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S. T. PETTET,
BELMONT, ONT.



"The Greatest Possible Good to the Greatest Possible Number."

Vol. VIII, No. 3.

BEETON, ONT., MAY 1, 1892.

WHOLE No. 311

GENERAL.

FOR THE CANADIAN BEE JOURNAL.

Prepare for the Columbian Exhibition
Now.

IN view of the World's Fair to be held in 1893, Canadian honey producers should arrange their plans for this season, so as to be able to place on exhibition at the opening of the show, comb and extracted honey which will be unsurpassed for quality and beauty, by similar productions from any part of the world. Mr. G. M. Doolittle is looked upon as one of the most successful men in America in the production of comb honey. Some years ago he had the honor of being awarded a gold medal for a crate containing a dozen of the handsomest sections. In the recent discussion on the grading of comb honey, he writes: "I wish to reiterate that if the *full import* of 'both wood and comb unsoiled by travel stain, or otherwise, and *all* the cells sealed,' is taken in, not one section in one thousand will be found that will answer that description, taking our years as they average."

"In that extra year, 1877, when honey came in as if by magic, so that I secured over 11,000 pounds of comb honey from sixty nine colonies, spring count, I found that when I came to try for perfect sections, according to the above, nine was the full number that could be picked out of that 11,000 pounds. The little cherry crate to which the Thurber gold medal was awarded, at that time, contained twelve sections picked from that 11,000 pounds, and as three of the sections could go in the crate so they were hid from view, the nine perfect ones, as above, answered;

but had I been obliged to have had twelve perfect ones, I should have never received the gold medal."

"No wonder Byron Walker offered twenty-five cents a pound for such honey, I said, when I saw the offer, 'he is safe enough.'"

In the Canadian exhibit at the Indian and Colonial exhibition at London, there were hundreds of sections in which the comb was built up to the wood without any rounding off whatever at the sides, and without an unsealed cell, and many of them without even a "pop-hole." The sections were simply solid cakes of honey, in sealed comb, of even thickness throughout. The honey flow in 1886, the season in which these sections were produced, was only moderately good in the most favored localities, while in others it was quite poor. A warm wind commencing on the 7th of July and lasting for three days, wilted the clover and put an end to anything like a copious secretion of nectar for the remainder of the season.

Let Canadian bee-keepers, like one of Eggleston's characters in the "Hoosier Schoolmaster," "put in their best lioks" this year, and show that they know how to produce a very much greater proportion of perfect sections than one in every thousand.

Owing to press of other business, the question of exhibiting at the Columbian Exhibition was not taken up at the recent meeting of the O. B. K. A. Our sister society, the Fruit Growers' Association, took time by the forelock and instructed the proper officers to ask for space. A difficult problem with them, is to find something with which to occupy their space till the new fruit crop arrives. Bee-keepers are in a better position in this respect. Comb honey can be

packed next fall in such a way that it will be just as good and as handsome in the following May as it was when taken off the hive. A director of the Fruit Growers' Association suggests that our honey might be made to assist in occupying their space to advantage, until the new fruit arrives.

A large exhibit of fine honey is one of the best means of advertising the suitability of the climate of a country, and the adaptation of its soil for other agricultural productions. This fact was clearly recognized by Sir Charles Tupper, and the officers of the Canadian Emigration Department at the Colonial Exhibition in 1886. It is probable that it will be recognized by Prof. Saunders, also, as commissioner, and that he will require our honey at the opening of the show. I notice that the Dominion Government is about to ask the Provincial Governments to make appropriations. Just what arrangements will be made to secure honey for an exhibit, I suppose no one at present knows. Now is the time for the producers to make preparations for doing their best. If their honey is not required there will be no loss, because a lot of fine comb honey is always good stock.

S. CORNEIL.

Lindsay, 24th April, 1892.

Mr. Corneil is too modest to say that a considerable proportion of the perfect sections which he describes as being shown at the Colonial, were produced by himself. He had six dozen sections put up in varnished, glazed on both sides, cases holding two each. These cases were very much admired, and sold readily at half a crown each, or at the rate of about thirty-five cents a pound for the honey. Mr. S. T. Pettit had a large number of sections nearly as perfect as Mr. Corneil's, and if anything, capped a little whiter, owing to a better honey flow. Mr. R. McKnight exhibited one thousand pounds, produced by Mr. Alpaugh, from which a large number might have been selected, which could be placed in the first grade, according to the Chicago rules.

FOR THE CANADIAN BEE JOURNAL.

After Dinner Thoughts.

It looks now as if we were going to have a long spell of fine weather. The *Millers* are fluttering to and fro, the soft hum of the *Mason* bee is heard, the *Roots* are sending forth their green shoots, and one feels like a *Newman*.

o o o

Extracting from the brood chambers is one

great cause of foul brood. It throws [out] the larvæ food, leaving the larvæ bare. The bees cannot replace this food as it was, in time to save the larvæ, so of course it dies, causing the disease of foul brood. You take a hen's egg and extract the albumen from it, and then see if it will hatch; or extract the albumen and then return the same to the egg in as good shape as you can, and if a hen can hatch that egg, then bees can hatch larvæ that has been mangled and disturbed with the extractor. But you know, and I know, and Dr. Miller knows that the bee larvæ or the hen's egg won't hatch after they have been disturbed in the manner described.

o o o

Doc. see see Miller thought he'd fight,
With that old swordsman, friend McKnight.
Doc's sword got broke, he had to yield.
And thought he'd better, use his shield.

o o o

We don't know just yet how bees have wintered here, but I have not heard of many losses. I think it is kind of any one to report just what kind of a season we are going to have this year, and if such a report can be made early it would give us time to get around with our fixings to catch the honey.

o o o

And then Doc. says to McKnight, says he: "Brudder, I always loved you, I have ever since you rescued me from that awful peril of having nothing but U. S. money in my pocket and being away in Canada." In return, says Doc., "Brudder can I do anything for you in the way of plasters?"

o o o

Doc. hears the lion in his den by asking me, yes, even me, this question: "By what authority do I lay the act of incorporation to the charge of 'five'?" It is well Doc. you answered your own question in your next sentence, which you did by saying, "They were all five of them certainly guilty." Doc., if any one says you and I are cranks, you just invite them to try and turn the handle. You and I will fix this thing all right yet. But Doc., you must know who the five are if you know they are guilty. I'd give quite a good deal if I knew Doc., but go slow till you find out. If I knew who the five were I wouldn't charge them with being guilty, because I don't believe they are guilty. That is a pretty big dose for even a doctor to give, for, to be guilty, is to be justly chargeable with the crime; don't you see? Doc., you ask me if there was a member at Keokuk not equally guilty, always barring the two members from Canada; faith, and that I don't know, but as you made a clean breast in the

matter of five, so in like manner I look for you to do the same with the rest soon. In any event, dear Doctor, rest easy in the matter of the other foxes. "It's the old rats we are singeing now, the others will take warning." Now then, dear Doctor, now then.

