

THE CANADIAN BEE JOURNAL

Vol. 19, No. 10.

OCTOBER, 1911

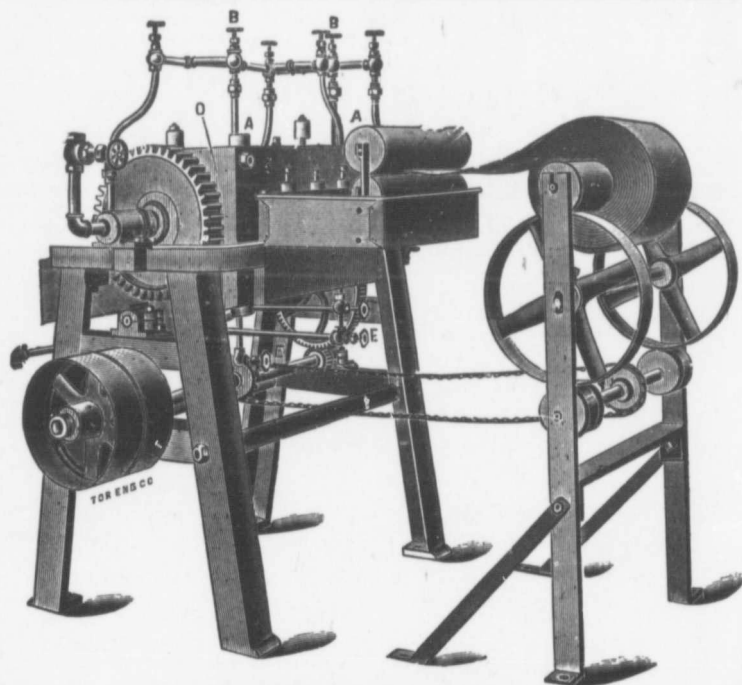
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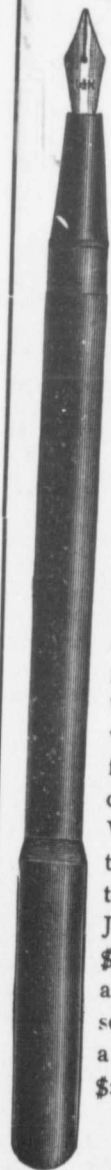
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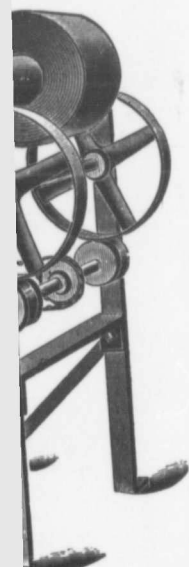
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The Canadian Bee Journal

BRANTFORD, CANADA

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Canadian Bee Journal**

Devoted to the Interests of Bee-Keepers

JAS. J. HURLEY, Editor

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The Canadian Bee Journal

Brantford

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JAS, J. HURL

Vol. 19, No. 10.

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October, 1911

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PUBLISHED MONTHLY

JAS. J. HURLEY, EDITOR, BRANTFORD, ONTARIO, CANADA
W. WHITE, ASSISTANT EDITOR.

Vol. 19, No. 10.

OCTOBER, 1911

Whole No. 560

In going through our mailing lists we find that many of our readers are in arrears with their subscriptions, and we take this opportunity of making a special appeal to them to forward us their remittances without delay. Every subscriber will find a number after his name on the addressed cover in which he receives the Canadian Bee Journal. This number indicates the last issue of the Journal for which he has paid his subscription, being the "whole number" printed on the first editorial page of that issue. Thus for instance, the reader will find on the right hand side of the page just above these notes the whole No. 560, and those who find this number printed on the wrapper in which the Journal comes to hand will understand that we shall be very pleased to receive their subscriptions for the next twelve months.

* * *

According to latest reports reciprocity has been indefinitely postponed! We have requested the Woman's Department to let us down lightly.

* * *

Readers should not need reminding that that now is the time for feeding colonies that have not their proper amount of winter stores. The sooner they are permitted to settle down for the winter the better.

* * *

Jos. Gray gives directions in the present issue for protecting combs from the ravages of the wax-moth. Read the article carefully. It will pay you to do so.

* * *

Dr. H. A. Surface, speaking at the Pennsylvania State Bee-keepers' Association recently, stated that a beginner in

bee-keeping should start with only three to five colonies, and that the increase of his apiary should be in keeping with his knowledge of bee-keeping. There was no better strain of bees than the Italian, and he preferred the eight-frame hive for a quick flow, and the ten-frame for a continued flow.

* * *

Every bee-keeper possesses his little library of bee books. During the next few months he will have many opportunities of settling down and learning all that books can teach him about bees and bee-keeping. If he has not Root's A.B.C. and X.Y.Z. upon his shelf, his library is not complete. Latest edition, magnificently printed and bound, Price \$1.75 postpaid from this office.

* * *

In a current issue of the "Weekly Report" the Acting Trade Commissioner at Havana states that amongst other articles that are admitted into Cuba free of duty are bee-hives and fixtures, and he suggests that Canada could compete with other countries, including the United States, on an equal basis.

* * *

Joseph Gray asks us to "disabuse our minds of the fact that the drone has a grandfather but no father." He contends that there can be no grandsire without a sire. Well, friend Gray, we are willing to concede you a point, and will admit that he is the son of his grandfather! But, tell us wherein we are wrong when, accepting Dzierzon's theory, we state that the drone is the insect resulting from the development of a single germ cell,—one that has been

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given off by the body of the mother, and has developed without its having coalesced with a male cell. Only one parent has supplied a germ cell, and surely we are justified in asserting that in consequence the drone has but one parent.

* * *

A letter from J. E. Hand, printed in "Gleanings" raises a very important and interesting point in the matter of feeding. Mr. Hand has found, and many others too, that feeding with thick syrup is productive of too much excitement in an apiary and conducive to robbing, but that a very thin syrup, sweetened water in fact, when fed out-doors nearly reproduces the conditions that obtain during a natural honey-flow. Mr. Hand mixes the sugar and water in the ratio of one to nine. He is able by means of this "artificial flow" to raise queens as easily as during a natural honey flow, and he claims to have solved one of the problems that confront the queen-breeder during a dearth of honey. We have reproduced Mr. Hand's letter in our "Reviews and Comments."

* * *

A bulletin on agriculture is being prepared by the Dominion Department of Agriculture, which, on completion, will be published both in English and in French, and will be distributed throughout Canada. In addition to general instructions in bee-keeping, it will contain an exhaustive account of bee-diseases and their treatment. In some parts of the Dominion, we have found, methods of bee-keeping have not reached the high level of excellence that they have in Ontario, and the scattering broadcast of such a bulletin should be productive of much good to the bee-keeping profession generally.

* * *

The Division of Entomology at Ottawa, since its organization, has taken a very keen interest in apiculture, and more particularly in the question of bee-diseases, and during the past year or two,

has been keeping in close touch with the Provincial Departments of Agriculture. Dr. C. Gordon Hewitt, the Dominion Entomologist, fully recognises the necessity of undertaking a vigorous campaign against bee-diseases, and we believe he is a man whose name will become very familiar to Canadian bee-keepers in the near future.

* * *

Mr. David Chalmers furnishes much food for thought in his "Observations" this month. "Is the most being done," he asks, "with the funds at our disposal, in the matter of eradicating foul brood?" The tenor of his article shows that he believes much remains to be done, and other prominent bee-keepers have written us to the same effect. As Mr. Chalmers points out, the fault lies chiefly at the door of the careless, ignorant and callous bee-keepers, who do not, and, possibly, will not, carry out the instructions of the Inspectors sent to help them. He makes a strong point in favour of quarantine stations—a suggestion in which he is supported by at least one other inspector. Mr. Chrysler in his report last year stated as follows: "I consider the most effective way, and probably the speediest way of destroying foul brood throughout Ontario, and cheaper in the end, is for the Department to instruct inspectors to have every diseased colony that was not destroyed, shipped to some central place for treatment or destruction, and that the owners receive a small compensation." Another inspector recommended that in all districts where disease was known to exist, the removing of colonies of bees without permission of the authorities should be prohibited by law. For our part, we believe that the funds set aside for the purpose are quite inadequate, and we feel that the time has come for the bee-keepers themselves either to agree to make a voluntary tax, or to urge Government to pass a measure having as its object the raising from among the owners of hives a fund that will enable more energetic and more

effective work being done on the bee pest.

* * *

Bee-keepers would do well to welcome such a proposal of the nature of an "insurance" policy. It is quite possible that such a plan might furnish the means of compensating the owners of colonies burned by the inspectors. The matter is well worth consideration.

* * *

We have on hand, for our next issue, a very useful contribution by Mr. Sladen, (Fellow of the Society of London), the English queen breeder. Mr. Sladen, in addition to being a bee-keeper, is well-known as an expert, and is an acknowledged authority upon the various races of bees. He was but fourteen or fifteen years old when he began his first work (on the honey bee, I believe), and since then he has written a great deal on various subjects connected with the natural history of bees, and the queen-rearing ("Queen Rearing in England") is a valuable work which has placed him in the front rank of bee writers on apiculture. He has in some years ago journeyed to Italy to study the various races of bees, and is no man living who is better qualified to write upon the question of queen-rearing than he. His work is good enough to deal with the question of "The Bee for the Breeder."

* * *

In our present issue, we have a letter from a reader, who, having been interested in Dr. Miller's article, asks for directions as to how to make a start. The bee-keeper who desires to Italianise his yard must first of all choose a good Italian queen. The best obtainable Italian queen should be the best obtainable. The bee-keeper should raise or buy a queen every colony in his yard has not been Italianized. The young queens will mate

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from a reader, who, having become in-
terested in Dr. Miller's article last month,
asks for directions as to how he should
make a start. The bee-keeper who de-
sires to Italianise his yard may commence
with one good Italian queen, and she
should be the **best obtainable**. From her,
the bee-keeper should raise enough queens
to requeen every colony in his yard. But
the yard has not been Italianized yet, for
the young queens will mate with black

drones, and the worker progeny will be
half-breeds. The young drones, however,
will all be pure Italians, and if we raise a
fresh lot of queens the next season from
the original pure Italian queen, and again
requeen the whole yard, we shall have
nothing but pure Italian queens mated
with pure Italian drones in our
apiary. We are now in a position to
commence operations in selecting and
improving our strain of bees.

* * *

If we are to obtain an accurate esti-
mate as to the relative merits of the
various queens that are under observa-
tion, we must remember that it is abso-
lutely necessary to preserve uniformity in
the conditions. It should also be unneces-
sary to insist that accurate records be
kept of the various colonies; also that
when you have found a tip-top breeder,
she should never be killed until you have
found a better.

