years I was given bees in the fall that were short of stores. I shook the bees into empty hives and brought them home. I filled some of these hives with old empty combs that had a good deal of pollen in, and in other hives I put new white combs that had no pollen, but had some honey. I then fed all until they had plenty of stores to winter them. About the first of April I found more or less brood in all the colonies that had pollen in their combs when I fed them in the fall. But those that I fed on the new combs with no pollen in had no brood in any of them. I took combs from other colonies that had pollen in, and put one comb in the centre in each colony that had no brood. This started brood-rearing at once in all these colonies, but they had been too long without pollen and fell behind my other colonies that went into winter with plenty of pollen in their combs. For many years I left the supers full of sealed combs on my colonies until the season closed, and in the fall took the combs out of the brood chambers and put in plenty of these all-capped super combs for winter stores. In several colonies I put in new super combs with no pollen in, and had to put combs with pollen into these colonies in early spring before I could get brood-

Mar. 1909

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rearing started. I have myself during the last thirty-three years cured hundreds of colonies in the fall for the bee-keepers of Ontario without a single failure, by shaking the bees off diseased combs in October and giving them sound combs of all-sealed stores. For fall treatment I recommend this plan, because I know from many years of experience that it is the cheapest and best ever given for curing diseased colonies in the fall and bringing them into spring in booming condition.

When on my rounds through the Province in 1890 I inspected apiaries in many places where the starvation methods had been practised, and for cruel treatment it proved to be one of the most killing things that the bee-keepers ever tried. The bees were to be starved until some of them began to drop, and then put in hives and fed up on foundation. The bee-keepers, not being judges of how much starving the bees could stand, left them too long in prison without food, and when they went to see them found them all dead. This was the general condition that I found things in in 1890 where the starvation treatment had been tried. Some men had sprayed the combs with acids until they smoked, and as soon as they were used foul brood broke out again. Others had fed medicated syrups, and they also failed. After all these other "cure-alls" had been tried, then the formalin drug was trotted to the front to drive the disease out with gas. Did it do this? No. It proved itself to be one of the greatest failures ever tested. I have taken all the drug methods, and all the cruel starvation treatments, and quietly and tenderly and carefully placed them side by side in the graveyards of the world, and now my methods of treatment for curing apiaries of every kind of disease are followed by the bee-keepers of every land. When at the Detroit convention I was surprised when I heard Mr. Byer speaking in such alarming ways about black brood, which he considered almost incurable, and said that he was not so sure as to the McEvoy treatment

being as effectual with European foul brood as it is with American foul brood."

I have cured many colonies of black brood and know that my methods of treatment will cure it every time. Mr. W. D. Wright, Altamont, N. Y., who is an inspector in the black brood district of New York, gets the diseased apiaries cured of black brood.

Woodburn, Ont.

Columbian Wyandottes

[By J. C. Montgomery, Brantford, Ont.]

One of the latest additions to the American standard of excellency is the Columbian Wyandotte. To describe their many good qualities would take considerable space. In color they resemble the Light Brahas, in shape the Wyandottes, with nice, clean, yellow legs and neat rose comb. In weight male birds often attain ten pounds and females eight. They are great layers of good-sized brown eggs, and shell them out lively in the cold winter weather, when prices range high. They mature early. Their flesh is sweet and juicy—one of the best table fowls in existence. I have established a strain known as the "Brant" strain, that produces a high percentage of exhibition birds. In Columbian Wyandottes we have a combination which cannot be excelled by any breed—beautiful to look at, great layers and finest table fowls. They are docile and hardy and are now to be seen in large numbers at the numerous poultry exhibitions. They are money-makers. Try them and be convinced. My advice to the beginners in poultry-raising is to start with the best stock or eggs they can afford, from a breeder who has a reputation for honest dealing. Determine that each year your breeding fowls, your plans and your management shall be better than the year previous. If you are not already a subscriber to one of the leading poultry journals, better do so at once. Much is to be gained from their pages. The National Columbian Wyandotte Club is one of the largest specialty clubs. Every breeder of Columbians should join this club. The fee is moderate and the advantages many. Send in your application to the Secretary, Granby, Mass., U.S.A., for membership.

Mr. Arthur Laing, writing us from Corona, California, says that hundreds of cars of oranges and lemons are being shipped from that point at present.

WHICH IS THE MOST PROFITABLE?**Selling Honey Retail or Wholesale**

[H. G. Sibbald, at Brant Convention.]

A mere opinion might answer the above subject, but that might not be satisfactory to you all, and therefore I will mention a few of the points and the advantages of one way over the other.

By retailing we understand selling honey straight to the consumer. By wholesaling we understand selling perhaps a few tons or a whole output to one or two dealers, who again sell it to dealers or consumers.

From an economical point of view, the less profits other people have out of the transaction the more there should be in it for the producer, and so it is. An apiarist having, say, a 6,000-lb. crop ought to obtain 2½¢ per lb. more by retailing it, which would give a profit over wholesaling of \$150.

There is another outstanding advantage that is much harder to explain or to understand, and that is the gain in the amount of honey consumed locally when the practice of selling honey to the consumer is pushed.

If we are the right kind of persons, our neighbors, friends and relatives should have more faith in our honesty and the purity of our product than strangers. Their faith or confidence is a big factor; it works on the imagination and appetites of people and causes them to relish what otherwise might not be much appreciated. We cannot enjoy a meal where the surroundings suggest uncleanness and filth. Our appetites desert us, and we find ourselves not wanting much, thank you.

Therefore bee-keepers should retail as much honey as possible for the sake of the increased consumption caused thereby and the influence this will have on the general market in keeping prices firm.

Instances have time and again been brought to my notice where families have almost ceased to use honey because their own particular honey man has had a crop failure or moved away to another locality,

and they cannot, as they suppose, get honey pure and of the same flavor as they had been accustomed to.

Did you ever notice how you enjoy maple syrup when you get it straight from the bush and can bank on it as surely genuine, made from maple sap only?

We meet people at the homes of mutual friends, and they, finding out that we are real bee-keepers, wish to procure honey from us, making some such remark as this: "We like honey, but don't care for what you get in the stores; they mix it, or it doesn't taste the same." This is often a delusion or fancy, a trick of the imagination, but nevertheless it has its effect and does influence the amount of honey consumed.

Having therefore determined that for these two reasons—the more money obtained, and the good of the craft in general resulting from creating a market and the greater consumption caused thereby—we will sell as much honey as possible retail, how shall we work it out in detail in general practice?

At the outset honey should be of the best possible quality. The bee-keeper should learn to produce good, ripe, delicate-flavored honey, appreciated by all, and which can only be obtained by knowledge, skill and honesty.

I would, then, advise Mr. Bee-keeper to ask his friends as he meets them if they have their supply of honey for the season, and tell them what a fine lot he has. Praise the quality, tell of the healthfulness, how good it is for children, how it prevents colds, aids digestion, etc. But don't cut prices. If your nearest bee-keeper friend is getting 12 cents for his honey, ask the same for yours. Your friend will respect you the more, and you will sell just as much, and besides, if you are retailing honey, you should get a retail price for it.

Another way, and a good one, is to make an attractive exhibit at the fairs. There you will meet many local people who will become regular customers. You

will also do advertising honey in the market in the market day; you will be sure and how interested.

Another plan of some who load up start out around farmers and sell if your honey glad to see you

Some advertisements think this plan more; it would do good to the

I know a bee-keeper of somewhere between sand pounds more. He writes his friends in the States and his honey is ready quotes prices. You been selling to ships the honey, then he secures a good product.

Larger bee-keepers their honey, and market by bottling in small packages in towns and cities.

near to a large city the groceries are well assortment, and ought to be held back supplied. This who says well and can when there is very farm, garden or apiary

After the ways about, and you still have can be distributed, by wholesale trade and to 3¢ per lb. less

tail. This trade can send samples to various merchants, and soliciting orders.

will also do good to all beedom by advertising honey. Again, you might visit the market in your nearest town or city on market day, make a nice display, and you will be surprised how many will buy and how interesting the work will become.

Another plan is peddling, and I know of some who have made a great success of it. Load up a wagon in the morning, start out around the country, call on the farmers and sell. Have a good time, and if your honey is all right they will be glad to see you next time you come.

Some advertise in local papers, and I think this plan should be indulged in more; it would result in many orders and do good to the craft also.

I know a bee-keeper who sells his crop of somewhere between five and ten thousand pounds mostly by correspondence. He writes his friends in the West and in the States and in the nearest city that his honey is ready, is of fine quality, and quotes prices. Year after year he has been selling to the same people. He ships the honey, they pay the freight, and he secures a good retail price for his product.

Larger bee-keepers cannot retail all their honey, and will find a good field or market by bottling and putting up honey in small packages for grocers in villages, towns and cities. Any one living in or near to a large city should see to it that the groceries are well supplied with an assortment, and an amount of honey ought to be held back to keep this trade supplied. This wholesale-retail business may well and can be done at a season when there is very little doing on the farm, garden or apiary.

After the ways above noted have been tried, and you still have more honey than can be distributed, you must look for a wholesale trade and expect to take from 5c to 7c per lb. less than the prices at retail. This trade can be developed by sending samples to wholesale grocers, commission merchants, etc., quoting prices and soliciting orders. Besides taking a

less price, we assume more risks in dealing in this way, and one must be careful. If dealing with strangers, it might be shipped to the order of your banker, giving him the bill of lading and invoice, with instructions to make a draft on the firm to be paid for before delivery.

In this larger field co-operation might be of great advantage. If a number of large bee-keepers were to co-operate in some way, so that their best salesman and business man could handle all their output over and above the retail business, a distinct gain in prices, freight rates, distribution and liberal advertising might be obtained, and if an association existed for such a purpose the different departments of agriculture could help more effectively to find and cultivate markets.

I do not claim to be a prophet, but I feel that the future of our honey marketing is bright in the vast north mining and lumbering country and our great Northwest. Much honey will be required, and there is no reason (except it might be panic or foolishness on the bee-keeper's part) why honey should sell at a price much less than at present. Flowers bloom and fade; they must be sold or they are lost. So it is with fruit and vegetables; but honey will keep forever, and, as was pointed out by Mr. Hershiser in his excellent paper on "Marketing Honey," read at the last National meeting at Detroit, with the uncertain features of our crop conditions, depending so much on clover as a main source, why should we be so anxious to sell every pound we have the same season it is produced? Farmers keep grain from season to season, awaiting a higher price, and why should we not keep honey over occasionally when it don't sell at paying prices? This is a feature of honey marketing that we have not taken sufficient advantage of. After a big crop often comes a poor one, and the honey kept over pays well and is eagerly sought after in times of scarcity.

As a member of the Honey Crop Report Committee, I might say that this

year we took a step forward, as we thought, and asked members to report the number of pounds they had to sell wholesale, and a list of the names of those having any considerable quantities were mailed to large buying firms, who wrote the bee-keepers, and we trust many sales were thus effected. If out of this discussion any further suggestions are made that the committee could arrange to work out, I am sure they will be gladly received.