JOHN F. GATES,
Ovid, Erie Co., Pa.

April 13th, 1892.

FOR THE CANADIAN BEE JOURNAL.
Query.

DEAR SIR,—I see an article in your JOURNAL of April 1st, from Mr. R. F. Holtermann, on "The Taking of Comb Honey." Will he please tell us how he keeps the queens from going in the sections without the perforated metal on. Please answer in JOURNAL soon, and oblige a subscriber.

J. P. ADLIAD.
Strathroy, Ont.

April 14th, 1892.

ANSWER TO J. P. ADLIAD.

If I would take or pretend to take a biased view upon the question of the necessity of queen excluders, it would naturally be in the direction of having them for the production of comb honey. But my own personal experience leads me to believe and hold, that the queen will so rarely lay in the sections, that to go to the expense of having a queen excluder is unnecessary, and to put the bees to the trouble of passing through the metal is also unnecessary. With a hive not shallower than the Langstroth, the queen will very rarely pass into the sections to deposit eggs, providing the sections are not larger than $4\frac{1}{2} \times 4\frac{1}{2}$. Of course the larger the section, the greater the danger. If the use of separators would have any influence on the queen, it would be in the direction of keeping her out of them. I use $\frac{3}{8}$ in. thick top bar, but even with $\frac{3}{8}$ in. top bar I do not think the queen would pass into the sections often enough to make the use of a queen excluder advisable. I notice that Mr. Gemmell supports me in advocating the use of separators. There are but few use them in the making of comb honey, and to advocate their use, will do much. Last Saturday I had a visit from Jacob Alpaugh, and in conversation we brought up the question of wired foundation. Mr. Alpaugh has tried wired frames, as I have, and the conclusion he has come to is so strong, that although he has a lot of foundation in combs wired, he intends to melt up the foundation and make no more wired combs. I notice in Mr. Gemmell's article that he values Mr. Alpaugh's opinion (and I think

rightly) highly enough to pay \$2 for his secret as to the new method. He has his opinion on wired frames for nothing. I enjoyed Mr. Alpaugh's opinion on the wired frames, it was just what I wanted as evidence. No, I have done with wired frames; they are a trouble and expense for which we have only a slight return. It is hard to kindle into life dead ashes. My fever for wired frames has burned out, never, I believe, to be rekindled.

R. F. HOLTERMANN,
Brantford, Ont.

April 25th, '92.

From Gleanings.

Paint For Bee Hives.

THE BEST PAINT; PRIMING COATS; HOW TO DETECT
ADULTERATION IN PAINT, ETC.

BY ERNEST R. ROOT.

WE have already given some hints in regard to the most durable paints for bee hives; but during the last few months we have been collecting material from various sources, and are now in position to offer some information that may be valuable to our readers, now that we are about to enter upon spring weather, when the bee-keeper may have time to paint some of his hives that may be sadly in need of it.

It is a well-known fact among painters, that yellow French ocher gives a very permanent covering, especially for priming coats. Ocher would doubtless supersede even white lead were it not that its color is against it. It is also stated that a priming coat of ocher presents such a hard surface that a covering of lead does not adhere so well as it does to a priming coat of lead. A few years ago nearly all the priming was done with yellow ocher; but it was discovered that the later coats of lead would flake off; so generally, now, for house painting, pure lead for a priming coat is preferred, providing it can be obtained. But we shall have occasion to speak of adulterated leads further on. It is generally acknowledged that French ocher combines very readily with lead, and the combination makes a more durable paint than even pure lead; but unfortunately, so-called pure leads are fearfully adulterated. Dealers get to cutting on prices, and manufacturers are tempted to put in barytes, lime, and other cheap ingredients, which, instead of adding to the permanence of the paint, work in an inverse ratio. The result is, that some of these adulterated lead paints show a very poor surface in a couple of years. The paint either flakes off or rubs off like chalk.

Besides pure lead, and genuine yellow French ocher, pure zinc is another good body for paint

The addition of zinc—at least a small proportion—does not generally affect the durable qualities of paint. Pure zinc paint alone gives a very hard, snow-white, porcelain finish. For inside white it is generally employed; but for outside work it is too hard and flakes off. Our painters, however, tell us that, while pure lead and pure ocher gives a more lasting combination, the paint may be cheapened by the addition of a little zinc; and this will, at the same time, give it a valuable quality in point of hardness, and prevent inclination toward chalking off. We are now using on our hives a combination made up as follows: $\frac{1}{3}$ pure lead, $\frac{1}{3}$ pure zinc, $\frac{1}{3}$ genuine French ocher, mixed in pure unboiled or raw linseed oil. Such a combination is cheaper than a great many of the so-called mixed paints on the market—cheaper because it goes further, and because it will last much longer. It has all the valuable qualities of the zinc, the ocher, and the lead; and the resultant shade is a light straw color. For beehives it is undesirable, on account of melting down the combs from the sun's heat, to use dark shades. Theoretically, snow-white paint would be preferable; but in actual practice the light straw yellow will do about as well as the white.

Now a word about buying paints. It is to be regretted that so many manufacturers of white paint label their paint "Strictly Pure." If you consult any practical painter he will put you in possession of tables containing analyses of all the paints in the market—analyses that show the amount of adulteration and pure lead sent out by each manufacturer. If dealers and consumers alike could only understand that pure lead, or pure lead and zinc, is a great deal cheaper in the long run, they will not try to be buying their paint wherever they could do so for the lowest figure. It is the consumers who have to suffer, and some cheap paints are very dear at any price.

Besides the adulterations which do not in the least add to the good quality of paint, fish and mineral oils are used instead of pure linseed oil. Painters generally agree that there is nothing like pure linseed oil for paint. All other oils are practically worse than nothing. They are a snare and a delusion, and only reveal the true nature of the paint after it has been on the wood for a few months.

Very fortunately there is a simple way of detecting adulterations in paint. Any thing but linseed oil can usually be detected by the smell. Fish oil has a very rank, sickening odor. Barytes and lime can usually be detected in the following way: Buy a small can of the lead

that you purpose using with your ocher or zinc, as the case may be. Scoop out a little of it and put it in an empty tin can; pour on top turpentine, mix thoroughly by stirring, and then allow this to stand for 24 or 48 hours. At the expiration of this time, pour off the top; and if barytes of lime is used you will find a sort of dry powder in the bottom of the can, that has failed to unite with the oil. This lime or barytes is a positive detriment; and the only reason it is put in is because it cheapens the lead. If, on the other hand, after making the test as above, you find no chalky residue in the bottom of the can, you may feel pretty sure that your lead is pure, or, at least, has nothing worse in it than an addition of zinc, which will not hurt it. Genuine French ocher, on the other hand, combines perfectly with the lead or zinc, and leaves no residue.