* * *

Let us here remark that there is one
point that bee-keepers appear to over-
look in the "Keep Better Bees" discus-
sion that is taking place in the various
bee journals of this continent. It is this.
The progeny of a specially good queen,
on the average, are not so good as their
mother. Like does **not** breed like. On
the other hand, the progeny of a poor
queen, **on the average**, are better than
their mother. These statements may ap-
pear somewhat paradoxical to many, and
it is important that the matter should be
clearly understood. Let us endeavour to
explain it. Supposing a breeder raises
a hundred queens from one selected
queen. Now if we could accurately meas-
ure at the end of their first season the
achievements of the colonies to which the
hundred daughters are given, we should
find that a certain proportion of the col-
onies would be below the average as
regards honey production, while
perhaps a similar proportion would
be above the average. The
average yield of the hundred would be

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much below the achievement of the parent colony. Now, very possibly, one of the hundred daughters will be found more efficient in the matter of producing good honey gatherers than her mother. If we raise another hundred queens from this daughter and place them at the heads of our colonies, we shall find precisely the same wide range of variation in the yields of honey, but at the same time we may obtain a slightly better average for the whole yard. Repeating this operation of selecting the very best daughter each time, and raising from her all the queens needed, we shall slowly, but surely, raise the average yield per hive. We have nothing to fear from inbreeding so long as we are selecting for efficiency and vigor. On the other hand, it will be absolutely dangerous for the man who is practising line-breeding to introduce fresh blood.

* * *

In his interesting notes on bee-keeping in British Columbia, Mr. Wm. L. Couper asks us why we believe the elimination of the swarming instinct in bees would mean probable destruction to the honey-storing instinct. We don't think we said quite that. We, however, believe that bound up with the swarming instinct are others which may include the honey-storing instinct. We believe that the instinct which compels a very large portion of the colony to abandon its hive in the height of its prosperity to find a new home is an all-important characteristic in the "make-up" of the bee. The instinct, whilst it may be modified within certain limits cannot, we assert, be eliminated. If, however, Mr. Couper can produce a single colony in which the tendency to swarm is suppressed, it will be a comparatively easy matter to perpetuate such a race.

* * *

We should be glad to hear from our readers on the point raised by Mr. Couper regarding honey-dew. Our own personal experience is that the conditions

mentioned greatly favor the gathering of honey-dew by bees. The liquid excreted by the aphids quickly dries in the hot sun into a varnish, upon which the bees do not work. During the cool of the night, however, moisture is precipitated upon the leaves, forming a honey-dew solution which in the morning attracts immense numbers of bees. On warm, misty mornings, such as Mr. Couper refers to, we have climbed trees and watched the bees upon the moistened leaves.

TREATING EUROPEAN FOUL BROOD IN THE FALL

Indexed

By Morley Pettit

In reply to one of our correspondents, who has European foul brood in his backyard, the Provincial Apiarist, Mr. Morley Pettit, writes as follows:

Owing to the nature of European foul brood, which is prevalent in your correspondent's neighborhood, there is nothing that can be done for him this fall, except to advise him to requeen his colonies with some good stock of Italian queens. In fact this is about all that can be, and that is necessary to be done for this trouble.

When we detect the disease in an apiary about the beginning of the swarming time, so that the "shaking" treatment can be applied without serious loss to the apiary, we advise that treatment; but if the disease is detected in the fall, we certainly do not advise anything but Italianizing, as that alone will generally cure the trouble. It will at least hold it in check until the next swarming season. There is absolutely no use trying to cure black bees of this disease. The only sure method is the introducing of Italians.

Guelph, Ont.

October, 1911

BEE-KEEPING IN BRITISH COLUMBIA.

Indexed

By Wm. L. Couper

I have read with interest Mr. Couper's remarks on bee-keeping in British Columbia. It was very interesting to hear of the conditions here and the conditions here. Last spring was, I fancy, an unfortunate one for bees, as the willow and fruit bloom were very late, and the weather was very cold and wet. In my apiary, which was in full bloom after a ten days' trip from Vancouver, the bees built up more quickly than I had believed possible. White clover yielded any honey, to speak of, in the middle of June, though the dandelion bloom in May. Due to the cool, wet weather, the clover did not last long, but I think very little honey went into the stores. Scarcely appeared to yield any honey in the district I should put raspberries, a nectar producer, closely followed by the weed, which came out about the middle of the month. At this date (the 15th) there is still a little left. I have put third, and snowberry, and the latter comes into bloom very late; when it ceases, I have a lot of flower on the ground. There is always a number of bees on the ground, it may yield more than I had expected. I took our weather in charge, and it was very hot and dry after the first three weeks of the hot weather. There was a fair flow and a good crop of honey. Since that time there has been practically nothing done, and the bees are picking up a living and the hives are still full. Among wild flowers, there is nothing worthy of mention, as it is only between fruit bloom and clover

favor the gathering of bees. The liquid exudes quickly dries in the varnish, upon which the bees. During the cool of the day, moisture is precipitated, forming a honey-dew in the morning at the numbers of bees. On the wings, such as Mr. Couper have climbed trees and upon the moistened

EUROPEAN FOUL BROOD IN THE FALL

Morley Pettit

of our correspondents, a foul brood in his bee-keeping Apiarist, Mr. Morley follows:

the nature of European foul brood is prevalent in your correspondence, there is nothing new for him this fall, except to requeen his colonies with stock of Italian queens, and all that can be done for this

to detect the disease in the beginning of the swarming at the "shaking" treatment, and without serious loss, I advise that treatment; if it is detected in the fall, do not advise anything but what alone will generally

It will at least hold it off until the next swarming season, absolutely no use trying to cure of this disease. The only thing is the introducing of

BEES-KEEPING IN BRITISH COLUMBIA.

Indexed

By Wm. L. Couper

I have read with interest Mr. Alpaugh's remarks on bee-keeping in British Columbia. It was, I think, at Chilliwak that he met Mr. Dundas Todd and the conditions here would be similar. Last spring was, I fancy, a particularly unfortunate one for bees. All through willow and fruit bloom there was scarcely a day on which they could fly, owing to cold and wet. In spite of this my apiary, which was in very bad shape after a ten days' trip from Saskatchewan, built up more quickly than I should have believed possible. White clover did not yield any honey, to speak of till after the middle of June, though there was abundant bloom in May. Owing, I suppose, to the cool, wet weather, it lasted a very long time, but I think very little clover honey went into the supers. Alsike scarcely appeared to yield at all. In this district I should put raspberry first as a nectar producer, closely followed by fireweed, which came out about June 20th, and lasted in full bloom for at least a month. At this date (the end of August) there is still a little left. Clover I should put third, and snowberry fourth. The latter comes into bloom very soon after clover; when it ceases, I don't know. There is lots of flower on it yet. There are always a number of bees on it, and it may yield more than I think. We took our weather in chunks this year, cold and wet till nearly the end of June, very hot and dry afterwards. For the first three weeks of the hot weather, there was a fair flow and a good deal of swarming. Since that time there has been practically nothing done, though bees are picking up a living on golden-rod, and the hives are still full of brood. Among wild flowers, thimble berry is worthy of mention, as it fills up a gap between fruit bloom and clover. I have

noticed that there is always a very strong flight here, on misty mornings. I tried to track them, but they were flying so high that I lost the line of flight, but some of them were working on honey-dew, although, I think, not many. Will somebody who has had experience with honey-dew tell me whether misty mornings are likely to favour it? I never saw it in Saskatchewan.

Before leaving the subject of British Columbia as a honey producing country, I should like to remind readers of the C. B. J. that there is more than one climate in this province. In conversation with Mr. Harris, the very able foul brood inspector for the Upper Country, I gathered that his average yield of honey was extremely good. The cool nights mentioned by Mr. Alpaugh are not so much in evidence there.

I note the experience of the editor of the Woman's Department with Alexander's plan for building up weak colonies in spring. I have experimented with this plan more or less every spring since it was first published. The results I gave in detail in Gleanings some years ago. Here, I may state, that, given the right conditions, it works to a marvel. These conditions are: first that the lower colony must be particularly strong—boiling over, in fact, with bees; second, that the queen of the weak colony must be young and prolific; third, a fair flow of nectar or feeding. The second condition will account for many failures. The very weak colony is often so, simply because of a poor queen.

I should like to ask the editor whether he has any reasons for believing that the elimination of the swarming instinct would also destroy the honey-storing instinct. That this should be so would be quite in line with scientific breeding; but the results I have seen quoted point the other way. —[See note in Editorial columns.]

Hatzic, B. C.

WOMAN'S DEPARTMENT

CONDUCTED BY

Miss Ethel Robson, Ilderton, Ont.

This month we had the opportunity of calling on some of the neighbouring bee-keepers. Mr. Robt. Wallace, Vanneck, was the first one visited. Mr. Wallace takes great satisfaction out of his gasoline engine for extracting, and finds it away ahead of hand power. No doubt it must be, but the greatest drawback, from my point of view, would be the noise and constant chucking of the engine, which would be a little trying to the nerves. I suppose a man does not mind these things, though. Just outside the extracting room, Bro. Wallace has a circular saw, and by removing a door, and changing the belt, he can turn the power on to it. It is a good idea, but I believe I should prefer to have it attached to the washing machine instead.

A pleasant hour was spent with Mr. Moses Pierce of Brinsley, the president of the Middlesex B. K. A. He was a fine lot of bees, and being fortunate in getting rain just when it was needed, secured a good crop of honey.

But the longest time of all was spent with Mr. John McEwen. There are few bee-keepers whose hearts are not in their work, but Mr. McEwen ranks among the first in enthusiasm. The years spent among the bees have each added to their interest for him, until to meet him now is little short of an inspiration. He served his apprenticeship in the lean years, when honey was almost a drug on the market. Now, with the advent of larger markets and better prices, he is in a position to reap the full benefit. It always helps your enthusiasm to have your efforts crowned by success, and it certainly is a source of satisfaction to find your chosen avocation producing a comfortable independence for the latter end

of life. Mr. McEwen last spring removed from his old place near Claudeboye to a farm which he purchased right in the Alsike district, not far from Craig, and where he has better and much more commodious quarters for his work. The whole farm is full of clover, and experts told him that last summer \$500 worth of clover seed must have been threshed out in the fields. Think of the prospects for clover next year! He has divided his apiary, his son keeping part at the old place. Like his neighbour, Mr. Pierce, Mr. McEwen got the rains just in the right time, only, perhaps, more of them. He tells with enthusiasm that he never before saw such a harvest of clover honey, nor does he expect to see it again.

With his bees in the best of shape in the spring, is it any wonder he secured a great crop? It is these people up in the north part of Middlesex who got the rains when they were needed, and who brought up the average for this county above that of the rest of the province. I asked Mr. McEwen if he found any difference in the yields from his year-old and two-year-old queens, and in reply he said "no," that both had done equally well, but that he did not think it wise to use the queen the third year. He thought that there was, perhaps, a little greater tendency to swarm among the two-year-old queens than among the younger ones. Then we fell to discussing swarm control. "Swarming," he said, "no longer troubles me. And I wouldn't have anything to do with a system which involved looking for queen cells." But in all else his methods of swarm-control seemed to be identical with those recommended by the provincial apairist. By giving plenty of room and ventilation,

October,

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swarming is reduced to such a minimum that it really wouldn't pay for the labour of getting down to the brood chamber to examine it during the heavy flow of honey he experienced last year. The time could be much more profitably spent attending more bees.