QUESTIONS AND ANSWERS

1. Do you consider it essential that bees have a fine day and a flight the first day they are put out of the cellar?

2. What do you think of the quarantine station plan proposed by Messrs. Chalmers and McEvoy for the treatment of foul brood?

3. Do the majority of bee-keepers in Ontario use a cloth or quilt over the frames, or a honey-board?

A BEGINNER.

Reply

1. No, it is not essential. If the day is warm, bees are apt to rush out without marking their position. Many get chilled and never return, and there is great danger of a bad mix-up when they do return. We think it is best to set them out on a cool day (not a cold day), when the weather gives promise of improving; then when the fine day comes, the bees will come out gradually as the morning slowly warms up. They have a chance then of marking their position, and mixing is avoided.

2. The idea is a good one if some practicable plan can be devised whereby it can be conducted.

3. We cannot say whether a majority of the bee-keepers use a cloth or a honey-board. Practices of this sort depend very largely upon the trained habits of the bee-keepers. For ourselves, we much prefer the honey-board. It prevents the condensation of moisture in the hive, and allows a bee-space over the top of the frames—a very important consideration in early spring, when brood-rearing is going on.

Prompt care of the bees in the spring, with plenty of prepared supplies, means increased crop of honey.

HOW TO OBTAIN BENEFIT FROM BEE JOURNALS

[By LEON C. WHEELER, Barryton, Mich.]

There is much good to be had from the reading of bee journals. In fact, no progressive bee-keeper can afford to do without one or two journals devoted to his business, and if he can read four or five, or more, he will receive benefit in proportion.

Still one must be careful how he takes up with every new idea in the manipulation of bees. When reading an article along the line of some new idea you expect to incorporate in your work, the first consideration should be: What is the writer's location? Are his seasons divided off about the same as yours, or are they perhaps two or three weeks earlier than yours, or perhaps later?

For instance, when E. R. Root of Medina, Ohio, or Dr. C. C. Miller of Marengo, Ill., tell us we should set our bees out of the cellar at a certain approximate time in the spring, we of Northern Michigan and of Canada should remember that the seasons down where Mr. Root and Dr. Miller live are at least two weeks in advance of ours in the spring, and act accordingly.

When some of our well-known bee-keepers of those States, and perhaps a little farther south, tell us that bees will winter finely in single-walled hives, wrapped in paper and left on their summer stands, we must remember that their winters are materially different from ours farther north. They have some cold weather down there, perhaps some times nearly as cold as we do up here, but they do not have such long sieges of it, and it is a well-known fact that it is not so much how cold it gets as it is how long it keeps it up, that makes the difference with bees wintered out-of-doors. Too long a siege of zero weather will sometimes cause the death of a colony, simply because they cannot become sufficiently warmed to change the cluster to fresh stores, and they will actually starve with plenty of

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Some time a great deal the late E. ica's most methods were perhaps, and were severely ity it was not at fault, but tions in his l that of almost range of his v bee-keeper in flow commence twentieth of J ander's locatic not open up un

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honey in the hive.

Some time ago our bee journals printed a great deal in regard to the methods of the late E. H. Alexander, one of America's most successful bee-keepers. His methods were tried all over the continent, perhaps, and in a great many instances were severely condemned, when in reality it was not the methods which were at fault, but simply the fact that conditions in his locality were totally unlike that of almost any other location within range of his writings. With the average bee-keeper in the north the main honey flow commences between the first and the twentieth of June, while with Mr. Alexander's location the main honey flow did not open up until the first of August.

Now this difference of two months in the beginning of the main honey flow makes a tremendous difference in the way of getting them ready for the harvest, especially as he had practically the same kind of weather as those whose honey flow commenced so much earlier. This gave him four months, instead of two, to get ready for the harvest, with the very best of weather to build his colonies up into those rousing swarms of which we have heard so much.

Thousands of acres of buckwheat are raised within range of his bees, which made it possible to successfully operate so many colonies in one yard.

G. M. Doolittle of Borodino, N.Y., tells of his wonderful success in the production of basswood honey. If I remember rightly, he has made the statement that he has never had less than a three days' flow of basswood honey, and that he has had flows from this source of two or three weeks' duration. Knowing what a wonderful flow the basswood yields while the bees are working on it, one might think that all that was necessary was to get in a locality where there was plenty of basswood and his success were assured.

Now as a matter of fact I have located in a splendid place for basswood, as far

as timber goes, and yet in the last five years there has only been two years which yielded me any basswood at all, and those two seasons only gave me an average of five or ten pounds to the colony. The bees were in fine condition, too, for we have a fine flow here from clover and raspberry.

Well, some one will say, we can surely depend on what our best bee-keepers in our own locality tell us? Well, let us see.

Mr. E. D. Townsend, one of the most successful bee-keepers of this State, tells us of his method of leaving all honey on the hive till the white honey flow is over and the honey cured and ripened before extracting; this method based on the fact that there is usually a couple of weeks between the closing of the white honey flow and the opening of the buckwheat flow. In this he is backed by the most of the best bee-keepers of the State, and yet, living here within twelve miles of his home apiary, I find conditions entirely different; for my white honey flow overlaps the fall flow by two weeks in an ordinary season.

Therefore I must leave on the white honey supers till I get the first whiff of buckwheat smell in the yard, and then get a hustle on and get them off and new ones back on for the fall flow.

Now perhaps you will think I do not have much use for what I get in the journals, but the fact of the case is, there's no one more ready than I to accept new ideas, but I simply want to caution not to go in too heavy on these new methods until they have found out if they will fit their locality.

Also they should always remember that what one man will make a success at is not always sure to be a success in the hands of another, even though he may be just as capable a man.

Stick to the old tried methods until you are sure the new method is a success in your locality and in your hands; then go ahead and win along the line best suited to your locality.

Mar. 1909

BEFIT FROM LS

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A SEASON'S MANAGEMENT

[Read at Brant Convention by
Mr. J. L. Byer.]

The subject that I am asked to talk upon to this representative gathering of bee-keepers is entitled "A Season's Management in the Apiary." That it is a broad one—so broad, in fact, that it would be utterly impossible for any person, no matter how well qualified, to discuss fully in any reasonable time—will be admitted by all who have the slightest understanding of the craft. I might say that Mr. Craig, your Secretary, intimated that I was expected more particularly to speak to beginners in bee-keeping. The suggestion struck a responsive chord, as aside from always being anxious to give a helping hand to those who are struggling to get an insight into our delightful pursuit, I felt that I was relieved of any responsibility in so far as concerned the number of bee-keepers present who knew the business from A to Z, and towards whom it would be rank presumption on my part to try and teach anything apicultural. It is proverbial that bee-keepers as a rule are ever ready to impart to others all they themselves know about the business, and in some cases it is darkly hinted that some even exceed this a bit and tell a **little more** than they know. The full fledged bee-keepers who are present will, nevertheless, in the interest of the beginners, have the privilege of calling me to account if I begin to tell the "little bit more."

Starting in the spring, it is assumed that the bees are in an average condition, as to assure of the hive would of necessity lead into too many details that in the limited time allowed I could not deal with them. While I always like to be sure that all colonies have been so well supplied with stores that there is not the slightest probability of any being short of supplies in the early spring, yet up to the present I have been able to resist making a systematic examination of every colony in the winter weather conditions

will allow. This examination is of the shortest nature possible, and merely consists of removing enough packing from the back of the hive to allow the quilt to be turned back a few inches; a few puffs of smoke and a glance down among the frames will reveal all I want to know for the time. If the examination shows sealed honey in abundance, well and good, but if, on the contrary, no sealed honey is seen, immediate attention is necessary, as, rest assured, if there is no honey in the back of the combs, there will be none in any other part of the hive. In such cases the easiest and best way to bridge over the difficulty is to place a comb of honey flatwise over the combs, and then cover all to prevent the escape of heat from the brood-nest—a very necessary precaution at this time of the year. If no combs are at hand, the next best thing is to feed sugar syrup, giving all required for the time being at once if possible. To all colonies having enough honey I advocate most emphatically a severe "letting alone" until suitable warm weather along about fruit-bloom. During the past two trying springs it has been my privilege to visit a good many apiaries, many in which stimulative feeding in the hands of expert men had been faithfully carried on, yet I am bound to say that in every case where the bees were found to be in real good condition they had been heavy in stores, and had been well protected and left alone, without any stimulating whatever.

About fruit-bloom I want to give every colony a thorough examination, and while this is being done I find all the queens and clip any not before operated upon. I am a thorough disciple of clipping queens. One good reason for this may be that my good wife says she wouldn't help me if I did not clip them; this will be explained by saying that sometimes in my absence she takes charge of the home yard, and all I wish her to do in case of swarming is to cage the queens and allow the bees to go back till I can attend to them later. Other reasons are that it is the only way of being **sure** of the age

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of your queens; and perhaps the most important one of all is, that where queen-clipping is practised, it of necessity means the examination of every brood-nest at least once a year, and foul brood is not apt to get much of a start in an apiary where this is practised. It is very necessary to have nice warm weather and nectar coming in when this work is in progress, as aside from any possible danger of robbing, there is great danger of the bees killing their queens if these conditions are not present.

This latter danger is one of my main reasons for my objecting so strongly to early manipulations of the brood-nest, as I am thoroughly convinced that the practice causes the loss of hundreds of good queens every spring. I am not much of an advocate of strengthening weak colonies at the expense of the stronger, and I believe that with proper management the former variety can be pretty well dispensed with. However, it sometimes happens that a few nuclei that have been wintered with good young queens, may be so weak that, left by themselves, they may not weather the critical period when it is a race between the birth-rate and death-rate, with the odds in favor of the latter. In such cases I have for some years used a plan which I do not remember of ever seeing in print. Find the queen of a very strong colony and set her aside on the comb; then from this strong colony carry over some combs with adhering bees and shake all in front of the nucleus. The old bees fly back to the old stand and the young bees crawl into the entrance of the nucleus. I have saved a queen when there was only a few dozen bees left with her. It has this advantage over other plans, in that no brood is shifted from one hive to another, with the chance of the major part of it perishing, as is often the result in such cases. At the time of this general examination some colonies are always found that are so strong as to need immediate attention. Different plans can be put into use, and after trying equalizing

of brood, with varying results, I now leave all the force with these extra strong stocks and add an extra storey of worker combs without putting any queen-excluder between the two bodies.

Our aim should be to always cut out swarming during fruit-bloom, for, regardless of what our forefathers may have thought of the value of a swarm in May, I certainly think swarming at that date is a calamity in so far as securing best results from the stock is concerned. At a later stage in the game of honey production these hives with two or more lodges of brood can be used to good advantage.