There is another very simple test, though perhaps not so positive in its results. Dip your thumb and finger into pure white-lead paste and rub them vigorously together for four or five minutes. If the paint is made of pure lead and linseed oil, or of pure lead, ocher, and linseed oil, a rubbing of the fingers for four or five minutes will still leave only a soft oily residue. If, on the other hand, the paint is adulterated with barytes or lime, two or three minutes rubbing will reveal a sort of dry powder between the thumb and finger. Linseed oil combines perfectly with lead, zinc, and ocher, but it will not combine with lime, barytes, or chalk, and hence the fraud is easily detected.

Perhaps we might state, while we are about it, that there are on the market what are called white and gray ochers. We would warn beekeepers to let these alone. The only reason they are called "ocher" is because the general public understand that ocher paints—at least the yellow ocher—is known to be durable when spread upon the wood. We have tested some white ochers; and while we could not tell exactly, we felt pretty sure they were made up of barytes, lime, and clay. Gray ocher is, perhaps, a little better; but it does not begin to have the qualities of the yellow ocher.

While we are about it, we might add that Venetian red also makes another durable body when combined with pure linseed oil. Its color however, is against it. You can get a very pretty and durable red by mixing pure French ocher and Venetian red, half and half. Such a red will not deteriorate into a dull brownish red, but will remain of a bright glossy color. We use such a paint on our outside winter cases, or on any thing that is not to be used for summer use. We also use it on hive-stands. The

bright-red hive-stands and the straw color of the hives make a very pretty combination in an apiary.

It may be also stated that dark shades are apt to burn off more by the effect of the sun than the lighter shades.

We have thought best to make some extracts from the readings we have made. They not only confirm in some cases what we have said, but they will be found to give other additional facts.

IMPORTANCE OF GOOD PAINT.

We are probably more indebted to paint than to any other article for the preservation of surfaces that are exposed to the elements; and it is therefore desirable to use only the best. Notwithstanding the experiments and trials that have been made with other materials, thus far nothing has been found to take the place of white lead (carbonate of lead) and linseed oil. Owing to the high cost of these articles other metals have been repeatedly tried, and even more extended experiments have been made to substitute some other oil for linseed, but without success, and they still hold their supremacy for painting purposes. The carbonate of lead contains, in addition to the metallic lead, a certain percentage of carbon and oxygen, and just sufficient hydrogen to give it the proper spreading quality. Linseed oil also contains carbon, oxygen, and hydrogen, and hence its affinity for the lead, causing the two to unite perfectly. The natural formation of carbonate of lead, however, is such that it has a tendency to chalk off; and the more advanced authorities in paints employ the use of zinc oxide to correct this tendency; and experience has proven that this combination of lead and zinc insures a more durable paint than lead alone.

As white paint is more subject to being soiled from dust, smoke, etc., (the favorite painting materials are in colors), the most durable colors are the iron oxides; but these are usually too dark in color to be pleasing to the eye. Chromates of lead, i. e., yellow and green, are used largely in varying tints and shades. Combinations of different pigments are used in almost endless variations. Probably there is no color that is more of a favorite, however, than ochre; and as it combines perfectly with white lead, it makes a good paint. Ocher is a substance, the best grades of which are found in France. It is composed of alumina, silica, and hydrated oxide of iron. From the latter it obtains its peculiar rich yellow color. Many pleasing tints are made by combining ochre with white lead; and although it may not perhaps be indorsed by the aesthetic as the color "par excellence," it is always a reliable and favorite color, and is more largely used than any other color of its class.—From the Forest City Paint Co., Cleveland, Ohio.

Hastings' Lightning Ventilated Bee Escape.

THIS illustration is a sectional view of the Lightning ventilated Bee Escape, of which read following description.

Fig. 1, shows the escape complete, ready for the board. C is the perforated top, which allows free ventilation from the hive to the supers. A is the top opening which the bees enter on leaving the supers.

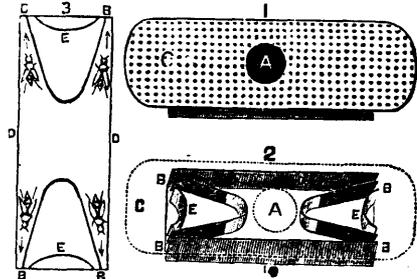


Fig. 2, shows the escape with the top removed. A is an outline of top entrance. B B B B are the outlets from the escape to the hive. C an outline of top plate; D D are side walls, and E E are circular end walls.

The ground plan shows the bees passing out through the four passages toward B, each bee pushing against the spring as it passes out. It is impossible for them to return, there being only space enough for a drone to leave, between the ends of E E and the side walls D D, and the springs hang in the centre, between the above mentioned walls. By simply placing a suitable board, with bee space top and bottom, having an escape in the centre, (as explained in printed directions which accompany each escape) between the supers and the hive; the escape will do the work that is most dreaded,—that of harvesting the surplus honey, with neither the taint of smoke nor the capping injured, leaving the honey in perfect condition for market. It has been thoroughly tested and is no experiment. It will clear the supers in from two to four hours time. One case of supers of 27 one pound sections was cleared of every bee in one hour and 43 minutes.

DIRECTIONS.

Make the escape board of $\frac{3}{4}$ or $\frac{1}{2}$ in. lumber, the size of the hives or supers, and provide a suitable bee space by nailing strips $\frac{1}{4}$ or $\frac{5}{16}$ in. thick and 1 in. wide around the edge of both sides of the board, thus making a suitable bee space on the top and bottom of the board.

The hole for the escape should be cut in centre of the board. One escape to each board is sufficient, yet for extracting in out-apiaries more escapes in each board could be used to advantage.

When the surplus honey is ready to be taken from the hive, at any time of day when convenient, put escape board under the super with the round hole of the escape on top for the bees to enter on leaving the super. If there is brood or Queen in the super a portion of the bees will remain with her, and they must be removed.—M. E. HASTINGS, New York Mills, Oneida Co., N. Y.

Spraying of Fruit Trees.

SPRAYING of fruit-trees and other plants has come to be a necessity in order to secure a profitable yield so as to sufficiently remunerate the grower for the time, care and labor spent in cultivation. But that the doing of anything so necessary to the success of the fruit-grower should be performed in a way, and at a time, which should prove detrimental to the interests of the fruit-growers' best friends—the bee-keepers—would be much regretted, were it not for the fact that such spraying, if properly done, will in no wise result in loss to the apiarists.

Bulletin No. 7, as issued by the United States Department of Agriculture, and to which we referred on page 505, gives full directions for making and applying the various poisonous compounds used in spraying for the destruction of the harmful pests, and states very decidedly that "no spraying as described by the Department has ever resulted in the slightest deleterious effects upon the fruit subjected to it." This will be welcome information to all who feared that the spraying had caused poisoning among those who had partaken of fruit which had been sprayed. It thus behooves all who employ this means of protecting their fruit, to follow carefully the *modus operandi* as given by the Department of Agriculture.

On the subject of preparing the arsenites (London purple, Paris green and white arsenic) for spraying purposes, the Bulletin says:

The poisons should be thoroughly mixed with water at the rate of from 1 pound to 100 to 150 gallons of water, and applied with a force pump and spray nozzle. In preparing the wash, it will be best to first mix the poison with a small quantity of water, making a thick batter, and then dilute the latter and add to the reservoir or spray tank, mixing the whole thoroughly.