The elections have come and gone, and reciprocity has been defeated at the polls. For some time to come bee-keepers will have nothing to fear from free honey. Having the market pretty much to ourselves, it behoves us, since we have elected to remain as we are, to view our natural responsibilities, as well as advantages. There is one responsibility in particular which I should like to call attention to, that of keeping up a representative and creditable national journal. Our editor is doing good work, but everyone must remember that getting material together is not easy work, nor is the subscription list sufficiently long to make the labor particularly remunerative one. Printing is Mr. Hurley's livelihood, just as bee-keeping is ours. We know how we were stirred up when we thought our markets endangered. Even if some do not agree with him in matters of trade policy, yet we have but one Canadian Bee Journal, and our national pride ought to prompt every one of us to lend a hand, that the labour of producing it fall not too heavily upon one. Let us have full and generous reciprocity of ideas, so that if the time should come when the government could no longer extend to us the present protection, we may, by mutual good will and fellowship, have so developed and organized our business that we should have no need to fear any competition.

The honey exhibit at the Western Fair was not large. There were only three exhibitors, but even so it made an attractive display. Mrs. Anguish was there attending to the business end of the exhibit when I called around. We are sure she is one of those "silent partners," who

have done much to make the bee business a success. This department would like very much to hear from her.

The O. A. C. had the exhibition of handling live bees again on the grounds, with some of the students interested in apiculture in charge. My visit was paid too late in the day to see a demonstration. Bee-keepers are not altogether favourable in their comments on this method of bringing bee-keeping before the public, the fear being that making a popular side-show of bees may have a tendency to make bee-keeping appear mere child's play, and so help to swell the ranks of incompetent bee-keepers. Bee-keepers welcome all capable men to their ranks, but they do fear the man whose bees, being only a side line, will usually have to take chances, and if disease should strike them, become a menace to the whole community.

An exhibit from the Middlesex B. K. A. did not materialize at the Western, the committee, like the committee on cooperative selling, finding too much indifference among the bee-keepers to warrant the undertaking. The truth is that marketing conditions are at present too favourable for the need of such an effort to be apparent. With honey wholesaling at from 11 to 12 cents, bee-keepers are well content.

Wandering through the transportation building, a comfortable little motor runabout tempted me to sit down and rest. Presently the manager of the exhibit came along, and we fell into a conversation about automobiles. Now I have always been interested in autos, because they seem such an excellent rig for getting around among bees with. The fact that one's horses are so afraid of bees is one of the principle reasons why I had no bees in an out-yard this year. I have hitched horses up to a load of honey with the bees buzzing all around, and though I have had no accidents so far, I have been pretty well frightened a few

times, and now when I see one of the horses pricking her ears at the buzzing of a bee my knees grow weak and my heart rises in my throat, and as quickly as possible I get her safely out of danger. Now an auto would be perfectly reliable. Well, I was telling my own particular needs in the way of an automobile, and was much interested to hear that the Harding Company of London have now in the course of construction a light

utility motor just such as bee-keepers would need, and one which could be converted into a pleasure car by the addition of another seat behind. The manager told me they had been forced to build this car because of the popular demand for it. Bee-keepers, a great day is coming for you, for with gasoline engines to do your extracting, and automobiles to go about in, you will be the envied of the earth!

BEE-KEEPING BY TWENTIETH CENTURY METHODS

Indexed

By J. E. Hand

In reviewing certain parts of my book, "Bee-Keeping by Twentieth Century Methods," Miss Ethel Robson, the able editor of the Woman's Department in the September number of the C. B. J. frankly confesses to a certain degree of scepticism regarding some of its seemingly extravagant statements. The book in question is chiefly intended to introduce the new system of bee-keeping in connection with the "Double Bottom-Board" equipment, for the control of bees with the minimum of labor, and unless the equipment is used according to the instructions laid down in the book no one can judge intelligently concerning the merits of the system. Notwithstanding her scepticism, however, I wish to thank the worthy editor for the very kind and courteous manner in which she has reviewed the new system. The proof of the pudding, however, is in the eating, and it is hoped our worthy critic will not allow her scepticism to dissuade her from trying a system that perhaps may have more merit than would seem from outward appearances. To her statement that no amount of system will make up for that instinct acquired by constant living with the bees, I might retaliate by saying that no amount of acquired instinct (if there be such a thing) can make up for a lack of system. Instinct

is something but system is everything. Instinct tells us to watch and wait day after day for the issuing of swarms, but system enables us to have our swarming all done at the right time, and all at one time, thus enabling us to turn our attention to things of more importance than watching for swarms. Without systematic effort but little is accomplished along business lines, and bee-keeping is no exception to the general rule.

We plead guilty to a certain amount of enthusiasm concerning the new system of swarm control which may perhaps be judged from the standpoint of the "greatest higher than a farmer bee-keeper. Yes, we have tried farming in connection with bee-keeping as a side line for something like 35 years, and are still trying it.

Bees and Farmers.

Right here the question arises, should the farmer keep bees? Viewing the subject from the standpoint of the "greatest good for the greatest number," I think all will agree that every farmer should keep at least one colony of bees. Farmers and horticulturists are awakening to the fact that the honey bee performs an important office in the fertilization of the blossoms of field and fruit crops; that this knowledge has induced many to become interested in bees aside from the honey they may produce, no one can deny. With the ravages of foul brood staring us in the face on every side, the average farmer bee-keeper is not a dis-

sirable proposition. He not change the fact that management bee-keeping fully carried on in commercial farming. By this that every bee-keeper is er. From the "dollar a view, no one can deny icalist has the advantage

That the swarming is the greatest obstacle in the successful comb honey production no one will deny; with it solved the most fancy apiary, "Comb Honey," produced in out-apiaries as tracted. For many years devoted his best energies ment of a system of swarming the minimum of labour; labours along this line is bee-keeping public. A trial covering a period of I am unable to improve stand or fall by its own

Re-Queening

To the question, "do every year have a tendency to swarm?" it is my candid it will not only reduce swarming will also have a tendency will also have a tendency honey crop materially. It that a young queen reared of the honey flow will keep rearing late in the fall, with vigor early in the spring force of young bees will quarters and a strong force come out for the coming the other hand, aged queens be found wanting in these the right system, there is it will pay—and pay big—least once in two years.

Do bees transfer eggs to another? Personally, I do not fact that, in the case of eggs produced by bees, that it was a case of mild

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sirable proposition. However, this does not change the fact that under intelligent management bee-keeping can be successfully carried on in connection with diversified farming. By this I do not mean that every bee-keeper should be a farmer. From the "dollar and cent" point of view, no one can deny that the specialist has the advantage.

That the swarming problem has been the greatest obstacle in the pathway of successful comb honey production, I think no one will deny; with this problem once solved the most fancy product of the apiary, "Comb Honey," can be produced in out-apiaries as cheaply as extracted. For many years, the writer has devoted his best energies to the development of a system of swarm control with the minimum of labour; the result of my labours along this line is now before the bee-keeping public. After an extended trial covering a period of three seasons. I am unable to improve upon it; it will stand or fall by its own merits.

Re-Queening Pays.

To the question, "does re-queening every year have a tendency to lessen swarming?" it is my candid opinion that it will not only reduce swarming, but it will also have a tendency to increase the honey crop materially. It is well known that a young queen reared after the close of the honey flow will keep up brood rearing late in the fall, and will begin with vigor early in the spring; a strong force of young bees will go into winter quarters and a strong force of workers come out for the coming harvest. On the other hand, aged queens will often be found wanting in these respects. With the right system, there is no doubt that it will pay—and pay big—to re-queen at least once in two years.

Do bees transfer eggs from one cell to another? Personally, I don't know. The fact that, in the case mentioned, the eggs produced drones, might indicate that it was a case of mild laying workers

which are by no means uncommon, even in colonies in a normal condition.

The writer is always interested in anything connected with queen rearing, which is his chosen hobby, and when the sister related her disappointment in finding a choice batch of queen cells destroyed it was with a certain degree of satisfaction and security that we thought of our Cyphers incubator that takes such motherly care of all our queen cells during their period of incubation. These incubators are provided with a thermostat that is almost as sensitive as a thermometer, and will maintain a uniform temperature, which cannot be said of an ordinary hive, especially in the spring and fall months, when the nights, and sometimes the days, are quite cold. As a rule, queens that are hatched under a correct and uniform temperature are handsomer, as well as stronger and better developed, than those that are hatched in a hive with a varying temperature. All our queens are hatched in an incubator under a temperature of 96 to 97 degrees. Any incubator that will hatch chicks successfully will hatch good queens every time, other things being equal.

Birmingham, O.

"The Virginian creeper (ampelopsis quinquefolia) so often planted to cover porches, palings and walls, develops flowers in midsummer which are visited by bees very industriously and eagerly. The color does not act as an allurement in this case, for the flowers have green corollas, are hidden away under the foliage, and cannot be seen by good eyes even at a little distance. Yet the bees fly thither from all sides in such a way as to leave no doubt that the flowers of the Ampelopsis can be perceived by them a considerable way off. Since it is not their appearance, it must be their smell which announces their presence! But to men they appear quite scentless."—Oliver and Kerner.

NOTES FROM HURON COUNTY.

Field Demonstrations, Honey Prices, etc.

Indexed

By Jacob Haberer

Quite a few field or apiary demonstrations have been held in Ontario during the present season, and I have no doubt that such meetings are more instructive to ordinary bee-keepers than the winter conventions. To see and to be shown will always be more helpful to most people than merely to hear. Our Huron County Association have held two apiary meetings, one at the writer's home yard at Zurich, and the other at Mr. Isaac Dodd's apiary in Clinton. The first meeting, I am sorry to say, could not be called a success, for on that occasion we struck a rainy day. It was only one day too soon, as after that we had no rain at all for a month. There were but a dozen bee-keepers present. The worst disappointment of all, however, was when the demonstrator, Inspector Schrank, failed to appear, which was also the case at the second meeting at Clinton. The fault was not Mr. Schrank's, as we understand that he did not receive his instructions from headquarters until after the meetings were over! The owners of the apiaries acted as demonstrators in his absence, and at the Zurich meeting, during the few fine hours we were fortunate enough to get, the writer gave his audience information on queen-rearing, forming nuclei, wax rendering and saving. But on the real subject of interest, the one that everybody was anxious to hear about, viz., foul brood, I could give only what I had read and heard about it, and describe only what I had seen of a sample of foul-broody comb a few years ago at a Toronto convention. If we live on another year we hope to be more fortunate.

Our new Association numbers twenty-four members.

In consequence of the crop reports

issued by the Honey Crop Committee and published in the Canadian Bee Journal, it seems that honey prices are stiffening in this neighborhood. Before this year very little honey was sold at a higher figure than 10 cents, except my own and a few others. A very good-hearted lot these bee-keepers are compared with other people in the community! Imagine a farmer selling his wheat at 75c. when it is worth a dollar. "Customers don't want to pay more," is generally the answer when I speak to these good-hearted fellows. But I have sold nine-tenths of my own crop now without much trouble at from 12 to 13 cents. Only one customer was trying to cut my price. Of course, he will look out for a 10 cent honey producer.

My crop has been small—perhaps I should not tell how much. Those lucky fellows will laugh, but it is of no use hearing only of big yields. Only 8000 pounds of honey of good quality from 250 colonies! Zurich, Ont.