After fruit-bloom, throughout most parts of Ontario, there occurs a period of drouth in nectar secretion, and at this time the forces of bees necessary to garner the crop of honey are on the way. Mr. McEvoy has preached the doctrine of feeding every day during this period, and while the great majority of apiarists have neglected in the past to do this work in a systematic manner, to my mind there is no question but that it is one of the most important factors towards the securing of the very best results in the matter of getting a big surplus. Some years ago, before I had thought much on this matter, an object-lesson on the subject made me open my eyes in no uncertain manner. In that year there was a very long spell of hot dry weather between fruit-bloom and clover, with the result that when the clover did bloom it was of short duration, only yielding for about two weeks. The bees at the home and out-yards were about in the same condition in the spring up to the close of fruit-bloom. At the home apiary practically nothing came in for three weeks during the period mentioned, and the result from the clover was less than fifty pounds per colony. At the out-apiary, only four miles away, there was a field of 15 acres of land which the farmer had left for a summer fallow, but owing to pressure of other work he had not touched it to in any way interfere with a rank growth of mustard with

which the field was infected. As a result, the weather being very favorable for nectar secretion, the bees during the three weeks previous to clover-bloom not only secured enough for their brood, but in addition the eighty colonies put over 1,200 pounds in the supers. When clover did open, what shape those bees were in! Suffice to say that 8,000 pounds of honey was gathered in so short a time that I could hardly understand it, while not another apiary, including my home-yard, within twenty miles gave over fifty pounds of an average. At the opening of clover-bloom I count on doing any equalizing deemed necessary, and at that time the weather is generally warm enough and bees strong enough to allow any placing of brood as may be required. Many reasons might be given as to why it is good to have all stocks as nearly of the same strength as possible, and many methods are available for the purpose; but as it would take up too much time to go into details I shall not attempt to do so.

All my experience has been pretty much with extracted honey; anything I know about comb honey, therefore, consists of what the "other fellow" told me, so please do not ask me any questions about comb honey production. As to extracted honey, my most urgent advice would be to prospective producers, as well as faulty ones already in the business, to have an eye as to **quality** even more, if it is possible, than you would have towards quantity. In past years "any fool can produce extracted honey" seems to have been the watchword in many cases, but I am glad to say that we are seeing things differently now, and to produce a good article of extracted honey it is recognized that good brains, good judgment and a good **conscience** are necessary on the part of the producer. Allow the honey to be capped before extracting, and this cannot well be done satisfactorily unless more than one super is used. To my mind, some of the noted New York producers, by their advocating only the use of one super, especially in the case of a hive as

small as the eight-frame Langstroth, did so much harm to the bee-keeping industry as to seriously counterbalance their otherwise sound teaching. By producing a real good article you will do much towards solving the marketing problem that was so apparent a few years ago, but which, owing to the poor crops lately, have not been so much in evidence. But the good crops, we hope, will come again, and the suggestion as to producing a splendid article of honey is given "lest we forget." Along with the honey flow in June and July, the swarming problem crops up, and on this question so much has been said and written that I deem it superfluous to take up much time on the subject. With Italian queens and hives as large or larger than the ten-frame Langstroth, I would not look for many swarms in extracted honey production; at least, that has been my experience. With Carniolan or black brood in the apiary during a good flow there will be more or less swarming, no matter how large the hive. Let me say just here that while I like Carniolans in many respects, I do not attempt to keep this race of bees in a hive as small as the eight-frame Langstroth, or I will have heaps of trouble in "the good old swarming time." Different bee-keepers have different methods of removing the honey from hives, the different systems largely dependent upon style of hives, etc. In my own case I have never used bee-escapes, and with a number of hives I have in use I brush and shake the bees off the combs in the old familiar way. In the hives that I tier up the supers on, if necessity calls for extracting during the flow, I go to a number of hives, hastily give a few puffs of smoke in top of the supers, and then lift the supers, bees and all, off the hives and place the supers to one side. In a short time all the bees inclined to sting will have left the supers, and the remaining young bees can be brushed off in front of the hives like so many beans. Of course, this plan is only available during the honey flow, as at

any other

While clover flow have from prefer but ways will h this source. combs not in boxes made two of the use are hung When all are tened down ; few ounces of the combs are perfectly box is openec come handy purpose havin near future.

While it is all poor queens to be in the y queening I hav best time, all during the buc there is much s flow many unde placed easily at time will not p details as to met brings us to th get the bees rea time to start ac direction will de locality. If then cannot be done tember. In our c late years have e keep the bees bre to September 15th feeding is done b October 7th or 8t syrup always, mad two pounds of su The water is broug pounds of it pour which 100 pounds o No acid is added, b found it necessary. had losses from vari

any other time it would excite robbing.

While I advocate tiering up for the clover flow, with the light yields we have from buckwheat in our section, we prefer but one super, as that nearly always will hold all the honey we get from this source. To care for the extra super combs not in use at that time I have large boxes made out of matched lumber at two of the yards, and all combs not in use are hung in these boxes close together. When all are in the box the cover is fastened down after having previously put a few ounces of carbon-bisulphide on top of the combs in an open tin. The combs are perfectly safe for all time until the box is opened again. These boxes often come handy through the season, and I purpose having one at each yard in the near future.

While it is a good plan to get rid of all poor queens as soon as they are known to be in the yard, yet for wholesale requeening I have found the cheapest and best time, all things considered, to be during the buckwheat flow, although if there is much swarming during the clover flow many undesirable queens can be replaced easily at that time. Here again time will not permit me to go into any details as to methods of requeening. This brings us to the time when we are to get the bees ready for winter, and the time to start active operations in this direction will depend very much on the locality. If there is no fall flow, much cannot be done till some time in September. In our own case we usually of late years have enough honey coming to keep the bees breeding quite heavily up to September 15th or later, and all my requeening is done between that date and October 7th or 8th. We feed a thick syrup always, made in the proportion of two pounds of sugar to one of water. The water is brought to a boil and fifty pounds of it poured into a tank into which 100 pounds of sugar has been put. No acid is added, because we have never found it necessary, and while we have had losses from various causes in winter-

ing, I believe I can honestly say that we have never lost a colony in normal condition that had been fed on this syrup so simply made. R. L. Taylor of Michigan says that lots of good stores is **the essential** in good wintering, and I unhesitatingly endorse that sentiment. That condition granted, all other factors, such as ventilation, amount of packing, direction and size of entrances, etc., etc., are but secondary matters at the most. Talk as we will, the wintering of the bees still remains the test for success in a financial way, and in order to solve the problem successfully we may as well recognize the fact that the question will never be a **finality**, but on the other hand is one of an annual occurrence and a matter resting entirely with every individual bee-keeper. It is no exaggeration to say that for every winter loss from other causes there are twenty-five caused either by actual starvation or from the fact of stores present being unfit for winter, or, as very often happens, the honey that is in the hive may be so scattered that the bees are unable to reach it in cold weather, and perhaps, clustering on pollen-filled combs, gorge themselves with this substance, which, however necessary for brood-rearing, is nevertheless fatal to adult bees when eaten to excess in cold weather with no opportunity for a flight in the near future. The remedy for the trouble in each case is obvious, and I wish to say most emphatically that a colony of bees in normal condition, with an abundance of **good** stores, given any ordinary protection, will always winter well during the most severe seasons that we get in our latitude. In preparing for winter, instead of debating as to how little can we give the bees and bring them through without starving, rather let our motto be: "How much can we give so as to have the possibility of turning it all into bees before the clover-flow?"

Do not be in too great a hurry to get the bees out of the cellar. We may have some very rough weather yet before we see April Fools' Day.—Ed.

Notes and Comments

[By J. L. Byer]

Those who were present at the recent Brantford Convention will remember the discussion that took place relative to the advisability of trying to educate the buying public to expect the honey to be in the granulated form. All were a unit in the matter in so far as the matter of tin packages are concerned, and in all cases where any considerable quantity is sold in bulk. Some even favored the idea of putting the honey in bottles out to the trade in the granulated form, although, if I am correct, the sentiment of the meeting was rather against this radical step. No doubt but that it is the experience of most bee-keepers that in so far as the tin packages are concerned there is not the slightest difficulty in selling honey in the granulated condition, and in fact a goodly number of my customers prefer it in that state. However, there is quite a difference in the matter of glass, and some extensive bottlers that I know of tell me that if they had some harmless method of preparing the honey for the bottling trade that would positively prevent granulation their sales would be increased enormously. True, some of the advocates of granulated honey for the bottle trade claim that if the honey was put on the market only after being thoroughly granulated, without having been heated at all, that the snow-white honey would have an inviting appearance, and I admit that honey in that condition is much nicer-looking than is the case when it is only a mixture of granules and liquid. While on my way home from Brantford, having a little time at my disposal between train connections, I took a trip through the grocery department of one of the large departmental stores. Staged up there was a large quantity of honey in glass, some of it as it had come from the tables of exhibitors earlier in the season. Well, that honey would create anything but a favorable impression, according to my idea, anyway. For the most part the bottled

honey was all **streaky**, a mixture as already described, and the looks of honey in that condition is more likely to excite suspicions of its purity than would be the case if it was granulated solid and of a pearly white color.

Mr. Beuglas solves the problem pretty well as to treating the honey so that it will not granulate, but his method is a lot of work, and again there is just a danger of spoiling the flavor through overheating. As a goodly number know, friend Beuglas heats the honey as soon as possible after it is extracted, and again when bottling. Those of us who have tried this agree with Mr. Beuglas that it is an infallible method of preventing granulation, but the system has its disadvantages already mentioned. At the Convention friend Anguish showed how easy it is to spoil the quality of a real good honey by having it overheated. Two samples from the same pail were shown, one of which had been liquefied with all due care to avoid overheating, and the other purposely allowed to be made hot for illustrative purposes. While the one sample was a beautiful article of clover honey, the flavor and color of the other was totally ruined and did not taste like honey at all. Some even make the claim that it is impossible to liquefy honey without spoiling the flavor a little, no matter how careful we may be, and while this may be a bit radical, yet there is no question but what the operations requires extreme care so as to get best results. As was pointed out by several, storekeepers and others without the practical knowledge necessary often attempt to liquefy honey, and of course spoil the flavor, to the detriment of the business of the honey producer in general. All things considered, it seems that there is more to be gained by furthering the granulated honey propaganda than there would be to take an opposite course, and it is gratifying to know that the trend of opinion seems to be strongly in favor of the former idea.