When freshly mixed, either London purple or Paris green may be applied to apple, plum, and other fruit-trees, except the peach, at the rate of 1 pound to 150 to 200 gallons, the latter amount being recommended for the plum, which is somewhat more susceptible to scalding than the apple. White arsenic does little, if any, injury at the rate of 1 pound to 50 gallons of water when freshly mixed.

As shown by Mr. Gillette, however, when allowed to remain for some time (two weeks or more) in water, the white arsenic acts with wonderful energy, scalding when used at the rate of 1 pound to 100 gallons from 10 to 90 per cent of the foliage; the action of the other arsenites remains practically the same, with perhaps a slight increase in the case of London purple.

With the peach these poisons, when applied alone, even at the rate of 1 pound to 300 or more gallons of water, are injurious in their action, causing the loss of much of the foliage.

By the addition of a little lime to the mixture, London purple and Paris green may be safely applied, at the rate of 1 pound to 125 to 150 gallons of water, to the peach or the tenderest foliage or in much greater strength to strong foliage, such as that of the apple or most shade trees.

Whenever, therefore, the application is made to tender foliage, or when the treating with a strong mixture is desirable, lime water, milky, but not heavy enough to close the nozzle, should be added at the rate of about 2 gallons to 100 gallons of the poison.

In spraying apple-bloom, which perhaps as much as any other (if not more) affects the bees most seriously when not applied at the proper time, the Bulletin continues thus:

With the apple, in spraying for the codling-moth, at least two applications should be made, the first, after the falling of the blossoms, or when the apples are about the size of peas, and the second a week or ten days later. The first brood of the codling-moth lays its eggs in the flower end of the young apple, and the worms upon hatching gnaw their way into the interior of the apple, and on sprayed trees get poisoned in so doing, an infinitesimal amount being sufficient to destroy so minute a worm. The second spraying is for the purpose of destroying larvæ hatching from eggs which may be laid after the first spraying, as the arsenic is gradually washed off by rains.

For the plum curculio on the plum, cherry, peach, etc., two or three applications should be made during the latter part of May, and the first half of June. The poison in this case is applied for the purpose of destroying the adult curculios which hibernate and gnaw into the young growth of the trees, and even into the hard young fruit before laying their eggs. The eggs are pushed under the skin so that the larvæ are not ordinarily affected by the poisoning.

In the case of most leaf-feeding insects one should spray on the first indication of their presence.

Treating the subject of spraying from a purely hygienic stand-point, several instances are cited where careful experiments have been made to ascertain what possible deleterious effects could arise from the consumption of fruit to which had been applied the arsenites so deadly to the codling-moth and other parasites. Regarding the eating of apples that were so treated, the following reference is made.

In case of spraying apple orchards for the

oodling-moth, there is scarcely a possibility of injury to the consumer of the fruit. A mathematical computation will quickly show that where the poison is used in the proportion of 1 pound to 200 gallons of water (the customary proportion) the arsenic will be so distributed through the water that it will be impossible for a sufficient quantity to collect upon any given apple to have the slightest injurious effect upon the consumer. In fact, such a computation will indicate beyond all peradventure that it will be necessary for an individual to consume several barrels of apples at a single meal in order to absorb a fatal dose, even though this enormous meal be eaten soon after the spraying, and should the consumer eat the entire fruit.

As a matter of fact careful microscopic examinations have been made of the fruit and foliage of sprayed trees at various intervals after spraying, which indicate that after the water has evaporated, the poison soon entirely disappears, either through being blown off by the wind, or washed off by rains, so that after 15 days hardly the minutest trace can be discovered.

In order, then, to receive a fatal dose of the poison, an individual must "consume several barrels of apples at a single meal!" Whew! Please excuse us from such an experiment to test the poisonous effects of sprayed fruit! How foolish to suppose that one or two apples could possibly contain a sufficient amount of the poison to produce any apparent effect!

In the line of actual experiment as indicating the very finely divided state of the poison, and he extremely small quantity which is used to each tree, Prof. A. J. Cook, of the Michigan Agricultural College, has conducted some striking experiments. A thick paper was placed under an apple tree which was thoroughly sprayed on a windy day, so that the dripping was rather excessive. After the dripping had ceased, the paper (covering a space of 72 square feet) was analyzed, and four-tenths of a grain of arsenic was found. Another tree was thoroughly sprayed, and subsequently the grass and clover beneath it was carefully cut and fed to a horse without the slightest sign of injury.

The whole matter was well summed up by Prof. Riley, in a recent lecture before the Lowell Institute, in Boston, in the following words:

The latest sensational report of this kind was the rumor, emanating from London, within the last week, that American apples were being rejected for fear that their use was unsafe. If we consider for a moment how minute is the quantity of arsenic that can, under the most favorable circumstances, remain in the calyx of an apple, we shall see at once how absurd this fear is; for,

even if the poison that originally killed the worm remained intact, one would have to eat many barrels of apples at a meal to get a sufficient quantity to poison a human being.

Moreover, much of the poison is washed off by the rain, and some of it is thrown off by natural growth of the apple, so that there is, as a rule, nothing left of the poison in the garnered fruit. Add to this the further fact that few people eat apples raw without casting away the calyx and stem ends, the only parts where any poison could, under the most favorable circumstances, remain, and that these parts are always cut away in cooking, and we see how utterly groundless are any fears of injury, and how useless any prohibitive measures against American apples on this score.

Such, then, is the result of the investigation as made by the expert scientists of the Department of Agriculture, and various State Agricultural Colleges. It should inspire confidence in the heart of every consumer of American fruits, and also cause every lover of justice and honor to co-operate in the efforts to establish and extend the knowledge of the harmless effects of sprayed fruits when such spraying is properly applied.

Mr. C. S. Walters, in the *Farmers' Home*, writes thus wisely on the subject, urging harmonious action on the part of horticulturists and bee-keepers:

The fruit and honey interests should work together, and for the latter it is very important that the spraying of trees should be done at the right time. It is an unnecessary and useless labor and expense to spray the fruit trees when in blossom. The proper time to have good effect is to spray immediately after the blossoms have fallen. Paris green and London purple must both be deposited on the fruit itself to have any effect, and this cannot be done when the blossoms are on the trees. The petals of the blossoms cover the fruit until they have withered and fallen from the trees.

Spraying the trees when the blossoms are on them is labor thrown away. Moreover, whole colonies of bees are killed off by eating such poison in the blossoms of the fruit trees, and this is the chief loss.

That the bees should ever receive their death at the hands of unwise fruit growers, is to be regretted, and perhaps cannot better be prevented than by seeing to it that all who must spray with poisonous compounds do so at a time which shall not endanger the lives of the bees, that are really the most helpful of all agencies in producing a bountiful yield of luscious fruits. If the presentation of simple argument will not have the desired effect in securing the respect of the fruit-growers, of course nothing remains except an appeal for the enactment of such legislation as shall protect bee-keepers from loss on account of carelessness and wilful ignorance.