REPORT OF THE O. B. K. A. HONEY CROP COMMITTEE

Dark Honey Prices—"Scare Cards"

The Honey Crop Committee of the Ontario Bee-Keepers' Association met at Toronto on Wednesday, September 6th, to consider the crop reports received from the bee-keepers of the province, and to recommend prices for dark honey. A good many reports were sent in, and after considering these the committee came to the conclusion that the dark honey crop was about the same as last year. Owing to the shortage in the early fruit crop, there has been less home canning than usual, which will undoubtedly result in an increased demand for honey.

Prices for dark honey are suggested by the committee as follows:—

In lots of one ton and over to wholesale

October, 1911

grocers or commission

In smaller quantities

7½c to 8c.

Retail direct to cons

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ONTARIO BEE-KEEPING

Coming Annual C

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by Crop Committee and Canadian Bee Journal, prices are stiffening. Before this year was sold at a higher price, except my own and very good-hearted lot are compared with the community! Imagine wheat at 75c. when last year. "Customers don't buy," is generally the answer to these good-hearted. I have sold nine-tenths of the crop without much trouble for 13 cents. Only one thing to cut my price. I will look out for a 10 per cent.

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O. B. K. A. HONEY COMMITTEE

Prices—"Scare Cards"

The Crop Committee of the Ontario Beekeepers' Association met at Guelph, Tuesday, September 6th. The report received from the various sections of the province, and the prices for dark honey. A list of prices was sent in, and after the committee came to a decision that the dark honey crop was about the same as last year. Owing to the early fruit crop, less home canning than last year will undoubtedly result in a demand for honey.

Dark honey are suggested by the following:—

Wholesale and over 100 wholesale

grocers or commission houses, 6 $\frac{1}{4}$ c to 7c. In smaller quantities to the retail trade, 7 $\frac{1}{4}$ c to 8c.

Retail direct to consumer, 9c. to 10c.

In answer to the committee's inquiry regarding prices realized for light honey, 100 per cent. of the bee-keepers stated that the committee's recommended prices had been obtained. A very large local trade was reported from many points, and the committee urged that this local trade should be encouraged as much as possible. The demand for honey will undoubtedly result in an increase in the price in dark grades.

After referring to the "scare" card recently issued by Rutherford, Marshall Ltd., on which we have already commented in the columns of the C. B. J., the committee reported that the manager of the National Bee-Keepers' Association, Mr. N. E. France, in writing to a member of the committee, had stated that the United States honey crop was the shortest in twenty years, and would fall far short of supplying the home demand in the States. The committee thereupon urged bee-keepers not to take any notice of reports, which were issued by dealers with the purpose of bearing down prices.

ONTARIO BEE-KEEPERS' ASSOCIATION.

Coming Annual Convention

We are able to announce that the arrangements for the coming convention of Ontario bee-keepers are well in hand, and that very shortly the programme will be ready for mailing to members. What we believe to be a step forward is being made this year in changing the programme so as to cut out the discussion of matters of minor importance, and in confining the subjects of the addresses principally to matters connected with the business end of bee-keeping. Now that local organizations exist in most of

the bee-keeping counties of Ontario, it is considered that the meetings of these county associations are the proper places at which to discuss such subjects as are interesting and useful more particularly to beginners.

At the Convention it is proposed that one or more sessions be devoted to co-operation, including the co-operative purchasing of supplies and handling of the crop, etc.

Two sessions will probably be devoted to a thorough discussion of the foul brood situation, especially with reference to European Foul Brood. In connection with these two matters Dr. Phillips of the Department at Washington, Mr. Stewart, chief inspector for the State of New York, and Mr. Tyrrell, secretary to the National Association, have been invited to take part in the discussions. The latter gentleman has also been requested to address the Convention on the subject of "Organization," which matter will also be discussed.

Mr. Robert Thompson, of the St. Catharines Cold Storage Company, will likely speak on the co-operative purchasing of supplies. He has probably had a wider experience in this connection than any other man in the province. He is the manager of the Co-operative Fruit Growers' Association at St. Catharines, and handles thousands of dollars' worth of supplies each year.

Altogether, the Convention promises to be one of the most profitable and interesting in the history of the O. B. K. A.

NEXT SHORT COURSE IN APICULTURE AT O. A. C., GUELPH.

A second Short Course in Apiculture will be held at the Ontario Agricultural College, Guelph, in January next, full particulars of which will be shortly announced.

NOTES AND COMMENTS.

Introducing Queens—Partial Failure of
Buckwheat.

Indexed

By J. L. Byer

Most of us are no doubt much interested in rearing queens and in the best methods of introducing the same, so, needless to say, the contents of the September C. B. J. have been read with interest. While the scheme of playing "cuckoo" in the substituting of one larva in the place of another is not new, yet I believe friend Chrysler is the first one to come under our notice as having used the plan in an extensive and systematic manner. It certainly looks good to this scribbler, and if spared till another season I shall try the plan myself. If Mr. Chrysler had not given the plan such unqualified commendation, I should have been a bit afraid that the bees, after the first cells constructed had been torn down at the end of five days, would again have drawn out some more cells from quite old larvae. Sometimes the bees, in desperation, will try to make a queen from any old kind of a larva so long as it is not sealed over, as all of us know who have had provoking things to occur when we have been introducing queens. That they always accept the grafted larvae, as friend Chrysler says they do, is good news, as the plan is one that can be readily put into use even by a novice.

* * *

Re the introduction of queens, there is no question but that friend McEvoy has given one of the safest methods if one cares to go to so much trouble as the method requires. Right here I would say that we happen to know of the fact that some of the most extensive queen-rearers are thinking of popularizing a plan of introducing queens, directly along the lines of the plan referred to, the main object in view being to avoid having the candy in the cages being consumed by the bees of the colony to which the queen

is being introduced. Reports have arisen from time to time as to foul brood being transmitted in mailing cages, and naturally queen breeders would welcome some system of introduction that would take all chances of suspicion away from any and all of them.

For a number of years we used the cage plan as advocated by Mr. McEvoy and to the best of my knowledge never a queen was lost. For a few years past the plan has not been used, as it means quite a lot of work when a number of queens are to be handled. However, the plan as used by us was a modification of the one Mr. McEvoy gives, and in our humble opinion quite a bit better, too.

Instead of caging the queen over unsealed honey, I was always careful to see that she was over emerging brood, and it would surprise one to look in the hive in a day or two afterwards and see the crowd of young bees around the queen. As a rule, the bees would automatically release the queen and bees by tunnelling under the corner of the cage and with all these young bees with the queen, I believe she will always be accepted.

Of course, the honey under the cage will do no harm anyway, but in so far as the queen is concerned, I have no idea that it will do no good, as the sooner the queen assumes the attitude of a suppliant and begs for food, the better are the chances of her safe introduction. As to tearing out all cells before allowing the queen her liberty, up till this fall I fully believed in the necessity of such a method of procedure, but at the present am more than sceptical as to its being the best thing to do. If bees are inclined to rob, certainly leave the cells alone, as the excitement caused by going through a colony at a time like that is more dangerous to successful introduction than the cells that may be in the hive. During the past few weeks we have introduced quite a few dozen queens under the most adverse circumstances imagin-

able, and in a few words the work was done, to results that attended the first place, the yard was from home, so that time was consideration. The apiary had and at the time of our visit honey was coming in to plenty and all work had to be tent—even then they would row when the tent had from over a colony after queens. My original intention use the plan given by Mr. introducing queens, but found in the apiary made practicable, as the least opening brood nests, the

The plan used in introducing queens was as follows:—A closed window in the horizontal queens were taken out of transferred into other cages with candy in the usual plug of candy in the end cardboard was placed, but perforated with a pin until it held together, the object the bees liberate the queen to six days without my having to open the hive again when the queen was laying. On the morning after killing the queen thus prepared was shoved end downwards between the latter being spread apart. The second evening was count of the excited state the first night after the queen. Just here let me remark I knew that 40 or more queens queenless in a single day such a racket—certainly under such circumstances. Results with this simple plan know, not a single queen the conditions were very producing, no one was more myself. With regard queen-cells, no less an

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able, and in a few words I will tell how the work was done, together with the results that attended the same. In the first place, the yard was over 200 miles from home, so that time was a prime consideration. The apiary has 230 colonies, and at the time of our visit not enough honey was coming in to prevent robbing, and all work had to be done under a tent—even then they would kick up a big row when the tent had to be lifted from over a colony after hunting out the queens. My original intentions were to use the plan given by Mr. McEvoy for introducing queens, but the conditions found in the apiary made the plan impracticable, as the least we had to do opening brood nests, the better.

The plan used in introducing the queens was as follows:—In front of the closed window in the honey house, the queens were taken out of the cages and transferred into other cages prepared with candy in the usual way. Over the plug of candy in the end of the cage, cardboard was placed, but this was perforated with a pin until it would scarcely hold together, the object being to have the bees liberate the queen in from four to six days without my being compelled to open the hive again until after the queen was laying. On the second evening after killing the queen, the cage thus prepared was shoved down candy end downwards between two combs the latter being spread apart for the purpose. The second evening was chosen on account of the excited state of the bees on the first night after the queen was killed. Just here let me remark that I never knew that 40 or more colonies made queenless in a single day would kick up such a racket—certainly they will sting under such circumstances. Now as to results with this simple plan—so far as I know, not a single queen was lost. As the conditions were very bad for introducing, no one was more surprised than myself. With regard to cutting out queen-cells, no less an authority than

Geo. B. Howe had written me previous to my leaving home, saying that when the bees were ready to accept the queen it would not be necessary to tear down the cells, and in this case, at least, I found that he was correct. In front of many of the colonies, after six days, I found cappings of queen cells at the entrance, and curiosity compelled me to look into a lot of these hives, against my better judgment, and in every case, the torn-down cells were in evidence. Fifteen queens were run in the colonies in the evening, after thoroughly smudging with tobacco smoke, and in this case I lost one queen—the first one attended to in the evening. Evidently not enough smoke was used, or else it was too early in the day. It is only fair to say in conclusion, that since coming home I have tried to introduce 18 queens and have lost two. In this case the cages were of the wide style, and were laid on top of the combs. Not a particle of honey coming in may help to explain the loss—anyway, two queens were killed, explain it as you will.

* * *

Last night (September 13th) there was a heavy frost in our section, and many acres of late buckwheat have "tired feeling" this morning, judging by the looks of the plants. Owing to the extreme drouth in the latter part of June and early July, most of the buckwheat around here was not sown till July 12th, now that frost has come, too late for this year, so far as a crop of seed is concerned, and too late also for much honey. Here we rarely get much buckwheat honey after August 20th. At the Altona yard, eight miles only from home, a few early fields were sown, and as the ground has been well worked all summer, enough moisture was there to germinate the seed. Much to our surprise, those early fields yielded well, with the result that all the supers were jammed with honey; while at the other three yards around home scarcely any

honey went in supers, although the brood nests were made quite heavy. However, we are glad for the surplus at the one yard, as we find that there is enough honey there to pay for all sugar needed for the other yards and still leave enough money over to keep us in "beer and baccy" for the year to come.