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public be educated to know the pure article in its natural state, without any tinkering or doctoring or "improving" by us. This is the only way in which the public will escape fraud. Honey in its pure and natural state is attractive enough, and any attempt to make it more so will be found to be born of a desire to deceive. Take a case in our own city. The patrons of the milk dealers were constantly complaining about their milk going sour, utterly oblivious of the fact that that was the natural evolution through which good milk passed. The milk dealers tried to meet the demands of their customers at considerable cost (and no doubt inconvenience), and purchased a preparation composed chiefly of formaldehyde and mixed it with their milk. This added a trifle to their cost, but did not increase the price. What, therefore, was their motive? Simply to please their customers and give them what they demanded. The formaldehyde "killed" the milk, and its progress to the souring stage was greatly retarded, if not prevented. Now for the moral. What occurred when all this was found out? The people threw their hands up in horror, and exclaimed, "They are drugging and poisoning our milk!" Our medical health officer was prompt with his reply. He said, "You demand something from the milkman that nature does not produce. This is the outcome. The fault is yours!" Let us educate the public to know that in the matter of milk and honey the art of man cannot improve on nature.—Ed.]

Much has been said and written in the past about the danger of sugar syrup granulating in the combs if fed to the bees without any tartaric acid having been added. While I have never regarded these claims with any seriousness, my personal experience having convinced me that there is nothing in the theory in so far as it affects the wintering qualities of the syrup, yet on the other hand the addition of the acid does no harm as far as I know, and under exceptional conditions it might, for all I know to the contrary, do some good. Of course, it is understood that the acid is recommended for real thick syrup, as when the syrup is fed thin it has been generally claimed that the danger of granulation is not as great as when the thick syrup, say 2 to 1, is given. However, my object in com-

menting on this matter at the present time is to tell of a little incident that goes to prove that the acid is not necessary for the thicker syrup any more than it is for the thin. Along some time in September of last year a strong four-frame nucleus was fed up to be wintered in the cellar. The bees were fed the thick syrup already spoken of, and they had but little else in the hive. During a warm day in October I noticed a strong colony acting very peculiar, and on examination I found their queen out in front of the hive, dead. As they were fed up heavy for winter, I thought the best thing to do was to unite this nucleus with the strong queenless colony, and this was done a few days later when I had the time to spare.

Three of these syrup-filled combs were taken from the nucleus when the uniting was done, the combs being put aside in the honey house at the time. To be brief, they have remained there ever since, subjected to all the weather variations of a very variable winter. Yet notwithstanding that the lower half of these combs were not even sealed, I find today (Feb. 24) that the syrup is perfectly liquid, showing not the slightest signs of granulation. Whether the conditions inside of a hive of bees would be more favorable for granulation than is the case in an open building, as mentioned, I am not prepared to say, but I should judge otherwise.

The writer of these Notes has had considerable to say during the past about wax-rendering and wax-presses. That it is a very important subject is my excuse for mentioning this matter again, and I hope readers of the C.B.J. will bear with me. Last summer a friend sent me a sack of slum-gum, asking me to put it through a press and find out if he was wasting any wax or not. The stuff came to Markham, and as I was very busy at the time it was not called for till after ten days or more. The result was we found it all moldy and badly heated, and this, of course, would destroy some of

the wax that was in it. However, it was spread out thinly over a hay-loft, so that it might dry thoroughly, and thus prevent further decomposition, until we had time to treat it and see what wax was left. A few days ago we brought it in the house and found that there was just 38 pounds of the dry material, and we forthwith put on the boiler and started to heat the stuff. By the way, it is quite a job to heat up and dissolve slum-gum that is dry, and we would want to have some different arrangements besides a kitchen stove if we were going to do much at that kind of work. We do not mind melting wax from comb, etc., but the slum-gum gives off a bad odor and is in every way disagreeable to handle. A day was badly broken when the 38 pounds had been heated and pressed, and at the conclusion of the mussy job it was moved by myself, and **emphatically** seconded by my good wife, that no more **slum-gum** be melted over the kitchen stove. There being no dissenters from the rest of the household, of course it goes without saying that I will never dare to break my resolution, even if I should change my mind in the future. Now as to results. From the 38 pounds of **refuse** we secured exactly $9\frac{1}{2}$ pounds of wax, so I at once wrote to my friend that I was **sure** he was wasting wax by the method he was using. This bee-keeper is no novice, but on the contrary is well and favorably known to most of the members of the Ontario Association, and I have given this illustration just because I know that there are a lot of bee-keepers who have not as yet bought a press and are wasting annually lots of good wax. No, I have no interest in any press that is on the market, aside from the fact of wishing that every bee-keeper would secure one of the different kinds and be profited and pleased with the small investment. The press used was of the Sibbald pattern, and the work was all that could be desired. While we got 25% of wax out of the mass treated, there is not the slightest doubt but what the

amount would have been considerably more if the stuff could have been treated before it was moldy and so badly heated. Another thing to be taken into consideration is the nature of the slum-gum treated. Judging from the amount of propolis present, I have an idea that a lot of the original was from scrapings of combs, etc., and of course if this was the case there would have been more wax left in the slum-gum, provided only old combs had been treated, as the larger the number of cocoons present the more wax will be left in the refuse, provided no pressure is applied to the heated mass.

Since writing the foregoing February C.B.J. has come to hand, and any misgivings that I had when mentioning the subject of wax-rendering were quickly dissipated as I read what "J. A. R." (page 60) has to say as to the method he uses. Working as he does to get the wax, I venture to say that when he has secured the 18 pounds mentioned he probably threw away one-half as much as that amount with the refuse. Then think of spending a **day** to get 18 pounds of wax! Why, with a good press you can render anywhere from 100 to 300 pounds per day, and have the satisfaction of knowing that you are getting most of the wax. The varying amounts mentioned as a day's work with the press, being gauged by the nature of the raw material, the facilities for working, and the number of **hours** you would crowd into a day while at the work. Just a few days ago we shipped 240 pounds of wax, and that was all got ready for market in considerably less than two days of ten hours each. The wax was good enough, too, for a manufacturing firm to use in making a special brand of waxed paper; in fact, the firm previously used for this purpose a **refined** beeswax bought in New York at a fancy price.

[Thanks, friend Byer. The above is a very valuable comment, and we have no doubt our readers will greatly appreciate it.—Ed.]

EXHIBITION What is Their Government

To my mind courage and de- riculture and l to the world v one individual, gardener, poulti By looking over produc^e and st be the product should the apia I know that o management nee with any other none of the oti equal the. bee i amount of money prove my statee bee-keepers or (I higher) honey pro Mr. Jacob Alpa Martin Emigh an might mention, w did not make a p exhibition purpos I notice by C.B. issue, that one of ing to explain why from requiring all exhibitor's own pr writer's own staten quite a number of they were not ho might have got d honey producer wo the public that way The writer refers (as he calls it) at Honey Show of 190 raised in this way be the product of was, as far as I w was quite different exhibitors. One of th own comb honey t from a man in Gu rather too bold to p

Letters to the Editor

EXHIBITIONS AND EXHIBITING

What is Their Function?—What Does the Government Give Grants For?

To my mind, the intention is to encourage and develop the industries of agriculture and horticulture, and to show to the world what can be done by any one individual, whether he be a farmer, gardener, poultry fancier or stock breeder. By looking over prize lists I find that all produce and stock of all kinds have to be the product of the exhibitor, and why should the apiarist be otherwise classed? I know that our industry with proper management need not take second place with any other industry, for there is none of the other branches which will equal the bee industry with the same amount of money invested. I can easily prove my statements by the following bee-keepers or (I will class them a little higher) honey producers: Mr. J. B. Hall, Mr. Jacob Alpaugh, Mr. McEvoy, Mr. Martin Emigh and several others whom I might mention, who produced honey and did not make a practice of buying it for exhibition purposes.

I notice by C.B.J., page 461, December issue, that one of the exhibitors is trying to explain why the change was made from requiring all of the honey to be the exhibitor's own product. It seems by the exhibitor's own statements that he consulted quite a number of bee-keepers. Possibly they were not honey producers, or he might have got different advice, as no honey producer would think of deceiving the public that way.

The writer refers to an unseemly row (as he calls it) at the Fruit, Flower and Honey Show of 1907. Now this row was raised in this way: All honey was to be the product of the exhibitor, and it was, as far as I was concerned; but it was quite different with some other exhibitors. One of them had some of my own comb honey that he had bought from a man in Guelph. I thought it rather too bold to put my own honey in

competition against myself, so I entered a protest and proved my case to the directors satisfactorily. But this exhibitor has never acknowledged that he did anything wrong. The directors just let him slip and made a change so that it could not occur again, or, as the writer terms it, "placed all exhibitors on an equal footing." It seems at the discussion before the board Dr. Orr stated that he wished to avoid dealers making an advertising scheme of it when they were not bee-keepers. He should have said: "Not producers." Now he told me a different story. He told me that he had a notion to cease giving prizes altogether, for he did not think it fair to be allotting so much valuable space to dealers who went all over buying honey from wholesale houses, bee-keepers and farmers, and bringing it in in barrels and milkcans and other vessels to be retailed as their own. It seems as if Messrs. Root and Hutchinson are in favor of cancelling the rule also. Probably you are not all aware they are not large producers. The A. I. Root Company may be classified as jobbers, for they buy honey from all over the country. If jobbers and dealers are allowed to exhibit there should be a separate class for them, so that the public would know whether they were dealers or producers. I have had people by the score state to me that they were surprised, for they supposed that all of the honey on exhibition was produced by the exhibitor.

He says further: "Out of four exhibitors at the 1907 exhibition"—(all that was there)—"three asked to have the change." That is natural enough, as they were all in the same boat, save the one, who produced his own honey—so why should I want a change?

By the writer's own statement he has been exhibiting comb honey several years without a break—always entered in the name of the producer. He claims that it was never counted in display. Now this is just where I raised the objection. As there was always 80 points for quality,

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this belonged to the producer. But what about the 20 points for display? As the honey was put up in fancy cases and arranged by the exhibitor, this portion surely must belong to the exhibitor and was counted as 20 points for display. It seems to me that there is not much British fair-play in that way of putting two against one.

In the writer's concluding remarks he states that his relations with his fellow-exhibitors have been very agreeable, with one exception. Probably you are all aware who he is alluding to. Probably there is no producer of honey more pleased than I was when I read this and discovered that I was not classed with the "bonâ fide bee-keepers," but as a simple producer of honey!

It appears I am always doing something wrong. I sold nearly four thousand pounds to a bee-keeper at Guelph, and because he exhibited it as a "bonâ fide bee-keeper" I was accused of beating the Exhibition Board. I wish to make a suggestion to those "bonâ fide bee-keepers." Go to the committee on honey exhibits and have the prize list changed so that it will prohibit D. Anguish from exhibiting or selling honey to any one to exhibit at Toronto Fair as long as any of us "bonâ fide bee-keepers" exhibit!

My intention is to produce as good a honey as I can, both for exhibitions and for table use. I find by so doing we never have any trouble in getting rid of it at fancy prices. And as for exhibitions, my intention is to follow them up and always exhibit my own honey, and if the prize list reads as it does now I will sell my honey to whoever I see fit. I do not want to be accused of doing wrong because I have followed the prize list rules, for that is all an exhibitor has to govern himself by. All exhibitors should study the rules of the prize list and then they would not be running to the directors and finding fault when there are no grounds for complaint.