The apiarist cannot afford to lose his bees, and the farmer or fruit-grower cannot afford to kill the bees. They are a benefit to both, and should be protected in every way possible.

Reports From Bee Keepers

REY. JAS. FRAZER, of Sutton West writes,— I have been twelve years in the bee line, and have had a new experience. My whole stock last fall was fourteen. I now have five and they are pretty well reduced. Whether I can bring them to time for the clover or not I cannot tell. In one way it was all my own fault and in another hardly, any way it is another lesson, not to take anything for granted in this line of business, I suppose that holds good in every line. The reason of my loss was want of stores. Our honey season dropped off short at end of July and there was no honey gathered after that. I began last season with ten, increased to fourteen, extracted 628 pounds; bees were in good condition when I fixed up for winter but I did not extend as to stores so the poor bees died of starvation. I winter in summer stands in double-walled hives, my frame is the Quinby. I did not extract from the brood chamber and have eight frames in it. I am using frames six inches deep in super. Don't you think we have had enough about that incorporation business?

MR. D. J. DEWAR, Kertch, writes that bees are carrying in pollen to-day. I wintered 24 in fine condition, lost one, and have one queenless. Looking for good season this year.

April 3rd, '92

MR. ROBT. SHAW, of Rosemont writes:—My bees have come through the winter all right, I put 70 colonies away last fall and they have all come through in good condition, 65 on summer stands, and five in the cellar. In the winter of '91 I wintered 70 on summer stands without the loss of any. I have been keeping bees six years and have not lost a colony in wintering, nor yet have I lost any in the spring. I think I have the best way of wintering there is going. I would not want any better plan, good boxes, plenty of food and a good yard.

WM. ELSON, of Port Moody, B. C. in a correspondence says:—During the last fortnight we have had very severe weather here, hail, snow and frost, while cherries, plums, peaches, pears and all other small fruits are in full bloom, this will be a hard blow on us as we were boasting of bringing through 24 hives without the loss of apparently a bee, this we made from eight hives in the spring and sold \$80. worth of honey, besides what we used and gave away to friends.

MESSRS. F. H. AND E. H. DEWEY, of Westfield,

Mass., write:—Pasturage is very unreliable, and we must close out for a time but expect to resume again in the near future.

A. MURPHY, Bluevale, writes us:—My bees did very poorly last summer, did not keep themselves. Had no increase and have lost some during the winter, cannot say much about them as the spring is cold and backward up to this time.

FOR THE CANADIAN BEE JOURNAL.

When Will Bees Swarm.

PLEASE could you inform a new beginner through your JOURNAL how he can tell just when bees are going to swarm and oblige.

S. MAY,

March 11th, '92.

Littlewood, Ont.

We think there is no way we could describe through the JOURNAL, except you open the hive and watch when they are capping the queen's cell and they will swarm the next day; occasionally a swarm issues just before the queen cells are capped. As soon as you find larvae in the cell, you should watch your hive. After the first swarm issues you will hear the queens piping if you listen at the hive.

FOR THE CANADIAN BEE JOURNAL.

Spring Management.

IN spring management I do not spread brood (as I cannot tell what the weather is to be), but bore holes through the comb, which the bees and queen can pass as they become numerous enough to require it, and I have the gratification of knowing that I have not mis-used my bees, and these small holes are used for a winter passage, and opened in the fall if closed up by the bees, which they will sometimes do. I make two holes near the top layer. When the discussion came on the closed end layer I took the reverse. Feeling that I would be safer while transporting bees I made a few hundred frames. Did I like them? No. When I made one attempt to extract honey from those frames, where the honey was sufficiently cured, the combs would leave the frames, as a bee space would not allow a comb to rest against the basket, and with tender combs much damage was done, as I had only a two frame extractor much time was lost in reversing combs by hand. To throw all the honey out of one side at a time the comb would be broken by the force of the honey on the other side; and for me, give me the open end frame,

A reversible extractor would save lifting out the combs, or take a part of the honey from one side at a time, so that the strain would not be so much on the combs.

JOHN ANDREWS,

Pattens Mills, N. Y.

You make some very good points against extracting from the closed end frames, we found the same difficulty you speak of and could only overcome it by making a special kind of basket, which enabled the wide end bars to project in order that the comb might come against the wire netting. In making holes through the combs, if you plain off a thick shaving, curl it around with about $\frac{1}{2}$ inch hole and shove it into the combs, the bees are not likely to fill it up but we have found them almost invariably fill up holes cut in the combs, this they do not do until they get strong in numbers, we frequently found them filling it with drone comb, in fact in order to get drone comb in the centre of such combs to induce the queens to raise drones early, we have sometimes taken these combs for this purpose, and again we have cut out a little piece in the centre and slipped in a drone comb. You are quite right in not spreading your brood in the spring when you are not sure of the weather. Spreading of brood is a very dangerous operation and results more frequently in injury, than in good. Instead of spreading brood by putting empty combs between full ones, when the colony is sufficiently strong to warrant it, and the weather favorable, we have some times taken the outside ones filled partially with brood and placed them in the centre placing the capped brood nearer the outside, at other times we have merely lifted out the frames and turned the combs around putting the larger amount of brood on the outside and the smaller on the inside as anyone will observe there will be much more brood near the centre of the cluster and each comb from that to the outside of the brood nest will have less brood on the opposite side from the centre of the cluster, thus by reversing the combs once or twice, say every three or four days before they are spread, there is no danger of chilling and the brooding is carried on more rapidly and there is no possible danger of chilling.

The two outside frames with a very little brood in them can be placed in the centre and the capped brood nearer the outside; this requires a great deal of labor and careful attention, besides more experience than perhaps one in fifty beekeepers have, therefore we do not recommend it except in special cases. There is no doubt but brood rearing can be increased one third or one-half faster by this process and persons anxious to build up their colonies very early, and having time to attend to it themselves would in all probability be repaid but for novices and those who could only give their bees partial attention, it would be great folly to attempt it.

FOR THE CANADIAN BEE JOURNAL.

Expulsion of Beemen from Ontario.

A humorous paper by A. Pringle "Sunshine and Cloud on Beekeeping," read at the annual meeting of the O. B. K. A. Jan. 90, occurs this impressive list of clouds. 1st, A sting that poisons and pains. 2nd, Winter mortality and spring dwindling, that thin the hive. 3rd, Foul brood, mice in winter, toads in summer, and, wasps, spiders, beetles, the King bird, bee hawk, bee louse robber flies, and finally poor crop of honey, and unremunerative prices. Such an array of shadows must make one pause; but to those must now be added the climax of torment "The Foul Brood Act" violating rational and essential freedom, rendering apiculture burdensome, permeating resentment and culminating in despair and the suppression of apiculture. A comprehensive consideration of these matters, the promotion and progress of that act will lead one to meditate on some of those grand old lines which have done duty in many themes of instruction.