* * *

That item on the first page of the September C. B. J. re the amount of honey imported from the West Indies into Canada last year is a puzzler to me. One firm of manufacturers that I am well acquainted with use 100,000 pounds of honey in their business each year, and the manager of that same firm told me just a year ago that they were again getting all their honey from Jamaica as usual, as when they could get logwood honey laid down duty and freight prepaid for 7½ cents, needless to say, they would not pay the price asked for the Ontario product. The honey this firm imports alone would at five cents per pound amount to \$5000, and the item referred to says that the total value of honey imported from the West Indies last year was but £402 (\$1960). Then again, I know positively of another firm that imported a considerable amount of this honey and mixed it with Ontario clover honey, putting the mixture up in bottles for the grocery trade. Surely there must be a mistake somewhere in the "Weekly Report" from which the item was taken. [We are in communication with the Customs Department on the subject. Ed.]

"KEEP BETTER BEES."

Dear Sir:—I notice an article in the C. B. J. entitled, "Keep Better Bees." Now I think it would be a good thing for us all to try to keep better bees, but for my own part I am at a loss to know how to get at it. I have purchased forty new queens this season, of which some have proved to be good, and some no better than those I removed. I obtained

six from one breeder, but three of them were apparently virgins instead of mated queens, as I supposed them to be. I lost two of these, and one mated here with a black drone. I obtained nine from another breeder, and these proved to be fine, large queens. Now, I believe that what we want is a good queen-breeder in Ontario; then we could be pretty sure to get what we paid for and to get it on time, instead of having to wait five weeks, as I did for some. I am willing to pay a good price for good queens, but a good price for poor ones is another matter altogether. Now, why cannot a company be formed in the province by the bee-keepers for the purpose of importing and breeding the very best queens that can be had anywhere? Surely there is as good a chance here as there is in the U. S., and there are plenty of them there. We shall be wanting fifty or sixty next spring before June 15th, for we mean to weed out every black queen in the yard, even though some of them are good ones. They have, however, a habit of sitting down too hard and are not pleasant to handle in many ways. I have one hive that has not attempted to swarm once in three years, and has always given us a good supply of honey. Even this year it gave 120 pounds of white and 60 pounds of buckwheat, and never gets any feeding. But they are clinkers to fight! Yours truly, A. B. Jarratt.

[Our correspondent's letter raises several points of interest that we should be pleased to see discussed in these columns. Perhaps our readers will forward us their views on the matter.—Ed.]

According to the Leipziger Bienenzeitung, an effort is being made in Germany to obtain a simple, practical means of detecting adulteration of honey, and a sum of 1650 marks (about \$400) has been offered in payment for the discovery.

CHALMER'S OBSI

Inspection of

Let me ask, is the n (with the funds at our could be done in the w foil brood? My exper justify me in giving an swer, but it may be th within myself. I have s and taught the foul known as the McEvoy s every confidence in its have studied the bee-o it strikes me forcibly tha a great mistake in dependen of them doing as advised believe that we shall ev brood, while the work o left in the hands of the amongst whose bees we

Allow me just to give tions. Beginning right a dicor neighbour owned Lees last year, one of wh foul brood when inspecte structions were given a bees were to be treated, following my advice, divided this diseased col yard where both Mess Alpaugh have found fou course, both advised thi proceed to cure them, an neither of those gentleme mend dividing a foul broo the colony were strong et Now this neighbour in when nectar was scarce, combs of these diseased them out of the hives at ing the bees off, extract and returning the combs. ally to stand and examin a time after shaking the robbers could be seen floc This was going on unde and he was prosecuted fo spector's eyes are not in

CHALMER'S OBSERVATIONS

Inspection of Apiaries

Let me ask, is the most being done (with the funds at our disposal) that could be done in the way of eradicating foul brood? My experience would not justify me in giving an affirmative answer, but it may be that the fault is within myself. I have studied, practised and taught the foul brood treatment, known as the McEvoy system, and have every confidence in its efficiency. I have studied the bee-owners, too, and it strikes me forcibly that we are making a great mistake in depending on one-half of them doing as advised. I really don't believe that we shall ever be rid of foul brood, while the work of curing is to be left in the hands of the majority of those amongst whose bees we find the disease.

Allow me just to give a few illustrations. Beginning right at home, my next door neighbour owned two colonies of bees last year, one of which I found had foul brood when inspected in June. Instructions were given as to how those bees were to be treated, but instead of following my advice, said neighbour divided this diseased colony. This is a yard where both Messrs. McEvoy and Alpaugh have found foul brood, and, of course, both advised this party how to proceed to cure them, and I feel certain neither of those gentlemen would recommend dividing a foul broody colony unless the colony were strong enough to swarm. Now this neighbour in August, 1910, when nectar was scarce, exposed the combs of these diseased bees by lifting them out of the hives at mid-day, shaking the bees off, extracting the honey, and returning the combs. He had generally to stand and examine the combs for a time after shaking the bees off, when robbers could be seen flocking on to them. This was going on under my own eyes, and he was prosecuted for it, but an inspector's eyes are not in every apiary in

his territory at all times. The result of this man's operations was this:—The divided colony died during the winter and the colony which was in my judgment sound last year, I found on June 10th of the present year diseased, contracted, no doubt, through robbing from the exposed foul broody combs, and besides this, foul brood showed up in six of my own colonies, originating, I expect in the same manner as the other.

Another case is about one mile from my apiary where foul brood was found some years ago by both the above mentioned inspectors, and which I partly inspected July 6th, 1911, examining three colonies out of fifteen. Finding the three diseased, I went no further, as their owner was from home, my purpose being to go over them all later on, in his presence. But I received orders to "do no more inspecting this season." Both the above cases are men who have kept bees for many years, and a person would naturally think that an inspector would have no need of calling on men of their experience.

I can cite the case of a man who had his bees burned up for foul brood by Mr. McEvoy some years ago, and whose apiary I inspected June 3rd of the present year, and found half of them so bad with foul brood that it was evident they were diseased last year. He was also from home, but his wife, who accompanied me to the yard, was ignorant of the presence of disease. In another case in which a party had two weakish colonies in 1910 standing within a few inches of each other, one of them being diseased, instructions were given to shake them both into one, and make a good colony. Contrary to this, however, the diseased one was "shook" and cured, and the other was left alone; and when I called there on June 2nd it was cast in my teeth that I had said that the weak colony wouldn't live over winter. On examination, however, I found matters just reversed from last year; the formerly

eder, but three of them virgins instead of mated proposed them to be. I e, and one mated here drone. I obtained nine eeder, and these proved queens. Now, I believe ant is a good queen- io; then we could be t what we paid for and e, instead of having to as I did for some. I am good price for good od price for poor ones altogether. Now, why y be formed in the pro- keepers for the purpose breeding the very best a be had anywhere! s good a chance here as S., and there are plenty

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clean colony was now diseased, presumably through some of the bees from the other colony going in there when being "shook," and there were still two weak colonies, too weak to be profitable.

I could go on giving examples of this very important work being bungled, but I think those given should suffice to show that some other means must be taken than leaving the curing of foul broody colonies in the hands of, I may say, most of those "side issue" bee-keepers.

It is not only the inefficiency displayed by so many in the treatment of foul brood that alarms me, but also the improper disposal of the combs in which the disease exists. There are different ways in which foul brood may be transmitted. Take, for instance, the case of a bee-keeper whose apiary is adjacent to the O. A. C., Guelph, where Mr. Pettit took us on May 4th to show the "Short Course" students foul brood. But in addition to seeing foul brood, we saw there a large solar wax extractor, not in shape, by any means, to keep bees excluded. This case is cited because it came under the eye of other inspectors besides my own, as well as that of our Provincial Apiarist, Mr. Pettit. I find similar cases in my own district, and in all likelihood the other inspectors have in theirs. Foul broody combs should never be put into a solar extractor, no difference how sound it may be, for if once in there, there is danger of spreading contagion during the whole of that extractor's lifetime.

To overcome these and other dangers, I have for some years been an advocate of "quarantine" stations, say, one in each township or district, where diseased bees could be treated by competent persons. Last winter I hammered away at Mr. Hodgetts and Mr. Pettit, asking them to let some of us try it, and I might say I almost gained their consent. The latter, however, writing on January 24th, stated that "bees cannot be quarantined in the same sense as animals," and went

on further to state that "he considered quarantine stations would be a menace to the apiaries in the neighborhood." As far as I am concerned, a quarantine station may be established across the street from my apiary, provided it is run during June and July. There would be, however, no need of locating a station so close to any apiary. Why not advertise a demonstration to be held at a certain place on a stated day, convenient to a railroad depot and an hotel; have the bees in a given radius inspected before this comes off, and the diseased ones, together with one or more box hives, or hives of any kind, with fixed combs, carted to said station by the owner at his or her expense, i. e., give the owner of diseased bees the choice of carting their bees thither and home again when cured, as well as paying the cost of curing, if any, or having them burned up on the spot. Then we would know just what we were doing.

If "quarantining" bees is a misnomer, let us call it a "bee infirmary," or "the pest apiary," and if such places were to be established, let them be selected in winter, which could be done by corresponding with leading bee-keepers in the different townships. The inspectors not being appointed till spring doesn't leave much time for making those arrangements, but Mr. Hodgetts can give us a fair idea in fall whether there is a likelihood or not of the same inspectors being appointed next year. I may say right here that I am only staying with the job to try and master this dread disease. I shall be only too glad to be relieved any time the department finds some other competent person to take the inspectorship of Perth and Waterloo.

DAVID CHALMERS.

We should be very glad to receive the names of bee-keepers who do not at present subscribe to the Canadian Bee Journal, and are prepared to offer special rates for this service.

BALMER'S METHOD ING AFTER THE

By Isaac

On page 255, Mr. excellent article on re-set forth therein being allowed for a few years. same drawback as our of the Woman's Department danger of overlooking queen-cell occasionally. a plan that is more s means of which I ave looking for queen-cell hunting out the queens is carried out after the is as follows: Going to tains the queen I wish t move the centre comb bees, replacing it with drawn-out empty comb comb is filled with egg hive and place in it sc ing plenty of honey, eggs, together with t referred to above. a hive No. 2, and re side, placing the hive eggs in its place. The found, and the frame t set on one side. The l frames are next shaken with the frame of egg stand) and the frame queen is replaced in now removed to a new has her hive full of b nurse bees to keep an ing. We have now a frame of eggs from o stand No. 2, and pro force of nurse bees, an field bees. In a few to find from 15 to 25 q larva swimming in roy; important that we sho that the larva reach a not get capped over.

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DAVID CHALMERS.

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BALMER'S METHOD OF RE-QUEEN- ING AFTER THE HONEY-FLOW.

By Isaac Balmer.