D. ANGUISH.

Evergreen Park, Lambeth, Ont.

QUESTIONS AND ANSWERS

Would you help a beginner by giving some information as to bee-keeping? First, at what time of the year should one buy their colonies (say, one or two colonies)? What are the absolutely necessary supplies needed for one or two colonies? Have you any addresses of bee-keepers in British Columbia where one could obtain good supplies?

If you would answer these questions you would more than oblige.

V. CARTWRIGHT.

British Columbia.

Reply

1. In the spring, about 1st of May to the 24th.

2. If worked for extracted honey you would require two supers for each hive, of 8 or 10 frames, according to the size of the hive purchased. Each frame to have full sheets of foundation, nicely wired. If worked for comb honey, two or three comb honey supers for each hive. If worked for both extracted and comb honey, then half and half of each. For the first two years we would advise that you work for extracted honey. By that time you will get well acquainted with your bees, and obtain some theoretical knowledge of comb honey. You will also need a smoker and a bee veil, also some kind of an extractor to take the honey from the combs without destroying them, but not least, take the Canadian Bee Journal.

3. We know of no supply dealers in British Columbia, unless the Ham & Not Company of Brantford, Ont., have agents there. We will ask them to write you. Let us know your winter conditions, and we will advise you as to how to take them successfully through the first winter. This is important.—Ed.

Kindly send me some information regard to the culture of bees, as I am going to introduce bee culture among my tenants.

A. McCULLOCH,

Mayor.

Thorold, Ont., Feb. 17, 1909.

In a short space it is impossible to tell you all that would be of importance. Bee-keeping can only be learned by ex-

perience with you get starte cinating. Get from two to you can with the book "A B a good bee jou the first of May tical man to st the internal pa with its techni you read you meant. Start swarms are unc some men say: shape: They ha are likely to sw are not bee-ke "keep" bees, bu difficult for n start your tenar t like ducks to pelled. Select tive among th e you select two With a little goo ttle reading and should succeed. a to know the qt orker bee, and t of each. A good warming during pening of clove more room—enlar this must be done nly be done with colonies can keep arm. There are and nights during i not take care of tl all brood) witho wood-nest is chille they will die. The ee-keeper who wa is bees breed, bree middle of March (c ill the opening of the general wh ay have a large ar e object in view me. Bees do not ther it. Therefore thers. Sometime times prolonged. re as to this, as al er conditions. Yo are great indirect b they will make your ds more producti are made a study of that this is the ch —the honey it gat reward. Owing t tey, it gathers m

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perience with and study of the bee. Once you get started you will find it very fascinating. Get a few bees at first, say from two to six. Converse as often as you can with a practical bee-keeper. Buy the book "A B C of Bee Culture." Read a good bee journal. Buy your bees about the first of May to the 24th. Get a practical man to start you off by explaining the internal parts of the hive, together with its technical terms, so that when you read you will understand what is meant. Start off with the idea that swarms are undesirable. You may hear some men say: "My bees are in great shape: They have swarmed twice, and are likely to swarm again!" Such men are not bee-keepers for profit. They "keep" bees, but do not get honey. It is difficult for me to advise you how to start your tenants. Some will take to like ducks to water, but others will be repelled. Select the most intelligent and active among them. Give such persons as you select two or three hives of bees. With a little good advice at the start, a little reading and close observation they should succeed. The first lesson to learn is to know the queen, the drone and the worker bee, and the functions and duties of each. A good bee-keeper will prevent swarming during fruit-bloom and the opening of clover by giving the bees more room—enlarging their hive. But this must be done with caution. It can only be done with strong colonies. Weak colonies can keep only a small space warm. There are many cold, wet days and nights during fruit-bloom. Bees cannot take care of their babies (which we call brood) without warmth. If the brood-nest is chilled to a certain point they will die. The great object of the bee-keeper who wants honey is to make his bees breed, **breed, BREED**—from the middle of March (or earlier if possible) till the opening of white clover, so that the general who goes into battle, he may have a large army to quickly attain the object in view in the least possible time. Bees do not make honey—they gather it. Therefore you will want many gatherers. Sometimes the flow is short, sometimes prolonged. You will never be as to this, as all depends upon weather conditions. Your tenants will receive great indirect benefit from the bees. They will make your orchards and your fields more productive. Scientists who have made a study of natural history tell us that this is the chief life-work of the bee—the honey it gathers being its food and reward. Owing to its astonishing industry, it gathers much more than it

needs. This is where man steps in and takes the surplus, and, we fear, sometimes a little more than the surplus. Thus it is the bee is twice valuable. Try and have no swarms until your main honey flow is on. Then if you are on the spot to take care of them no harm can be done, because you will put the swarm in a new hive on the old stand, and reduce the old hive down practically to a nucleus. Thus you hold the entire working force of your bees in the new hive on the old stand to reap the crop of honey—almost the same as if they had not swarmed at all.

Then will come the problem of wintering. This is a big problem in itself. A bee-keeper with brains is like unto an artist—always learning, always improving.

By all means, Mr. Mayor, get the bees, start your good people in the work, and the C.B.J. will help you all in its power. From our advertising columns you can see where bees, queens and supplies can be bought.—Ed.

HE AGREES WITH US

I agree with what you say on page 46, bottom of left-hand column, and I notice that the Review in Bee-keeping is to be given as a premium to members of the Oxford and Ontario Society of Bee-keepers (page 55). Now I like the Review, and Gleanings, too, and have had every number of Gleanings regularly since it was first published. Yes, and I have had every number of the Canadian Bee Journal through all its different stages since it was first published by Mr. D. A. Jones, and have always paid promptly when the year came round. Never an editor asked me to renew. I am well pleased with it now. I think Canadians should be loyal to their country and their industries, and Canadian bee-keepers loyal to their own bee journal and support it well. What is the use of shouting "God Save the King" if we are not loyal to our own country in a way that is beneficial to at least that portion of it in which we live?

ILA MICHENER.

Low Banks, March 5, 1909.

[Thanks for your loyalty and help. The tide is slowly coming our way now. Canada WILL have a bee journal.

Chalmers' Observations

Foul Brood.—For March C.B.J. we will tackle the foul brood question. There has, I understand, been a difference in the teachings of some of the inspectors, and it is not well that such should be the case. Mr. Hodgetts informs me privately that there is not much likelihood of a meeting of the inspectors being called before the season opens, but I believe the course he is pursuing in revising the circular issued by the Department of Agriculture in 1907, of which Mr. Wm. McEvoy is the author, will answer the same purpose.

Mr. J. L. Byer, in his "Notes," rightfully eulogizes Mr. Jacob Alpaugh's abilities as a bee-keeper, but when he gets to supporting the latter's two-day starving plan for curing foul brood we must call a halt. When on duty last season as a foul brood inspector I advised having the bees build their own comb for three days, taking for a theory the fact that nearly everything about the bees and their work goes by three, or is divisible by three. Mr. McEvoy, as all are aware, advises four days, but it may be that he calculates according to the old school. For instance, anything happening on a Friday, and they wanted to count how many days it would be on the following Monday, they would count thus: Friday, one; Saturday, two; Sunday, three; and Monday, four, when it is in reality only three days.

I would just ask Mr. McEvoy, if he shook bees off diseased combs on a Friday evening, which evening by the day of the week would he give them their second shaking? By "the evening of the fourth day," I would understand it to be Tuesday evening, but if you will follow his article on "How to Examine Apiaries and Cure Them of Foul Brood," which has already been alluded to and published in January C.B.J., you will notice on page 13 of said journal, second column, nearly half-way down, that he says: "In the fourth evening we are to remove the

new combs made out of the starters." Now, if the bees were shook off the foul broody combs on a Friday evening, and shook again "on the fourth evening," that would be Monday evening, which would only be three days, so it will lie with Mr. McEvoy to clear this up for us, as there is one day of difference between "the evening of the fourth day" and "on the fourth evening," and if he maintains that four days is meant and is necessary, I will certainly fall in line, as it will not be any loss to me (in the event of being an inspector again) to have bees build their own comb for that period.

But to return to the Alpaugh two-day system. I might just say that Mr. Alpaugh was inspector for this locality in 1907 and taught the two-day system. A party who had treated his bees accordingly told me last winter that his bees were not cured. There was another case last spring, where I found four colonies of eight diseased. They had been treated in 1907 under Mr. Alpaugh. But this is not a test case, as I know from observation that the bee-keeper did not follow the instructions given. I want, however, to cite a case which happened in my own yard last summer. There was a splendid swarm issued from a three-storey, foul broody colony on a Wednesday, and the following day a swarm of about equal proportions was cast from another three-storey diseased colony. They were both put on starters, and on Saturday evening according to the three-day theory, the Wednesday swarm was due to be put on full sheets of comb foundation, which it did, and when at it I just thought I would shake the Thursday swarm too (as Mr. Alpaugh), as it was then fully three days hived, reasoning in my own mind that if left till Monday it would be four days; but it was later demonstrated that it would have been "better to be sorry than sorry." The incident was forgotten until I was getting some queens in the fall, when this colony was selected for having a queen which had better be

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aced, and when searching for her I dis-
covered foul brood, and of course the
whole circumstances vividly reappeared.
They are now on the McEvoy "solid
sealed stores" system, which is sure.
I might say that I have cured a colony
of bees which had foul brood by merely
stirring them on starters; never gave
them a second shaking. Likely others
have had similar experiences, but it
would be folly to depend on that for a
rule.
Mr. John McEwen of Clandeboye, Mid-
sex County, an extensive and thor-
oughly practical bee-keeper, practices the
"starving" system which Mr. H. W. Jones
discusses in the January
C.B.J. We would be pleased to hear
from either of those gentlemen or any
others through the C.B.J. as to how long
they have generally found bees stand the
winter before they begin to fall? I
have never practised the system myself,
but after hearing Mr. McEwen at it last
summer, and knowing his abilities as a
bee-keeper, I didn't hesitate in recom-
mending the plan. I don't know that
nature bees are fat and lean as we find
in larvæ or as we understand it by
ourselves or by animals. Examine a col-
ony of bees during a honey flow, and
you will find them nearly all large and
looking. Let that flow cease, and in
a few days you open the same
colony shortly afterwards and find the
bees only about half size? I believe that
a colony of bees put to starve will share
the honey they have in their sacks
about all ready to give out
at the same time, and that is the time to
take them on foundation and feed, but if
fed for foul brood and fed too soon,
the chances are that some diseased honey
will still be remaining in their honey
sacks, and would be discharged with the
brood, which would start foul brood
again.
Another difference that prevails among
the inspectors is the allowing of
queens in the allowing of combs being used on
colonies which have been used for

storing honey by foul brood colonies.
Mr. Alpaugh and the writer have been
agreed in not allowing them to be used,
while on the contrary Mr. McEvoy does,
and the only thing that I can see that
justifies his teaching is that he brings
in local option and says the combs are to
be dry. But we might ask him right here
if there wouldn't be danger from cells of
bee-bread in those combs which had been
wintered with honey containing germs of
the disease? I have some nice combs
which have been over foul brood colonies,
but they are wet, and how are they to
be made dry?