Bees, or no bees, that is the question, whether it is better in the province to suffer the compulsory and unexpected intrusion of an inspector, knowing or not knowing his profession, or to take up our hives and quit. To quit the province and secure freedom under a sensible legislature, or quit the business and absolve ourselves from trouble. Freedom from molestation by a few irrational and irresponsible mercenary hustlers, is a consumation demanded by 10,000 unspoken beemen.

Two years having tested the act and shown how falacious in the direction intended, it behoves all apiarists to move the redress. Without doubt it is the most abominable piece of legislation in this or any

country of our time. "The best of its kind in the world." Bad is the best.

To further elucidate the fallacy of its projectors I purpose printing a pamphlet setting out a simple plan of eradicating bacillus alvei, and a summary examination of the recorded evidence of recent years in regard to foul brood, before and after the act. My method is an application of the practice of Frank Cheshire, and I would advise all who purchase my pamphlet on Dominion Day for instance acting simultaneously all over, that is all who have any foul brood, and at proper time send me report of their condition and result.

A summary of which reports will be sent to each purchaser.

Local papers especially in Ontario, are invited to copy this matter, and if so to favor me with a copy of said local paper,

Toronto, 25 th April, 92. H. E. HALL,
44 Borden St.

Why my dear sir we are not a little surprised to learn you are going back to the old methods, of hundreds who have tried them in vain. I presume you will find but very few who have succeeded in ridding their apiaries of foul brood by medicine or chemicals of any kind Many have thought that a cure was effected or about to be effected but after a season's trial they have almost felt their hopes blasted. We have not one instance in a hundred where medicine has cured foul brood, besides it takes more time to cure one with medicine than it does 25 on the fasting plan. I am now speaking of what I have learned from the various beekeepers in America. I think you are quite at sea in reference to your remarks upon the foul brood act; instead of 10,000. bee keepers considering it an act not in their interests, I do not know of ten who do not consider it in their interests. If foul brood was allowed to go without an Inspector, or some one to look after its management and cure the novices or we had better say any beekeeper who has not had much experience with it, might not know how to deal with it without special instructions. Those who have been very much opposed to our Inspector, Mr. McEvoy, when he first made his appearance in their apiary we think have all come to the conclusion that it was a most fortunate thing that he was appointed. So far as our government was concerned they were approached not by one or two of

a click, but by the masses, the matter was brought to their notice and pressed upon them by the prominent and most intelligent beekeepers of our land and we certainly owe them a debt of gratitude, that they came forward so manly to our rescue with the necessary legislation, backed up with the necessary appropriation, to assist us in wiping out a pest that bid fair to annihilate beekeeping, if not looked after. We shall be pleased to publish all the information you may have in reference to Foul Brood that is new, or beneficial to our beekeepers, and if you have any means by which you can simplify or cheapen our present mode of managing the disease, we shall only be too glad to assist in its adoption.

Care of Un-Occupied Combs.

DR. C. C. MILLER.

"HOW shall I take care of brood combs left by colonies that have died?" That is the question asked every year. They are well worth saving. Two enemies are to be guarded against— mice and wax worms. ½ Years ago, one Winter, I lost 48 colonies out of 50. That left a pile of empty combs.—480. I stacked them up in their hives indoors. Do you believe the mice went at them and riddled every comb except a few that had never had brood in? New empty comb they do not care so much for. Comb filled with honey is disturbed only so far as they want to eat the honey, and their appetite in that direction is limited. But empty combs containing cocoons in which the bees have been, are their special delight. Those 480 combs, at that time, were worth at least \$100.

How should I have protected them? Why, how would you protect anything from mice? Kill off the mice as soon as you can, but in the meantime shut up the combs mouse-tight. This is easily done, for every hive must be so you can shut it up bee-tight, and a mouse will seldom gnaw its way into hive. Look sharp that there are no mice in the hives when they are shut up.

But if I had shut them up from the mice just as soon as the warm weather came, the worms would destroy them even worse than the mice, no matter how tightly shut up. Somehow the eggs are in the comb, and when warm enough they hatch out into worms. If the combs have been out-doors, so as to be thoroughly frozen, that kills worms and eggs. I do not know just how much freezing is needed, but light freezing

will not do; 10° to 15° would perhaps be necessary.

Well, what will you do if they have not been frozen? The eggs are so small you cannot find them, but you can find the worms when they are very small, for a white powdery substance surround them, made by their gnawing perhaps. Still, it is a pretty big undertaking to find the little worms on a big lot of combs, and if you keep them in a cool cellar they will not hatch out very rapidly, nor grow very fast after they have hatched.

Fumigating them with sulphur or brimstone will kill the worms, but not the eggs. If they have grown to full size, it takes heavy brimstoning to kill them. If you get them all once hatched and killed with brimstone then they are safe until the wax-moth lays more eggs in them. This can be prevented by closing them up moth-tight. If the combs are hung about two inches apart in an airy place, the moth is not likely to disturb them. Some report success by putting them in hives and putting in spiders.

I will tell you how I have managed my combs for the past few years: Suppose a colony has died. I try to see that no mice can disturb the combs, shutting the hive up mouse-tight, and then putting it in the cellar if it is not already there. From time to time I keep watch, and so long as no worms can be seen I let them alone. As it gets warmer, the worms will be seen, and sometimes I have left the combs then for some time, picking out, with a pin or a wire nail, all worms a half-inch long; for up to that size they do not work so fast on the combs, especially in a cool place.

But there is no place in the world that combs are so safe from worms as in the care of a strong colony of bees, especially the Italians. So as fast as they can be given to the bees, all anxiety about them is over. The only trouble is that in the Spring you want to keep the bees warm, and on as few combs as possible. But by the time it is warm enough for the worms to do much harm, it is warm enough for bees to cover a little more territory. Still, I do not need to put the combs right in the hives with the bees, but I put them under. Put a hive full of the combs under the hive with the colony, so that the bees in going in and out must pass through the hive of empty combs. Do not leave any other entrance or exit for them. You may rely on their finding every worm, and taking them out, too, if they are Italians, and I suppose the blacks, if strong, will make pretty good work at it.

If there is any honey in the combs, lookout, or you may have a picnic with robbers. Better

put the combs there toward evening, not very long before they stop flying, and by preference when it is warm enough for them to move around considerably at night. Then they will, by morning, get over the excitement caused by finding such a bonanza so near at hand, and will be ready to protect the entrance against intruders. Close the entrance up just as small as you can without hindering them from getting in and out. Of course if there is no honey in the combs there is no need for such precautions.

As soon as you need the combs for new colonies, they can be taken, and you will find them in the very nicest condition. One year I left them under until the bees stored honey in them, which I extracted, and some of them had brood. —*National Stockman.*

New System.