On page 255, Mr. Chrysler gives an excellent article on re-queening, the plan set forth therein being one which I followed for a few years. But I found the same drawback as our friend the editor of the Woman's Department, namely, the danger of overlooking an undesirable queen-cell occasionally. I then hit upon a plan that is more suitable for me, by means of which I avoid the labour of looking for queen-cells five days after hunting out the queens. The plan, which is carried out after the honey-flow is over, is as follows: Going to the hive that contains the queen I wish to breed from, I remove the centre comb and shake off the bees, replacing it with a nice, newly drawn-out empty comb. As soon as this comb is filled with eggs, I take an empty hive and place in it some combs containing plenty of honey, but no brood or eggs, together with the frame of eggs, referred to above. I now go to a hive No. 2, and remove it to one side, placing the hive with the frame of eggs in its place. The queen in No. 2 is found, and the frame on which she is set on one side. The bees of four or five frames are next shaken off into the hive with the frame of eggs (now on No. 2 stand) and the frame containing the queen is replaced in its hive, which is now removed to a new stand. This queen has her hive full of brood, and sufficient nurse bees to keep anything from spoiling. We have now a hive containing a frame of eggs from our choice queen on stand No. 2, and provided with a large force of nurse bees, and boiling over with field bees. In a few days we are likely to find from 15 to 25 queen cells with the larva swimming in royal jelly. It is most important that we should watch and see that the larva reach a good size, but do not get capped over. By the time that

the queen larvæ are well developed, I have another frame of eggs ready to replace the comb containing them. I take this comb and brush off the bees carefully. Going from hive to hive and finding the queens and pinching off their heads, I now cut a square hole about an inch each way in the middle of one of the centre combs in each hive, and also cut out a queen cell to fit the hole as nearly as possible. After the grafting is done, and the hive cover replaced, the job is done. It will be seen that by this method the grafted larva is farther advanced than anything the bees will raise from their own eggs, and, therefore, the desired queen, hatching out first, will destroy all other cells that may be built.

There is thus no occasion for hunting out the undesirable cells, and also the bees are only a little over half the time without a laying queen. The above method is not a success, however, when practised with capped queen cells, as the bees are liable to tear them down, before they become aware of their queenlessness. On the other hand, I have never known them to destroy an unsealed cell, and my experience has been that they always wait until it is capped over before they make up their minds whether it is needed or not.

Miss Robson asks, on page 250, "Does re-queening every year tend to reduce swarming? This is something I should like to know." I may explain it in this way. A young queen is not liable to be superseded the following spring, nor is a two-year-old queen, either, for that matter, except in odd cases. But a three-year-old queen is liable to be superseded about the beginning of the honey-flow, and swarming will accompany it. With me and my ten frame Langstroth hives, and with queens not over two years old, a super put on as soon as the brood chamber is getting full of bees, and the entrance enlarged, swarming is almost entirely prevented. The strength of the colony must be taken into considera-

before giving too large an entrance. Thus swarming has become a thing of the past with me, and I do not bother about swarms any more.

Burlington, Ont.

NOTES FROM MANITOBA.

Swarming—Bee Flora—Use of Carbolic Cloth for Subduing Bees.

By B. Brewster

I bought out a man's bees a few years ago, and his advice thrown in free was, "burn your bee-books, get out among your bees, and you will soon know something about them." I thanked him and asked him if this would also apply to a man desiring to become a doctor. He "guessed it wouldn't come amiss to him either." I am glad I didn't follow his advice, or I should never have thought of such practices as clipping queens, and many another little kink that has helped me this season in securing my largest crop. Of course, the nectar was there and I was able to get the bees ready for it.

Why did the Dr. tell us that a colony containing a queen of the current year's raising, and reared in the same hive would not swarm that season? They will in Manitoba, and three of mine did.

Before I finished clipping queens this season I discovered 9 colonies out of 56 either queenless, though with capped brood in hive, or superseding—too large a percentage. Is this the result of running for little or no increase? In a normal season about 30 per cent. swarm. My note-book shows that out of 47 colonies at home, one colony, and that a black one, never built a cell this season. I have been Italianising as fast as I can, with a view to reducing that 30 per cent. Several pure Italians came out just between six and seven weeks after swarming—that is, a prime swarm issued from a prime swarm. Of parent colonies left beside swarms for seven days, then re-

moved to new locations, and being given all the brood from one or two later swarms as soon as the queen was laying, three threw off swarms, although they were never crowded.

We have little or no clover in this section and the basswood, though covered with blossom, apparently secreted little nectar as very few bees visited it. Perhaps it was owing to a cold wave that struck us that week. After dandelion, honeysuckle, thistle and golden rod yielded profusely, while nuclei gained in bees and weight on asters, so that the latter flowers evidently furnish considerable honey, though most of it went into the brood nest.

Is there any place in an extracting yard for Hoffman frames apart from moving bees a distance? If there is, I have not found it. I can crush more bees with these frames than with loose hanging frames; and when it comes to the uncapping tank, to put it mildly, they are a nuisance, and I would rather crowd one or two frames a little and then lift out a comb, than tear out one comb and a dummy (Hoffman) when properly polished.

Why do not Canadian and American bee-keepers use more carbolic and less smoke for subduing bees? It is possible to drive the bees out of supers with less disturbance to colony than by any other way, except by using the bee escape. I tried it this season because the bees were so cross that the family were approaching open insurrection, and one or two callers got an extremely warm reception from the bees. Having made more increase than I originally intended, I ran short of supplies and all hives had from two to five supers full, so I decided to extract, and I used the carbolic cloth for subduing the bees, with great success. My method of employing this latter is as follows: A piece of cotton cloth of suitable size is dipped in a carbolic solution (one ounce carbolic acid to a pint and a half of water) and squeezed out dry. The cover and quilt are removed from the hive

and the carbolic cloth across the frames. It will set up a roar and the super. In five all be down, the clear quickly effected if a The breeze seems to down lower, sometimes supers at once. Remove on super of empty comb next hive. Again put it there whilst you get first one taken off. super of wet combs, next one ready, and so one is working alone, the cal and satisfactory make less cross bees, less d ony, and less stings.

Green Ridge, Man.

THE CARE OF SUPER

By Joseph

A friend in Canada writes: "Can you tell me how away so as to be free moths until wanted a In spring I am very always some loss through moths."

In a hot climate like moths and mice are found with. In the working combs ruined in about that now I give all extractible, into the care of busy world of to-day, I not stop to untie his p save the string, his time uable than string. But built comb presents a d the comb is worth 25 super of nine standard \$2.25 in value, and c supers a net value of 1 sequently, time spent in of your combs is so mu uable asset in apiculture

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and the carbolic cloth is quickly laid across the frames. Immediately the bees will set up a roar and begin to vacate the super. In five minutes they will all be down, the clearance being more quickly effected if a wind is blowing. The breeze seems to send the fumes down lower, sometimes clearing two supers at once. Remove full super, put on super of empty combs, and go to next hive. Again put on cloth and leave it there whilst you go and extract the first one taken off. On returning with super of wet combs, you will find the next one ready, and so on all day. Where one is working alone, this is a very practical and satisfactory manner of working—less cross bees, less disturbance to colony, and less stings.

Green Ridge, Man.

THE CARE OF SPARE COMBS.

By Joseph Gray

A friend in Canada writes as follows:—"Can you tell me how to store combs away so as to be free from mice and moths until wanted again next season? In spring I am very busy, and have always some loss through mice and moths."

In a hot climate like that of California, moths and mice are foes to be reckoned with. In the working season I have seen combs ruined in about three weeks so that now I give all extra combs, if possible, into the care of the bees. In the busy world of to-day, the merchant does not stop to untie his parcel in order to save the string, his time being more valuable than string. But a good, well-built comb presents a different argument; the comb is worth 25 cents. Thus a super of nine standard combs represents \$2.25 in value, and one hundred such supers a net value of \$225.00, and, consequently, time spent in the preservation of your combs is so much saved of a valuable asset in apiculture.

The rapidity with which the larger moth—*Galleria mellonella*—works, leaves us no idle moments until our combs are safely stored away. The metamorphosis of the wax moth is "complete," the insect passing through the various stages of development, as egg, larva, pupa and imago. The eggs take about ten days to hatch, and the larvæ are thirty days feeding. They then enter the chrysalis stage, lasting a fortnight, at the expiration of which the perfect imago, or adult, issues forth a grey brown moth, ready to repeat the cycle of life.

The simplest and most inexpensive way of caring for our combs is to build a low platform, six inches high, on one side of our work or store room, as wide as the length of the supers, twenty inches. All combs should be sorted, those with pollen and those without. The latter are usually the newest and cleanest combs, and are stored away first, nine combs to a super. The supers, as they are placed on the platform, are treated in the following manner:—Take an oil can, shortening the stem to make an easy flow for the liquid, and fill the can with bi-sulphide of carbon. If your supers are fitted with tin rabbets, fill up the space formed by the latter with carbon bisulphide from the can. If your rabbets are short, it will be necessary to stop up the corners. When ordering new supers, get the rabbets a quarter of an inch longer than usual, so that they fit snug to the corners. Should your super, however, possess no recess under the frame, take a piece of cotton batting, and place it between the frames, and on it, pour your carbon. A strong sheet of brown paper, 15 by 20 inches, completes the work. Tier up your supers to the desired height, and on the top one above the paper place an excluder zinc. Your combs are now well protected against mice or moth, and at very little expense. After the pollenless combs come the pollen combs, so that they get used first in spring, for combs containing pollen form a favourite breeding place for wax moth,

and it would be time well spent during mid-winter to look these last ones over again a second time, renewing the carbon.

Caution! Bi-sulphide of carbon is highly inflammable, giving off a gas that is heavier than air. It is better to work with doors and windows open, as the gas, if inhaled, is very heavy on the chest. Store carbon in a cool place.

Palm Fruit Co., Wasco, Cal.

PARTHENOGENESIS AND LINE BREEDING IN BEES.

By Joseph Gray

Indexed

I have read with considerable interest Mr. Hand's article in September issue on "Line Breeding." Accepting the theory of Parthenogenesis, as taught by Dr. Dzierzon, permit me to point out that drones from a breeder are not the product of that breeder, and are not the equal of the female progeny (queens and workers) from that breeder.

Whatever is sire or father of the queen is also sire or father of the male issue of that queen.

Parthenogenesis rightly understood does not teach us to accept a grandsire without a sire, but the sire is transferred inviolate through one generation on the female side. Hence the simple statement that "whatever is sire of the queen is also sire of the male issue of that queen" is correct and easily understood.

Mr. Hand in his next statement does himself a great injustice, for he takes credit for half blood drones when he has been producing full blood drones. He says, "The next season every queen in the yard was again superseded by a young queen from the same original breeder, all of which were mated to their half brothers."

You may mate an Italian queen to a black drone, and her male progeny, the drones, will be full blood Italians, while her female progeny, the queens and workers, will be half-blood Italians, so that instead of Mr. Hand's queens being

mated to half-blood brothers, they were mated to full-blood brothers, whose vigour and stamina have been raised by the law of parthenogenesis, permitting the drone to pass through one generation to reach "full blood" honours. This law applies to no other kind of stock breeding, but to the apiarist it is a valuable law—a law born out of the all-wise provision of the Giver of life to meet the needs of the case.

If the song-bird had its nest divided into five compartments, for each separate egg, two of these compartments being larger than the other three in order to accommodate the two male eggs, then the female song-bird must have the knowledge and will power to lay her male eggs in the larger compartments and the female eggs in the smaller compartments.