[You raise a nice point here in refer-
ence to those cells containing pollen. It
is now up to our friend McEvoy. We
think, however, he will be equal to the
occasion.—Ed.]

I would liked to have given some ob-
servations which led me to suggest the
advisability of quarantining foul brood
colonies, but this article is already too
long, and I only hope it may be helpful
in bringing about a similarity of teaching
by the foul brood inspectors.

D. CHALMERS.

Poole, March 3rd, 1909.

[Let's have it in your next.—Ed.]

Alberta - Cellar Temp.

A VOICE FROM THE FAR WEST

This country is not a bad country for
bees at all. The season of 1907 was very
poor, but look at 1908, when from four
colonies, one of them very weak, I got
between 600 and 700 pounds of honey,
increased to nine, and they drew out 25
pounds foundation. There is a great dif-
ference between keeping bees here and
in old Ontario. The nights here are very
cool. You don't find bees hanging out
in great big bunches in summer-time after
8 at night. The winter problem is—well,
I leave it to you to judge. The first
winter I had two colonies. I put them
in the cellar, and the mercury went
down away below zero—20 below, in fact,
in that same cellar, and kept around that
for weeks. I did not expect any bees in

the spring, but they came out all right. Next winter I had them in a cellar that also went down to zero, and they came out very good; the one that came out weak was weak in the fall. This winter I have a stove in the cellar, and when the mercury gets to freezing point I begin to warm up. The bees appear to be doing well. The bee men of Ontario would be alarmed at the mercury getting away down to 42 and 45, but an old-time bee-keeper here, Mr. Henderson, keeps his at 35. Probably the dry atmosphere may have something to do with it.

Could you please tell me what has become of Mr. R. H. Smith? I sent him a letter to Saskatchewan, but I got no reply. He had told me in a previous letter that he would have to go to a warmer climate. There are several bee-keepers in Edmonton district, but the distances are so great you cannot walk out to them.

W. BOWLING.

Edmonton, Alberta.

BROOD-REARING MARCH 2

Mr. Jacob Haberer, of Zurich, sends us the following report: March 2—Sunny; 36°; air quiet; five colonies flying. I could not resist looking into two hives. I am of the opinion that many colonies had brood nearly all winter. I found these two with brood in all stages, with newly-hatched bees and colonies strong. One queen was last year's queen, the other was one year old. Some of these early breeders are a strain from an imported Italian queen. At a point German bee-keepers pride in very much.

[Our own bees had a great flight during the winter on two occasions, and we are of the opinion they are rearing brood now. We have not, however, examined them, and will not do so till about the first of May and not then unless the weather is very warm. Bees that in the fall do not need this operation, but it will do no harm to give them one or two to note confidence.]

REQUEENING

A little knowledge of how I requeened an out-apiary might be interesting to some of the C.B.J. readers. I selected five of the weakest colonies in the spring, which were too weak to be of much use for a crop of honey (this is contrary to most teaching), but as the young queens were not wanted until the end of the harvest, these colonies had a chance to get strong enough for my purpose. No. 1 was made strong early in the season at the expense of the other four; then it was made queenless and broodless after getting strong in bees. The brood was now divided amongst the other four. The bees were now given a frame of eggs from a queen I received from W. O. Victor, Texas. In this case I want to get as many queen-cells as possible. To do this I must have a frame of new comb or a frame of foundation given to the queen I wish to breed from, placed in the centre of the hive about four days before required. It has been my experience that three or four queen-cells is all that can be relied upon, with a frame of eggs in old comb and from eight to thirteen on newly-built comb. I find grafting to be the easiest and surest way of requeening with cells. Take a thin-bladed pocketknife and cut out a queen-cell. It usually takes a piece about an inch square cut clear through the comb. Now go to the hive you wish to requeen, find the queen, kill her, cut a hole an inch square out of the centre of a comb and slip in your piece with the queen-cell carefully. Bear in mind that when killing a queen and giving a queen-cell at the one operation, it is safer to use a four or five-day old royal larva than a sealed cell, because bees are liable to destroy a sealed cell, and still more so a ripe cell, before they are aware of being queenless. But I have never known them to destroy an unsealed cell. I prefer using unsealed cells for requeening out-yards, so that the whole affair can be done at one operation. They are sure to start some cells from the eggs they have of their own, but

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Burlington, Ont.

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they will be so much younger than the
all given, and it being after the harvest,
here will be no swarming, the oldest
cell or first queen hatched will be ac-
cepted.
By the time the honey season is over
my colonies are strong, and it is an easy
thing to form a lot of nuclei. At the
end of last season I had a large amount
of sealed cells ready, and I soon had 55
nuclei, and all with a laying queen in a
short time. After that I commenced to
raise some more for increase. Two days
after I loaded up as many nuclei as I
could put on the light wagon, arriving
in the out-yard about dusk in the even-
ing, when all the bees were quiet. I
drove No. 1 back a few feet and place a
nucleus in its place; all the rest are treat-
ed the same way. In two days I find all
these nuclei boiling over with bees. This
time I have a nucleus with me with a lot
of queen-cells instead of a laying queen,
to make the amount of increase I wish.
The old queen is easier to find now, as
the old bees are not with her. She is
removed and a cell grafted. As soon as I
reach the number required the rest of the
queen-cells are destroyed, the bees shaken
out of the other hives and the brood
of bees divided up as much as possible.
One of those 55 nuclei that I treated ac-
cording to the above I lost one queen.
The above is the surest way of requeen-
ing out-yards with the least labor that I
have yet tried.

ISAAC BALMER.

Wilmington, Ont.

We are very much indebted to you,
Isaac Balmer, for the article. It is a good
one and your plan seems to be very simple
and effective. It appears to have the
advantage of a minimum amount of labor.—

THIS IS WHAT COUNTS

Enclosed please find \$1.50 for my re-
newal for two years, and I wish to say
that I am real proud of the improvement
in the C.B.J. Long may you prosper.

ANGUS MCLELLAN.

St. Roches, Ont.

ARE THE BEES SOMETIMES STUPID?

Mæterlinck endows bees with a ray of
that heavenly light with which we are
illuminated, and which we call reason. If
that is the case, I suppose we must con-
sider those hives as being in a more ad-
vanced state of civilization that make use
of rubberoid as cappings (C.B.J., July,
1908), for, sure enough, the knowledge
of chemistry did not extend so far among
their ancestors! But what then? Shall
we one day be obliged to say farewell to
the clean, sweet-smelling honey-comb of
former ages? Or shall we be compelled
to smother those colonies or individuals
that show such progressive (?) tenden-
cies, or such conscious depravity of taste?
In a delightful novel in the Christmas
number of the "Windsor Magazine,"
which I have just read, Rudyard Kipling
charges some bees with trying a new
plan of building round cells, and finding
it cost eight times more wax than the old
six-sided specification, "they eked out
their task with varnish stolen from new
coffins at funerals in the village." Is
that mere imagination, or does it rest on
observation of fact? At all events, an
instance very similar came under my no-
tice last spring. I saw a bee or two
hovering about some young apple trees
which had been grafted recently, and
paying to them more attention than was
customary. By and by the buzzing com-
pany increased and enforced an inquiry
on my inquisitive mind. What was my
astonishment and disgust to see them
working hard on the black salve that
had been put on the wounds of the
recently-grafted tree and loading it on their
thighs like pollen! This may take from
the poetry with which "Apis mellifica"
is often shrouded, but methinks the utili-
tarian principles on which most bee-
keepers cultivate bees justify such ex-
amples being put on record, so that we
may take proper measures to guard the
bees against their own stupidity! May
all the poets pardon me such an expres-
sion! But perhaps I over-lize too
much, and only some individual bees

have such depraved tastes! Just like among men, those who with a calm conscience adulterate with glucose or some such stuff, and sell it as real honey.

BR. COLUMBAN, O.S.B.

St. Mary's Abbey, Buckfastleigh, Devon.

SPRING DWINDLING

One or Two of Its Main Causes

I will mention one colony I had some years ago. The bees started tumbling out of the hive quite early in the spring. They were all bloated up and would crawl around on the ground, flapping their wings like a duck or goose trying to bathe themselves on dry land. I opened the hive and found that some uncapped stores had fermented, both honey and pollen bulging out of the comb. I removed all this and gave them good sweet stores and the trouble ended. After that the colony built up as fast as any in the yard. Sour stores is one of the main causes of spring dwindling. Another serious drawback to bees is the lack of drinking water for them close at hand. For years I have always supplied my bees with water right in the bee yard, and that kept warm by means of a lamp burning under it all day long, but not at night, as I heat a fresh pailful every morning. To every pail of water I add a small handful of salt. I believe this salt will do more towards keeping your bees free from disease than anything else you can give them. When I first started giving salt I had two drinking troughs, one salted and one fresh water. I found they would not touch the fresh as long as they could get the salted, so I gave up the fresh supply. Now just imagine the difference between the bees being able to get what water they want right in the yard, and lukewarm at that, on a cool windy day, or having to fly a long distance through a cold wind and then only get ice-cold water, which is liable to chill them as soon as

they get loaded, and never get back to the hive. The same thing often happens to bees in search of pollen. They get loaded and never get back. Now this can also be supplied in early spring right in the yard, especially if the yard is protected by a high board fence all round, as it ought to be, unless you have evergreen hedges or something else to break the wind. To make a drink tub I saw six or eight inches off the end of an oak or spruce barrel such as are used for vinegar or molasses. This will hold from two to three pails of water. I set it right on the ground, with a hole under it for a small lamp. Place small pieces of wood in the water for floats, which will lower with the water. One hundred colonies will carry away about three gallons of water per day. Now if some of our old veterans will try the above they will be surprised to see how the bees will work at this tub even on a cold day and get back with their loads of water without the loss of a single bee. These little things have more to do with success in bees than luck. Bees winter on the summer stands should have a packing box constructed so that the sun rays will not shine in at the entrance of the hive. This sometimes causes heavy losses when the sun is bright and the wind is cold in early spring. Some may say you cannot feed artificial pollen after the bees can get it naturally. This I will admit, but you can get the bees to take in a good supply before the natural comes, so that the bees do not need to leave the hive on a cold day to hunt for pollen from starving. I have had one hundred colonies carry in twelve to fifteen pounds per day. I found that pea meal or flour (called pea brose), which can usually be procured in large grocery stores in bulk, is the best substitute for natural pollen. Mix it with chopped oats or bran so the bees will not fan it all away with their wings.

J. ALPAUGH

Eden, Ont., March 8, 1909.