SAW in the A. B. J. on page 536, April 21st, an article on "Alpaugh's New System of Beekeeping," which is not made public and which Mr. D. A. Jones editor of the C. B. J., describes in that Journal what he thought he knew about it. From Mr. Jones' description one of our American cousins reviews it and publishes it in the "Review"; from the "Review" it goes to the A. B. J., they claiming to have a condensed statement. The correspondent seemed to be at sea as to the subject on which he was writing, in the first place he says the system "I think is." Now my friends it is all right to think if we do not think too loud, but frequently we are astray as the man who thought he knew was in this case, Mr. Alpaugh is going to let some of our leading bee-keepers test the new system this season, probably it would be as well not to say anything more about it at present, only to let our friends know that the articles published in the "Review" and the A. B. J., are no more like the "New Method" than the ordinary old style of beekeeping is like the present way of managing.

Faithfully Yours,

Southwold Ont.

D. ANGLISH.

There seems to be considerable curiosity about this new mode of management in the minds of some and we think it would be wise for Mr. Alpaugh to sell his system to those who wish to purchase it. We have faith enough in Mr. Alpaugh's ability after one year's experience with it to believe that it is worth all that he asks for it viz, \$2.50., and we are sure that if he would prepare instructions, have them printed and placed on the market it would be much better tested, than if allowed to be tested by a few, and deprive others of the benefit of it for a year. If Mr. Alpaugh would send us particulars we would be willing to test it this season, and report without making it public. This would give us a chance to speak from experience.

FOR THE CANADIAN POULTRY JOURNAL.

Douce Halvers.

THE editor of the C. B. J. is evidently no Scotchman, or the son of a Scotchman. In my manuscript I christened my notes in the last issue "douce haivers," which in broad Scotch means *serious gossip*, but "ye editor" left the suspicious looking bogey out. Now, I strongly suspect that brother Jones is either a Dutchman or the son of a Dutchman, and thought to himself—"What the *deuce* is *douce haivers* anyway?" He probably concluded that it had some occult connection with the *deuce* or "the old boy," or whatever you like to call that gentleman with the forked tail, whom the Privy Council of England made such short work of a few years ago in the celebrated "Jenkins case." I assure brother Jones that this *douce* has nothing to do with that other *deuce*, and will never trouble him I hope any more than the other dead one.

THE WEATHER AND THE BEES.

We may soon follow the fashion of the English apiarian journalists. They are all the time writing about the weather—the weather—in every issue. The reason probably is that they have a great deal of weather over there—much more than we have here. The weather is all the time doing something over there, and never stays done. Here it does less, and stays done longer. This is the 27th of April. Bees still in cellar except 35 colonies. Since 7th inst. it has been cold, raw and windy—most of the time freezing more or less nearly every night. Winter is literally "lingering in the lap of spring." Under such circumstances the bees are better in than out. I have seen no natural pollen carried in yet till to day. If I remember aright, some of the beekeepers at the House Committee in Toronto on the 5th inst. told me that their bees in the west there had been carrying in pollen previous to that date. There is evidently quite a difference in climate between the Eastern part of Ontario and the West, especially the Niagara peninsula. It strikes me that the wintering problem is a bigger one here than there. It requires more skill and care to get the bees through—especially through the Spring—with us than with you. Were it otherwise we would not find those friends in the west so ready to set themselves down on indoor wintering and those who practice it. It is just possible they might come out of the little end of the horn down here in their outdoor wintering. However, we can winter outside successfully, but much prefer inside. The Spring is the most critical time for bees wintered inside, which is not always the case with those wintered

outside. If quiet and free from disease they are better in, till natural pollen appears, and even longer if the weather is not settled to warm. I have had bees in the cellar until the middle of May which did as well if not better than those put out a month earlier the same season. I would not, however, care to take bees out of the cellar, the middle of May, which had been wintered on syrup without pollen *a la* Heddon, and try to get them ready for the clover flow. When left in so late they must have stored pollen for brooding, and a saturated sponge at entrance will supply them with water.

THAT "NAMELESS DISEASE."

I do not mean the bee paralysis, quite common of late years, which causes the bees to flounder about and hobble around in front of the hives until they die; but I mean that "sugar-honey" disease which is just now afflicting some of our American brethren of the quill, causing them to do an amount of moral hobbling and logical floundering which may not exactly lead them to death, like the poor bees, but if persisted in will undoubtedly lead them to grief. And the trouble is, such people necessarily bring others of the same craft to grief with them. Our American cousins have the reputation of being enterprising, and they have honestly earned it. They are constitutionally go-ahead a tive, all of which is commendable enough in its way in this age of lightning progress. But there is such a thing as going too fast in some directions, and too slow in others. That Mr. Hasty has a right to discuss, that or any other question in decent language, is beyond doubt; that the "Review" and all the others have the same right goes without saying. But it is not always prudent to exercise a natural right. All things that are lawful are not expedient. While I would not condemn anyone, for discussing the question, much less abuse him, my own opinion is that it might better have been allowed to rest. We are carrying load enough. We already have enough ignorance, prejudice, misrepresentation and falsehood to contend with. We are told that the truth ought never to be suppressed. That is true. But simply omitting to tell all the truth you know under certain circumstances is not suppressing the truth. It is no man's duty to either speak or write all the truth he knows. I could stir up strife, hostility, enmity and any amount of evil in a very short time by speaking and writing nothing but the truth. By doing so I would prove my own folly and lack of judgment. But I deny that the bottom idea of this sugar-honey theory is true. Before ever the bee gathers the nectar from the clover the

peculiar aroma of the clover honey reaches our olfactory nerves through the air. The bee gathers it and changes it somewhat in transit—though not essentially—and we have clover honey. The same holds true of thistle, basswood, buckwheat and other kinds of nectar. Honey comes from the nectar of flowers, and from no other source. Feed any other substance you like, and though the bee may take it up, change it somewhat while holding it, store it in comb, and cap it, it is not honey. I say it is not honey, and no sophistry can make it honey. No juggling with words can make it honey. No prefix adjectives will make it honey. Friend Clarke says it would be "sugar-honey," and could be labelled as such. It is not sugar honey or any other kind of honey. It is a fraud with that name. The word honey must never be degraded after that fashion. If the stuff is produced (and I hope it will not be produced by any bee-keeper) it must be called something else with the word "honey" left out. Let no Canadian bee-keeper produce an ounce of it. Let the CANADIAN BEE JOURNAL give the proposition the cold shoulder. Our business as bee-keepers is to produce honey. Let us stick to that. If we demean ourselves we can expect nothing better from the public.

Selby, Ont.

ALLEN PRINGLE.

Raising Queens In Hives Already Containing A Queen.

DR. MILLER ANSWERS QUESTIONS.

MHIS letter is anonymous; but there is no evidence that it is meant in any but good faith, and the subject is an interesting one and may be useful to others.

Dr. C. C. Miller :—will you please answer the following questions through GLEANINGS?