Such is the exact problem that confronts the queen. She must have the power and knowledge to lay her male eggs in drone cells and her female eggs in the worker cells. Hence parthenogenesis comes to her assistance.

I do not like Mr. Hand's next paragraph. After matching so well his princesses and their royal consorts from a queen remarkable for duplicating herself, yet not one solitary queen could he find to equal the old queen in her power of duplicating. Was the queen a freak, unable to duplicate herself?

Miscellaneous selection and cross breeding may be wrong, but all the good points are not centered in a single queen. I prefer to work my apiary by running a breeder to every 40 stocks. Thus Breeder "E" stands at the head of a row of stocks, all headed by "E" queens.

Thus if a customer sends for a breeder from "E" stock, because he has been well pleased with "E" stock, he gets a selection from 40 stocks. Or if he wants 20 queens from "D" breeder he can have them raised to his order; and should a breeder die, there is a selection of the best to take her place. By this method, the vigour of the drone is maintained,

and instead of single for supremacy, you have tending for the award

REVIEW

AMERICAN BEE

"A bee-keeper has his business if he be a This is the essence of an in the September A.B.J. P. Dadant. To produce honey requires knowledge on the part of the bee-keeper, yet a large portion of it can easily be sacrificed if the bee-keeper does not properly understand the nature of the business. In many cases, only one-third of the honey is sold by the market, because his price is too low. Beekeepers must use every means to ascertain by what means they can best market their product and most advantageously. In our vicinity, it is sold at low prices at which it does not sell." Mr. Dadant goes on to say that "the man who produces honey at a profit of ten pounds each year is not in the market, because his price is too low and too often he makes a mistake in attempting to find customers." We agree with him that it is the producer, the bee-keeper, who should fix the price. The publicity given to the Committee's Reports shows that part of the Canadian bee-keeping is comparatively easy, and but little temptation for the bee-keeper to see honey produced by home sales; not one year, regularly." * * "It is to peddle," says Mr. Dadant, "the honey around in order to

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 e is a selection of the
 place. By this method,
 e drone is maintained,

and instead of single stocks contending
 for supremacy, you have whole rows con-
 tending for the awards of honour, and a

wider range of choice of line bred queens
 for your customers.

Palm Fruit Co., Wasco, Cal.

REVIEWS AND COMMENTS

AMERICAN BEE JOURNAL.

"A bee-keeper has only half learned
 his business if he be a poor salesman."
 This is the essence of an excellent article
 in the September A.B.J., written by C.
 P. Dadant. To produce the maximum
 crop of honey requires great skill and
 knowledge on the part of the agricultur-
 ist, yet a large portion of his efforts may
 easily be sacrificed if he does not prop-
 erly understand the marketing end of
 the business. In many cases, as Mr.
 Dadant points out, the bee-keeper ob-
 tains only half of the price at which the
 honey is sold by the middleman, and, in
 some cases, only one-third. Thus bee-
 keepers must use every endeavour to
 ascertain by what means they may be
 able to market their produce in the best
 and most advantageous manner. "Ship-
 ping our crop away, instead of retailing it
 in our vicinity, is responsible for the
 low prices at which the honey often
 sells." Mr. Dadant goes on to tell us
 that "the man who produces a few hun-
 dred pounds each year is the one who gluts
 the market, because his name is legion,
 and too often he makes not the least at-
 tempt at finding customers among the
 consumers." We agree with Mr. Dadant
 that it is the producer, and not the ret-
 ailer, who should fix the price of honey.
 The publicity given to the Honey Crop
 Committee's Reports should render this
 part of the Canadian bee-keeper's task
 comparatively easy, and there should be
 but little temptation for him to sell his
 honey at less than the proper price. "If
 you want to see honey prices more firm,
 try home sales; not one time, but every
 year, regularly." * * "It is not necessary
 to peddle," says Mr. Dadant. "Carrying
 honey around in order to sell it is the

worst possible method. We sell by
 sample, always, and never haul honey
 about unless it is already sold. There
 is all the difference between carrying cans
 of honey about, trying to get rid of them,
 and taking an order from the consumer
 while delivering goods already sold.
 Nothing is more likely to create a demand
 than to be able to answer, when a ques-
 tion is asked about the price of the
 goods you are hauling: "These goods are
 sold on order, but I can bring you some
 of exactly the same quality, and at the
 same price, if you desire it. I produce
 this honey myself, and guarantee it posi-
 tively as of best quality and entirely
 pure." These home sales tend to raise
 prices, and simplify greatly the question
 of distribution." The motto "From Pro-
 ducer to Consumer, Direct," is one that
 has great attraction for the latter, who
 is always suspicious of goods that he
 knows have passed through the hands of
 several people all interested in getting
 as much profit out of them as possible.

Mr. York discusses, in an editorial, the
 subject of "Queen Mating Stations."
 "The one thing that more than anything
 else stands in the way of permanent im-
 provement in bees is the fact that male
 parentage can not be controlled, but
 must be left to chance. A bee-keeper
 may buy the best queen in the world,
 rear young queens from her, and those
 young queens, for anything that he can
 do, may mate with scrub drones from
 some surrounding apiary. * * * When
 one comes to think about it, it
 does seem that the bee-keepers go at
 the matter of breeding bees wrong end to
 end. When a dairyman wants to improve his
 herd, if he is financially able, he buys
 the best bull he can obtain. To be
 sure, he may buy one or more cows of

the right stock, but the bull is the main thing. So it is with the sheep-breeder, the poultry-breeder—in fact, with the breeder of any kind of live stock except bees, improvement is sought through a new sire. The bee-keeper, instead of paying any attention to the sire, gets a new dam. Even if he has in his apiary one or more colonies of superior stock, nine times out of ten he does nothing to encourage drones in these best colonies, and to discourage drones in other colonies but leaves the matter of drones entirely to the bees. Swiss bee-keepers do better. They have their mating-stations, as mentioned, and they are so isolated that drones of only one particular strain are to be found at each. To one of these mating-stations a virgin may be sent in a fertilizing-box and returned after being mated, parcels post making the matter of transportation inexpensive."

BEE-KEEPERS' REVIEW.

Three timely articles in the September "Review" deal with the business side of bee-keeping. Mr. E. D. Townsend in 1909 obtained a crop of 36,000 pounds of honey, and he lets us into some "trade secrets in selling it." Almost the entire crop of extracted honey was put up in 60 pound tin cans, two being crated together for shipment. His comb honey is cased in 20-section non-drip shipping cases; six to nine cases being re-crated in carrier with straw at the bottom, provided with handles, to carry by. He does not sell less than a carrier at a time. A small advertisement in the bee journals, telling in a few words of the different kinds of honey for sale, is the means of selling a large portion of the crop of honey to peddlers, the majority of whom are themselves bee-keepers, having a good retail trade. By the exercise of care in grading and packing, the honey thus sold realises prices above the average. Mr. Townsend has very little use for jobbers—those buyers who will take in a lump all the honey you have at about a cent or

two a pound less than the wholesale price, and who will turn round and sell it again in the original package.

The prices realized by Mr. Townsend for his 1909 crop were from 8 to 9 cents a pound for the best extracted. In 1910 the crop sold at from 8 to 10 cents per pound.

A second article by Dr. A. F. Bonney discusses the question of whether honey prices are governed by the "law" of supply and demand. "All things being equal," says Dr. Bonney, "the everlasting and universal law of supply and demand will adjust prices in spite of all the producers can do to maintain or raise them." When all things are equal or equitably arranged, we may be prepared to admit the truth of the so-called "everlasting and universal law of supply and demand." Everybody who makes the slightest attempt to study economic conditions knows that at present a very unnatural and iniquitous commercial system intervenes between the producer and consumer, imposing on both an unjust toll. When this is fully realised by the masses, means will be found to ensure proper treatment to producer and consumer alike. Meanwhile much can be done to raise prices to a just level and to maintain them there.

A more useful contribution, in our opinion, is that by Wesley Foster, who advocates "Demonstrating at Fairs and Retail Stores" as a means of stimulating the consumption of honey. "The real question of marketing our honey is this one of arousing a demand for our product."

Other able articles are by C. Blake of Snow Road, Ont., who describes how he converted his hand extractor into a power extractor; and by Leo. E. Gately, who believes that the possibilities in breeding a better bee are without bounds.

A D. Wood has a good word to say on behalf of the Caucasian. Whilst admitting that they bring in an enormous amount of propolis, yet they are great honey

gatherers and are long keep up brood rearing, the fall. "I have tr found the grey bee the

YEANIN

Modern accounts of the life are somewhat prosaic with the various romances which formerly passed as scientific statements of fact. The "able" bee, powerful in the presence, kept for a long period by investigators at a respectful distance, but the gradual acquisition by bee-keepers regarding the secrets of the hive. The various aspects of bee economy are pieced together in its proper place, we understand how more marvelous than what was formerly known. We now know that the laws of the bee are foreign, but the laws which still remain a secret. Needing for the government a visible system of laws, man finds it difficult to understand how, without disputable authority for the enforcement of those laws, any community of men or of more lowly creatures can preserve peace and order. One prominent, the one permanently established individual in the bee state, has had conferred upon her, all the attributes of a monarch in this most democratic of states. The queen has been deposed, a humiliation. She has been replaced by her body-guard or retinue. We are told about her instead, a group of workers attracted merely by the "ferment" which she emits during the process of the egg-laying operation. The egg-laying ceases for a time, and the group of workers disperse. Miller tells us in an interesting Gleanings, entitled "Son of a Queen," that "when the queen is ready to resume her activities, she is up much as if she had ju

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found the grey bee the best."

LEANINGS.

Modern accounts of the details of bee-
life are somewhat prosaic in comparison
with the various romantic speculations
which formerly passed current as scien-
tific statements of fact. The "unfathom-
able" bee, powerful in the face of ignor-
ance, kept for a long period the unskilled
investigators at a respectable distance;
but the gradual acquisition of knowledge
by bee-keepers regarding the true nature
of the bee has resulted in laying bare
the secrets of the hive. As the details
of bee economy are pieced together, each
in its proper place, we begin to compre-
hend how more marvellous is the truth
than what was formerly held to be ideal.
We now know that the hive has no sov-
ereign, but the laws which govern it are
still a secret. Needing for his own pro-
per government a visible and conventional
system of laws, man finds it difficult to
understand how, without one central in-
disputable authority for administration of
those laws, any community, whether of
men or of more lowly creatures, is able
to preserve peace and order. And so the
one prominent, the one more or less per-
manently established individual of the
bee state, has had conferred upon her by
man, all the attributes of royalty. But
in this most democratic age of ours, the
queen has been deposed, and great is her
humiliation. She has been deprived of
her body-guard or retinue, and we find
about her instead, a group of workers,
attracted merely by the "functional odor"
which she emits during the performance
of the egg-laying operation! When the
egg-laying ceases for a time, the little
group of workers disperses. Mr. A. C.
Miller tells us in an interesting article
in *Gleanings*, entitled "Some Observations
on Queens," that "when the queen is
ready to resume her activities, she starts
up much as if she had just remembered

some forgotten duty, walks deliberately
toward the brood part of the combs, be-
gins to investigate the cells, and, as she
is about to lay in one, the attention of
bees in her vicinity again becomes
marked."