[Translated
Wor

A picture in (Hft 5, 213) shows at his bee hive of Holland' plays the organ Bee-keeping is a The death of [et, at Avignon, of the charte Rhône et Dur er president of erce and Cheval eur. He has bee e advancement universalle, Agricolt.

There is an inte the current nun anadien on the r ect movement. motion chez les ly the former p e not available to In many of the fo tural, entomolog ral history, there lendid work of t hmead, formerly y service. Mr Washington, D.C., t ince 1897 he had i tion of the entom tional Museum, w y interested in, and y valuable contrit e of hymenoptera The death of Fer omoter of practical oced in the Februa er Bienen-Zeitung. 1909, when bee-ke and prominent cra e Leipziger Biene y, 1909 (pp. 30) re Algerian Bee Jou ructification of flo kept on the island ally on account of

FOREIGN NOTES

[Translated by Burton N. Gates, Worcester, Mass.]

A picture in Die Wache (Berlin, 1909, Heft 5, 213) shows Director Willem Saal his bee hives. He is a farmer, but one of Holland's famous musicians, and plays the organ in a church at Wagnum. Bee-keeping is a recreation for him.

The death of M. Etienne Gebriel Vermet, at Avignon, is announced, who was one of the charter members of "L'Abeille de Rhône et Durance," as well as a former president of the Tribunal de Commerce and Chevalier de la Légion d'Honneur. He has been actively interested in the advancement of apiculture.—Revue Universelle, Agricole, Vol. 13, November, 1908.

There is an interesting article running in the current numbers of Le Naturaliste canadien on the modes and apparatus of a single bee movement. It is entitled "De la motion chez les insectes." Unfortunately the former portions of this article should have been not available to the writer.

In many of the foreign periodicals, apicultural, entomological and general names, there are tributes to the brilliant and splendid work of the late William H. Ashmead, formerly of the U. S. Government service. Mr. Ashmead died at Washington, D.C., the 17th of October.

Since 1897 he had been in charge of a section of the entomological work of the National Museum, where he was especially interested in, and where he produced, many valuable contributions to our knowledge of hymenoptera.

The death of Ferdinand Liedloff, a promoter of practical bee-keeping, is announced in the February number of Leipzig Bienen-Zeitung. He died January 1909, when bee-keeping lost an earned and prominent craftsman.

The Leipziger Bienen-Zeitung for February, 1909 (pp. 30) reviews from Nahla, Algerian Bee Journal, an item on the fructification of flowers by bees. Bees kept on the island of Guadaloupe, especially on account of their value in the

transporting of pollen from flower to flower of the coffee and kakao trees. Were it not for the bees there would be very little or no fruit set, even though the trees bloom fully. By the use of bees the cultivators have not only found the crops regular, but they are more than doubled.

INSPECTION OF APIARIES

Amounts Paid by the Ontario Government

	Services	Expenses
Armstrong, James, at \$5.50 per day.....	\$448 25	\$153 70
Burke, H., \$5.50 per day	115 50	46 80
Byer, J. L., \$5.50 per day	129 25	53 17
Chalmers, D., \$5.50 per day.....	68 75	20 95
Chrysler, W. A., \$5.50 per day.....	159 50	55 15
McEvoy, W., \$5.50 per day	286 00	41 90
Newton, John, \$5.50 per day.....	239 25	82 29
Sibbald, H., \$5.50 per day	132 00	52 75
Total	\$2,085 12	
Grant to O.B.K.A.		450 00
Total Gov. grant to bee industry	\$2,535 12	

A HELPING HAND

I see in the C.B.J. that you are not supported as you deserve. I can sympathize with you, for no impartial judge will deny that the C.B.J. is immensely improved since the time you have taken it up, and contains more reading matter than most bee papers.

I enclose some more addresses of British bee-keepers to whom, perhaps, you may like to introduce the Canadian Bee Journal.

BRO. COLUMBAN, O.S.B.

St. Mary's Abbey, Buckfastleigh, Devon, England.

J. ALPAUGH
1909.

FOUL BROOD DISCUSSION AT THE DETROIT NATIONAL CONVENTION

How to Detect and Know Bee Diseases

Of course, Mr. White's method of determining the different bee diseases by the use of the microscope is absolutely correct, but as the majority of bee-keepers are unable to use this instrument in their diagnosis, it is well that there are certain characteristics present in the different forms of disease which will enable careful, observant bee-keepers to determine with the naked eye what disease, if any, is present.

I will first describe European foul brood (*bacillus alvei*), which has caused greater losses among the apiaries of New York State than all other diseases combined.

On opening a badly infected colony the most striking feature is the scattering capped cells containing brood. When you notice such an appearance don't fail to look for further evidence.

Many of these capped cells contain healthy brood, and the mottled appearance of the comb is caused by the large number of larvæ that, on account of disease, fail to mature and are never capped.

However, in the earlier stages of the diseases we are obliged to look for other symptoms, always remembering that the pearly white and glistening larvæ are healthy, and only those which have lost their lustre, and in some cases become mis-shapen, or which show a small black or bright yellow spot near the centre, are to be looked upon with suspicion.

This latter symptom is not always present, as a colony may be badly affected without showing any such.

After the larva dies it turns to a dull yellow color, and continues to grow darker with age, running through all the shades of brown to nearly black.

Under favorable conditions this disease rapidly spreads throughout the brood-nest until the majority of the brood is dead, and the hives become almost cess-pools.

At this stage the brood gives off a very foul odor, similar to American foul brood.

In this disease most of the dead brood is uncapped, but occasionally a few of the dead are capped, the cappings of which may be sunken or perforated.

There is little or no ropiness found in this disease. The dead larvæ often remain coiled around the bottom of the cells, drying down to a thin scale or skeleton, showing the rings or segments.

American foul brood (*bacillus larvæ*) is certainly a close second to that just described. Its characteristics are quite distinct from the former disease, viz.: Fewer of the larvæ die before the cells are capped, hence there are many more perforated and sunken caps in this disease.

The dead larvæ are at first of a light chocolate color, but gradually turn to a very dark brown, forming a thin scale on the lower side of the cell, which is very tenacious and seldom removed by the bees.

Before the dead larvæ dry out they consist of a viscid or ropy fluid, which may be drawn out of the cell two or three inches without breaking.

There is also a rank odor present in the hive at this stage of the disease. I really dislike the term "glue pot odor" as applied to this disease, and I think an insult to the glue manufacturer.

It seems to me to be somewhat out of date as in this age of refined and prepared glues most bee-keepers would probably prefer more unfamiliar with the crude, ill-smelling product than with the odor of the disease itself.

Next in order is what is known as "pickled brood." This is a peculiar disease of the larvæ, which causes death about the time of capping of same, sooner or later than the time of capping of same, sooner or later than the time of capping of same.

At this time they are of a light brown color, and have a distended, dropsical appearance. The skin is rather tough and filled with a watery fluid.

The larvæ usually lie on their backs and lengthwise of the cells, both ends sharply pointed, sometimes having black

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and lie against the lower side of the cell,
tending nearly the full length of same,
with black and ragged edges.

The disease looks quite formidable, and
is not surprising that it is sometimes
mistaken for foul brood. There is little,
any, odor present.

Palsy, or paralysis, is a disease of the
adult bees only, and is usually not very
common in the northern states. Often
by a few scattering colonies in an api-
ary will be affected by it.

The diseased bees present a shiny or
glossy appearance, as most of the hair
on the thorax has disappeared, having
probably been removed by other bees in
the colony and teasing them.

Their abdomens are often greatly dis-
torted. They also often shake and stag-
ger about, finally leaving the hive, either
of their own accord, or through expul-
sion by the healthy workers of the col-
ony.

They drop at the hive entrance,
sometimes by hundreds, some crawling
over the ground until they finally
disappear.

Mr. Williams—I would like to ask Mr.
Wright one question, and that is in re-
ference to the season of the prevalence of
these diseases, if either one of them would
be more in the spring or fall than the
other?

Mr. Wright—Yes. We find European
foul brood to be much more prevalent in
the spring. As soon as they commence
their flights rapidly the disease shows up in
the apiaries. After a good flow it dis-
appears greatly unless it is very strongly
established in the apiary. I have a sample
of European foul brood with me that was
taken from a hive about a week ago.

Mr. Holtermann—Does it seem to
be more in the spring than later in
the season?

Mr. Wright—Yes.

Mr. Holtermann—Can you give us any
idea for that?

Mr. Wright—Robbing in the spring is
more prevalent than in the fall.

Mr. Holtermann—The extent of the dis-

ease is not reduced later on in the sea-
son in the individual colony, but it is a
matter of spreading.

Mr. Wright—Yes, in the individual
colony.

Mr. Holtermann—Then that could not
be attributed to robbing very well.

Mr. Brown—I would like to ask Mr.
Wright if Mr. Alexander's treatment of
foul brood has been adopted as the stand-
ard.

Mr. Wright—No, sir. Bee inspectors
have not adopted it and do not recom-
mend it.

Mr. A. I. Root—The gentleman has
brought in what I would judge was a
sample of American foul brood and hand-
ed it to Mr. Taylor.

Mr. Byer—Did I understand you to
say that the odor of European foul brood
is similar to the American foul brood?

Mr. Wright—I so consider it.

Mr. Manley—In bees that are affected
with paralysis, does the disease ever dis-
appear without treatment?

Mr. Wright—It does.

Mr. Manley—Will it eventually destroy
the colony?

Mr. Wright—That I can't say. I don't
know of it having destroyed any colonies.

Mr. Manley—We have been importing
bees by the carload into our State, and
we have had considerable trouble along
that line. I have sometimes thought it
was paralysis, other times I have thought
it not. We noticed the bees in large
numbers crawling over the ground and
moving all over the apiary, and it would
always disappear and we would usually
get a good heavy honey flow. I finally
thought it came from confinement on the
cars. The wings of the bees were worn
out to that extent that those large num-
bers were seen all over the apiary.

Mr. Wright—How long after the mov-
ing did you notice all that?

Mr. Manley—Possibly about three
weeks. I noticed it in the clover flow.

Mr. Wright—Those were old honey-
gathering bees?

Mr. Manley—I can't say whether they
were all old bees or not.

Mr. Wright—I have never known of losses by it, although there may have been.

Mr. Moe—If this specimen of diseased brood was brought in and I got hold of it and got my fingers sticky, and I go home and handle my own combs and bees, what would be the result?

The President—Wash your hands.

Mr. Moe—According to the accounts given here, will that be sufficient, when neither carbolic acid nor heat always kills?

Dr. Bohrer—Do you treat a European foul brood similar to American foul brood?

Mr. Wright—Yes. If you wash your hands in a solution of carbolic acid and formalin it will be all right, I think.