The queen's degradation becomes more
complete, in our minds, when we read
of the state of beggary to which she is
reduced. "A queen in the full tide of
her laying is almost chronically hungry,"
says Mr. Miller. "The relation between
her feeding and her laying is exceedingly
close. She must seek her food, however,
for the workers **never offer it to her.**"

* * * "Worker after worker is 'spoken'
to until at last one is found to furnish
the desired food." Even then some
other worker may endeavor to steal the
coveted food, in which she will some-
times succeed.

A laying queen that has fasted for
fifteen minutes, when placed upon the
combs of a strange hive, will exhibit the
food-seeking desire, and this desire, to-
gether with the "functional odor," is the
reason for the easy introduction to the
colony of such a queen.

A letter from J. E. Hand to Editor
Root raises a very interesting point in the
matter of feeding. Mr. Hand has found
that out-door feeding with thick syrup
(half sugar and half water) is productive
of too much excitement amongst the bees,
but that a very thin solution closely ap-
proximating in consistency to that of nec-
tar, tends to reproduce the conditions that
obtain during a natural honey-flow. The
importance of the matter justifies our
quoting the letter almost in full.

"While we can scarcely hope to im-
prove upon nature's methods, we can im-
itate them so closely as to enable us to
rear queens during a dearth of nectar
that are every whit as good as those
reared under the swarming impulse in the
midst of a natural honey-flow. There has
been no nectar to be gathered in our
location since the first of July, and no

prospect of any change for the better during the remainder of the season. About August 1 many of our nuclei had become almost destitute of stores, and the feeding problem began to loom up before us with alarming proportions. The situation was rendered more aggravating by the fact that the bees had become so ravenous that it was a difficult matter to cage queens or manipulate frames without creating an uproar among them. Finally it became evident that something had to be done quickly; so we arranged ten of our old-style feeders in a line close together upon benches, and fitted them with syrup, half sugar and half water. This gave us a feeding surface of about 15 square feet and 2 inches deep, the pans being provided with slats standing on edge $\frac{3}{4}$ inch apart, so the bees could get the feed without any danger of drowning.

Now for the results: We soon found that the feed was too rich, as it caused too much excitement among the bees, and they gathered it up too rapidly. After some experimenting we found the conditions that prevail during an ordinary honey-flow. There was no excitement about the feeder nor in the apiary—only that quiet and contented hum that gladdens the heart of the bee-keeper, and tells him that his troubles are at an end so far as robbing and starvation are concerned. Nor were we disappointed in this respect, for the next day after starting the open-air feeder we caged queens and manipulated frames exactly as though we were in the midst of a natural honey-flow, with no signs of robbers anywhere.

The conditions that approached more nearly to those existing during a natural honey-flow were found when feeding a ten per cent. solution—that is, nine parts water to one part of sugar. We have about 400 nuclei and 75 full colonies in the yard, and the feeder above described affords ample room for stimulative feeding when feed of the proper consistency is

used. The amount of food taken by the bees is regulated by making it richer or poorer as required, and is under the control of the bee-keeper. When feeding for winter stores the feed should be considerably richer than for stimulative feeding to produce an artificial honey-flow. Half and half sugar and water fed in the open air during August and the fore part of September will place the bees in excellent condition for winter.

Since adopting this system of open-air feeding we get better queen-cells; the bees are stimulated to greater activity, and the queens made two or three days earlier. Breeding is going on at a rapid rate, and our hives will be filled with young bees to go into winter, which, in connection with well ripened stores of sugar syrup, is about the best kind of life insurance for bees. In order to practice open-air feeding profitably, one should be isolated a reasonable distance from neighbouring bees. Every queen-breeder is supposed to be so situated.

An ideal open-air feeder would be a pan six feet long by three feet wide, and four inches deep, provided with a frame-work of slats standing on edge $\frac{3}{4}$ inch apart, with a thirty-gallon tank to supply the feed through a half-inch pipe having a faucet to regulate the flow. If located convenient to the water supply, the tank could be filled in a few minutes each day, and would not require further attention. I do not advocate the feeding of thin sweetened water for spring stimulative feeding, as it exhausts the vitality of the old bees that have come through the winter, and causes them to drop off rapidly. I have about come to the conclusion that in the fall is the right time to practice stimulative feeding."

Mr. Root witnessed the feeding operations of Mr. Hand and remarked on testing the liquid that it scarcely tasted of sugar at all. The bees after they had left the feeders and were ten or twenty feet away were seen to eject tiny squirts of water, and it would thus appear that

the bees were able by some other, to separate and digest the excess of water whilst on

IRISH BEE JOURNAL

The Irish Bee Journal is a good number, as usual concentrated bee-lore, containing known British and Irish Bullamore contributes a dealing with the question of Beeswax." We regret did not write at greater Maguire, writing upon "The Honey Flow and the Honey pretty doleful tale to tell same the tone of his remarks to the not unhappy lot of Incidentally, Mr. Maguire black and Italian bees

Our own old black bees to hold their own with a Given a proper chance, 1 stocks equal to any Italian are not nearly so much given Their sealing, too, is in than that of some strain A friend of mine has a lot of Italians—beautiful bees, he guinea queens. They were swarms all summer, and sections are quite unsaleable as if they had been out a half-bred stock of the same ever, has given me some though hardly equal in size of the natives."

In another useful article gives timely instructions on But perhaps the most del contribution in this excellent is editor's witty and amusing an unlucky author of a recent hand book on bee-keeping, ous errors prove him to be in the practice of bee-keeping space forbids our making e

of food taken by the bees, by making it richer or poorer, and is under the control of the bee-keeper. When feeding for stimulative purposes, the feed should be considered for stimulative feed—artificial honey-flow. Water and sugar fed in the autumn and the fore part of winter place the bees in excellent condition for winter.

This system of open-air feeding, better queen-cells; the bees feed to greater activity, made two or three days, made is going on at a rapid pace. The bees will be filled with honey into winter, which, in well ripened stores of honey about the best kind of bees. In order to feed profitably, one should keep a reasonable distance from the bees. Every queen-cellar should be so situated.

The feeder would be a pan three feet wide, and four feet deep, with a frame-work on edge $\frac{3}{4}$ inch apart, on tank to supply the water. The tank should have a half-inch pipe having a flow. If located near a water supply, the tank should be refilled every few minutes each day, and require further attention. The feeding of this kind for spring stimulative purposes exhausts the vitality of the bees, and they have come through the winter to drop off rapidly. The bees do not come to the conclusion that it is the right time to feed.

In another useful article, Mr. Tinsley gives timely instructions on "Wintering." But perhaps the most delightful contribution in this excellent issue is the editor's witty and amusing exposure of an unlucky author of a recently published hand book on bee-keeping, whose numerous errors prove him to be a mere tyro in the practice of bee-keeping. Want of space forbids our making extracts.

the bees were able by some process or other, to separate and discharge the excess of water whilst on the wing.

IRISH BEE JOURNAL.

The Irish Bee Journal for September is a good number, as usual. It is full of concentrated bee-lore, contributed by well known British and Irish writers. Mr. Bullamore contributes a short article dealing with the question of the "Aroma of Beeswax." We regret Mr. Bullamore did not write at greater length. Mr. Maguire, writing upon "The Season, the Honey Flow and the Harvest," has a pretty doleful tale to tell, but all the same the tone of his remarks bears witness to the not unhappy lot of the bee-keeper. Incidentally, Mr. Maguire compares the black and Italian bees as follows:—

Our own old black bees seem to be able to hold their own with any of them. Given a proper chance, they can raise stocks equal to any Italians, and they are not nearly so much given to swarming. Their sealing, too, is infinitely better than that of some strains of Italians. A friend of mine has a lot of golden Italians—beautiful bees, headed by half-guinea queens. They were blowing off swarms all summer, and some of the sections are quite unsaleable—they look as if they had been out all winter. A half-bred stock of the same strain, however, has given me some fine sections, though hardly equal in sealing to those of the natives."

In another useful article, Mr. Tinsley gives timely instructions on "Wintering." But perhaps the most delightful contribution in this excellent issue is the editor's witty and amusing exposure of an unlucky author of a recently published hand book on bee-keeping, whose numerous errors prove him to be a mere tyro in the practice of bee-keeping. Want of space forbids our making extracts.

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"17 Cents a Day" Offer Stirs all Canada

The Whole Country Applauds the "Penny Purchase Plan"

From a thousand different directions comes a mighty chorus of approval, voicing the popularity of The Oliver Typewriter "17 Cents a Day" Purchase Plan.

The liberal terms of this offer bring the benefits of the best modern typewriter within easy reach of all. The simple, convenient "Penny Plan" has assumed international importance.

It opened the flood gates of demand and has almost engulfed us with orders. Individuals, firms and corporations—all classes of people—are taking advantage of the attractive plan and endorsing the great idea which led us to take this radical step—

To make typewriting the universal medium of communication!

Speeds Universal Typewriting
 The trend of events is toward the general adoption of beautiful, legible, speedy typewriting in place of slow laborious, illegible handwriting.

The great business interests are a unit in using typewriters.

It is just as important to the general public to substitute typewriting for "long-hand."

For every private citizen's personal affairs are his business. Our popular "Penny Plan" speeds the day of Universal typewriting.

A Mechanical Marvel
 The Oliver Typewriter is unlike all others. With several hundred less parts than ordinary typewriters, its efficiency is proportionately greater.

Add to such basic advantages the many time-saving conveniences found only on The Oliver Typewriter, and you have

an overwhelming total of tangible reasons for its wonderful success.

A Business Builder
 The Oliver Typewriter is a powerful creative force in business—a veritable wealth producer. Its use multiplies business opportunities, widens business influence, promotes business success.

Thus the aggressive merchant or manufacturer can reach out for more business with trade-winning letters and price lists. By means of a "mailing list"—and The Oliver Typewriter—you can annex new trade territory.

Get this greatest of business aids—for 17 Cents a Day. Keep it busy. It will make your business grow.

Aids Professional Men
 To the professional man a typewriter is an indispensable assistant.

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 For young people, The Oliver Typewriter is a stepping-stone to good positions and an advancement in business life.

The ability to operate a typewriter counts for more than letters of recommendation. Start now, when you can own The Oliver Typewriter for pennies.

Join the National Association of Penny Savers!
 Every purchaser of The Oliver Typewriter for 17 Cents a Day is made an Honorary Member of the National Association of Penny Savers. A small first payment brings the magnificent new Oliver Typewriter, the regular \$125 machine.

Then save 17 Cts. a Day and pay monthly. The Oliver Typewriter Catalogue and full details of "17 Cents a Day" Purchase Plan sent on request, by coupon or letter.

The OLIVER Typewriter



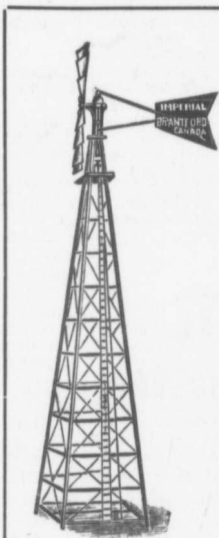
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