At the request of many in the Convention, Mr. William McEvoy of Ontario addressed the Convention as follows:

Mr. Chairman and Gentlemen,—I am in an awful fix amongst scientists, and I don't take too much stock in some of the scientific work, in a way, to start on, because they are mixed or confounded with black brood and foul brood, or at least European and American foul brood, and to start off I will rule out the American and will speak of foul brood. The other, I think, has a good name to leave it under the name of black brood, because otherwise it mixes matters so. I have not been very familiar with black brood, although I have run across it, and that requires the same treatment as the other. But go back to 1875, when my experience with foul brood was that it broke out in my own apiary. I had heard there was such a thing, and in my ignorance I distributed it splendidly. I would take a comb of brood out of the diseased hive and exchange it with a strong one, and I soon found I was spreading the disease. I tried many things, and I failed in curing it. At last I thought if I would take nice white combs that never had brood in and put them in the colony, it would make a cure. Oh, not so simple! It gave it a great check, though. The bees are a little restless for a while. I

carefully lifted the combs apart to see the queen, and I saw quite a little honey here and there, and I knew they hadn't got it altogether, and I took some of the honey and I fed it to others and I got the disease right from that. That led to finding the honey was diseased. At the time we had no foundation, and I started with extractor, and I can cure any case of foul brood with the extractor. It is not very practical, but this was my early experiment with it. I left the combs with the bees a day for four days, and I extracted each evening; then I took them away and let them gather and give another set of combs and extracted in two days more, and it was a cure. My combs couldn't last out, for I hadn't them spare. Finding that the honey was diseased, I said, Where is the disease? This is the next thing, because all the honey in the foul hive is not diseased—the most of it is sound—because if it was all diseased it would kill all the brood at once but it wasn't. Where was the disease in the brood? I took a wire and ran it across and then ran it crossways again, and I brought the cross rods over the diseased cell; that is where they put the honey on the crust of the old foul brood. I took a pin and I would lift that out and drop a little here and there on the lattice and every one of these went foul. I couldn't give it to the clean cells. Everytime I would dip into that, especially where it was a sort of crust of the old foul brood, that honey was foul.

As my combs gave out I have shut the bees down to let them build. It is a cure in one case and a failure in another. Why? The one had but a little disease and hadn't much loose honey unsealed in the brood-nest; the other was a bad case and they stored a quantity of it all through these cells, and it being the honey flow, as soon as they drew a little of that comb they stored some of it, and it broke out again. When the season gave out in the fall I resorted to building. I would take a board and run a rim around it and run wax in the joints and feed sugar syrup and let them

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long later in the season I found colonies that I didn't think had it, but they were pretty full of brood, and perhaps three dozen cells were foul, and to destroy that brood was going to destroy my fall and winter bees. I shook the bees and gave them plenty of honey to winter, but there was a piece left at the bottom there; they stored some of the honey and started up business. I cut some of these with solid honey, but some of them would build a little comb the bottom and start again. I found later, by letting them go till they hatched out and then shaking, that I could make the cure in that way; and I would feed the sound ones, one here another there, and get capped stores. I shook them all on to capped stores they had no place to put it; they got to keep that honey and consume because these were sound combs.

Speaking of this pickled brood, scientists have looked for the germ. Gentleman, that is starved brood. I have been that for twenty-two years. That takes place in the period between fruit and flower bloom in some localities. They leave the unsealed stores for feeding the bees, and they won't uncap fast enough to keep pace with all the larvæ that require feeding, and the result is that some are well fed, some half fed, and some starved. The gentlemen who have described that starved brood have described it perfectly. On the ninth day, lying on its back, you find it turned up black, as they call it. That is starved. It will die after it is capped and you will often find a bad cap here and there, and you think, Oh, foul brood! No; that is starved. The larvæ didn't get enough and it died. Feeding between fruit bloom or during flower bloom, where there is a quantity of honey for feeding, you will never have that at all. There is one thing in favor of Italians—they are better feeders of bees than any other race I ever found.

On the 28th of May, after a very favorable spring, when the brood were full of brood, a heavy frost

took place and killed everything, and for days it came on rain, rain, rain; the bees used up the unsealed stores, and there was starved brood everywhere all over Ontario. They all thought they had foul brood, but it was starved brood. They sent it away, and some of the scientists said they didn't think it was. In 1895 we had one week in the latter end of May and two weeks in June, when we had so much rain every day. There again we found it. If you will follow up the feeding you will never have that. As far as the treatment is concerned, one shake will do in many cases, but where a farmer has bees and is busy, and has a very bad case in the honey flow, it will not do to shake once only. If he shakes them on to foundation and leaves them sitting in the sun, some of these will swarm out the next day and mix with the sound ones and spread it; but if he shakes them on to starters they will seldom swarm, and four days after that they will be cured. Practical men can cure in many cases in one shake.

I don't know that I have anything more to say on that point than that I think if people would look closer after their bees and attend them there would not be so much disease, but the trouble is by letting them get ahead and then treating.

Mr. Brown—There is one subject that has not been touched upon. A great many bee-keepers keep different watering devices in their yards, and in handling a foul brood colony, if it is badly affected, it has always seemed to me the feet of the bee may become contaminated with the diseased matter, and in visiting a watering dish would contaminate the water and the whole apiary get the disease.

Mr. McEvoy—Eighteen years ago I was appointed inspector. For fifteen years before that I had been treating and I had never disinfected a hive in my life. The question was often put to me this way, How long am I to boil the hive? And my answer was, That will depend upon how long you intend to boil the

bees. What! Boil the bees? Yes. Surely you are not going to take these bees and just throw them all into your nice clean hive without boiling or scalding their little feet, are you? I said, Never mind the hive at all. I will be responsible for it if you will thoroughly cleanse those bees of the honey. An empty hive can't give the disease. The bees do not feed lumber to the larvæ.

Mr. Robb—I would like to ask Mr. McEvoy if foul brood in Ontario is on the increase or on the decrease.

Mr. McEvoy—No. We had it seeded down in thirty-seven counties, but after all that has been written and spoken, it is wearing out; it will never again be bad in Ontario, if we had no inspectors at all, from the simple fact that the people understand it pretty well now.

Mr. Coggshall—Which is the most contagious, black or foul brood?

Mr. McEvoy—Of the two I would sooner take my chances and treat the black than the foul, unless the foul was thoroughly done.

Mr. Byer—Mr. President and Gentlemen: I wish to say I agree thoroughly with our friend Mr. Wright when he suggested to Dr. White that he should put European foul brood first. Some three or four years ago at our Ontario Convention the question was asked, Have we got European foul brood or black brood in Ontario? We have got European foul brood in Ontario at the present time. There is no question about that, on account of its great virulence and a little difference in the way it seems to act as compared with the way Mr. Wright says it acts in New York State. In the first place, where this outbreak has occurred in Ontario it only covers about ten miles square, and a good honey flow has had no effect upon it. It has increased by leaps and bounds. Apiaries that have it in the middle of June are wiped out by September. I have seen larvæ at the age of three or four days dead, just as if a blight had gone over it. I am thoroughly convinced it is not through robbing alone that this disease is spread.

It might be a good thing for Dr. White and others to investigate this disease. In my opinion we practically know all we need know in regard to American foul brood. I don't rush after it, but I do dread it; it has no terrors for me, but I do dread European foul brood. Dr. White told us that practically nothing is known of how this disease is spread. I hope steps will be taken to find that out. I am a honey producer and depend upon honey for a living, and I told Mr. Holtermann, while I did not dread American foul brood, when I got out where European outbreak was it made me shiver. I am not so sure as to McEvoy treatment being as effectual with European foul brood as it is with American foul brood. I do not agree with him that it is easily treated. If he were out for one day where this outbreak in Ontario is he would agree with me that the American is not to be compared to the European foul brood as we have in Ontario. We hear that we got it from New York State. I don't know where we got it, but the fact remains that we have got it, and I earnestly hope steps will be taken at Washington and Ottawa to combat this terrible scourge.

Dr. Phillips—In view of the fact Mr. Byer has spoken of the danger of European foul brood, it might be of interest to get an idea as to where European foul brood is now found in the United States. As near as we know, it was first discovered in New York in 1887 and in 1899 they began to fight it in that State. For a long time it was not found outside of the Mohawk Valley. To understand, it is now found in several parts of New York State and in sixteen other States of the Union.

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well as in Canada. It is a disease that spreading very rapidly, and it will only be a very short time when, in discussing European foul brood, we will have to say it is found in every State of the Union, and in every county, unless some steps are taken to stop it.

Mr. Holtermann—Have there been any reports made to Dr. Phillips at Washington from any other part of Ontario than the one he corresponded with Mr. Byer about?

Dr. Phillips—That is the only one.

Mr. Holtermann—I think our Ontario government is making a mistake. This disease was only in one or two apiaries, and now it covers ten miles square or more. I think between the Provincial and Dominion Government they should at once stamp out every single apiary where this disease is found.

Mr. McEvoy—Do you treat it at all, Mr. Wright?

Mr. Wright—I have cured it.

Mr. McEvoy—Without burning?

Mr. Wright—Yes.

Mr. McEvoy—That is all right. Now, Mr. Byer, you are mistaken.

Mr. Pressler—Mr. Wright has stated that the dread of American foul brood is not as great as it was years ago if we know how to handle it. The people of New York State, especially Mr. Wright, have had considerable experience with black, or European, brood. Do you dread it as much to-day as you did three years ago?

Mr. Wright—Both diseases are bad enough, but Mr. Byer need not dread even European foul brood.

(To be continued)

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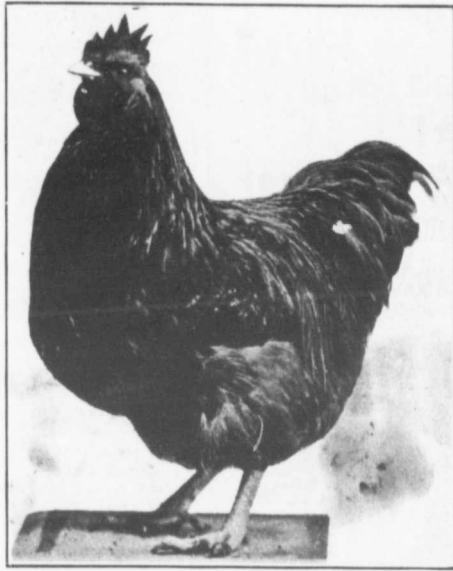
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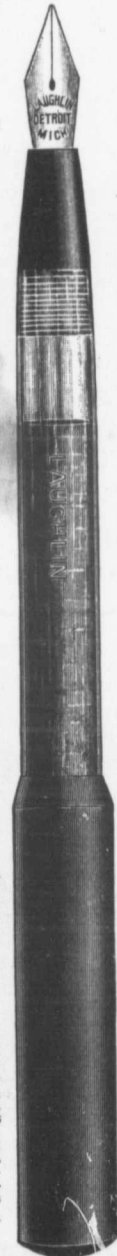
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