On page 333, 1890, you mention a way to have cells built by the bees, and have the queen fertilized when hatched. You say, "Let there be an entrance on top." Now, what I want to know is, if I do not make an entrance on top, but only the original entrance at bottom, can I raise cells, the cell to be cut out a few days before they hatch, and given to full colonies, as I wish to requeen all my hives? My bees are black, and show some trace of Italian stock, which I wish to get rid of and come back to the original black stock that I had years ago when I used to get honey. I used to raise what queens I wanted, by the neucles system; but if can raise them in full colonies without having the hives queeness, I think it would be better. The system you recommend seems to me to be really two distinct colonies. If I do not let

them have two entrances, will the bees below go above and raise cells and really act as one colony?

A SUBSCRIBER TO GLEANINGS.

Yes, you can raise cells just as well without any entrance above, if you want to cut the cells before they hatch. I think you may find the plan to succeed will sometimes and sometimes fail. The first time I raised any cells in the way mentioned was in a hive over which I had placed three stories of empty combs to be taken care of by the bees. In order to make sure that the bees would traverse the entire lot, I put a frame of brood in the upper story. There was no queen-excluder, and nothing to hinder the two queens coming together except the fact that they were so far apart that it was easier for the young queen to use as an entrance the hole she found accidentally left above. This case was reported in GLEANINGS at the time, and I think it was the first case of the kind ever published.

No, there are not two colonies. I don't know just how much separation is needed, but it seems that, whenever there is young brood to be taken care of, and the queen does not have ready access to it, a certain amount of isolation will induce the bees to rear queen-cells, even if there is a constant communication between the bees of the two parts.

I have not always succeeded in getting the bees to raise cells in a second story with an excluder between. But I'll give you a plan for raising cells that may almost always be depended upon, and you need no queen excluder. Instead of a queen-excluder, put between the upper and lower story a quilt or sheet; if holes are torn in it, no matter. But there must be some place, at back, front, or side, for the bees to pass up through, and I don't know that it makes much difference whether a square inch is left for a passage, or ten inches. The point seems to be, that the cloth cuts off direct communication between the two stories better than the queen-excluder. If very much of an opening be left, the queen will sometimes go up into the upper story, especially if she hasn't all the room she wants below. Of course, when she goes up, the cells above will be destroyed, unless there is some intention to swarm; but in any case the bees will start cells below. So I have often left the colony in the upper story, and put only one comb of brood in the lower story, to find cells almost surely started below.

Now, some one will say that this is a good plan to have queens renewed—simply let the young queen hatch out and kill the old one. I've had no trouble in having the young queen

hatch out, but in a few days she was always missing, and the old queen serenely maintained supremacy. With an excluder between, and an entrance for each queen, the case might be different.

You want to get rid of the trace of Italian blood. I wish I could swap for it the trace of Black blood in some of my colonies, and have as pure Italians as some I had "years ago, when I used to get honey". But I'm afraid that, if you had the same pure Blacks back, you'd find that they wouldn't give you a crop without a good season. We've had bad seasons lately. It is quite true that Italians have not secured crops; but I have no distinct recollection of reading about the Blacks storing better crops than the Italians.

C. C. MILLER.

Marengo, Ill., Mar. 17.

How My Bees Have Wintered

My Bees were getting very restless in the cellar although the Temperature was comparatively low (forty-eight degrees) some were spotting their hives and a good many dropping on the floor, and I thought possibly it would do no harm to set them out so that they could clean out their hives and prepare for pollen when it would come. (For some years we have not set them out till pollen appeared) on Saturday morning it was cloudy and cool after rain with prospect of clearing up so after dinner we decided to put them out (Temperature about fifty degrees) the sun came out and they commenced flying freely when suddenly it became overcast again, and cooler causing the Bees to drop in great numbers, at night it began to freeze and snow, then we wished they were all in the cellar again. I closed them up tight and covered all we could and put some of the lightest in the cellar. Yesterday was cold and they did not stir much to-day they have had a good flight and I hope the worst is over. They have very little Brood so that there will be less danger of it being chilled. What a grand thing the double walled hive is at such times as these, mine are nearly all in single walled hives for convenience of handling. Now some might ask why did you set them out on such a cool day, well for some years we have set them out before day-light when it was likely to be fine and it has happened to be very warm day which would cause a tremendous uproar, some would swarm out which often caused the loss of Queens. Some hives would be depopulated, others overcrowded which would give extra work, dividing them up again we have avoided that but lost quite a number

by the change in temperature. April 26th fine day bees flew well seemingly very little the worse, for the cold snap, first pollen carried in to-day from two sources every colony flying same number as put away in the fall sixty-five. The most active colonies in the fall at robbing have shown most sign of dysentery and appear the weakest now and have eaten nearly all their stores. I have some united and fed about the 1st of November for experiment they seem as good as any but I will watch them a little later on. How is it no one has prophesied a good honey season yet. In this locality if the frost has not hurt the clover too much, I think the prospects are fair but I can tell better about next exhibition time, we have had several poor seasons which has caused a number to give up bee keeping but when the change comes they will be just as ready to start again.

R. H. SMITH.

Bracebridge.

April 25, 1892.

Setting bees out when cold and chilly causes immense loss as the bees fly out and light down on the ground and as soon as the clouds hide the sun they become chilled and unless the sun comes out warmer they are sure to perish. We recollect one year of losing one-third of all the bees in one of our apiaries by that means. They would just light on the ground collect in little clusters and tremble a little while then become stiff and die. We always prefer setting bees out earlier in the day so that when those lighting on the ground become chilled they are sure to have sun enough at mid-day to revive them so they can get back to the hives. One reason that your robber bees have not wintered as well as those that remain more quiet in the fall is because they were not clustered so quickly or closely when they went into winter quarters. Neither was their honey as well sealed. It always makes bees restless to rob. The quieter bees can be put in winter quarters and the quieter they are for weeks, before putting in, the better they are likely to winter.

Report From Lancaster.

John W. Calder, Lancaster writes:— My bees have wintered well and I will send you in report shortly on Wintering bees. Wishing you success with your C. B. J.

Lancaster. April 30, 1892.

THE CANADIAN BEE JOURNAL

ISSUED 1ST AND 15TH OF EACH MONTH.

D. A. JONES, - - - EDITOR

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BETON, ONT.

EDITORIAL.

One of our customers a few days ago sent us three twenty-five cent pieces. The way in which the money was sent was interesting as it was the first time we have seen money sent in this way. Take a piece of paste board about the thickness of the twenty-five cent piece and cut out a hole to fit, then paste a piece of paper on each side of card, in this way money can be sent safely as it appears very much like a photo in an envelope and silver may be sent instead of postage stamps.

* *

We will insert an advt. in the JOURNAL free of charge, to anyone desirous of procuring a situation in an apiary this coming season as a student. We have had a good many inquiries for students and we hope more of our young men, and ladies as well, will become interested in this business.

* *

We have on hand a large number of Hercules club trees for ornamental purposes. The bees gathered honey on the bloom last year after there had been frost, they seem to be great honey producers and some of ours had clusters of flowers about the size of a bushel basket, they are quite hardy and do not require any protection, in winter. We have had in one year's growth sometimes from three to four feet, and from one to one and a half inches in diameter. As this is the season of the year to plant these trees we will make a special offer to any friends who will interest them-

selves in the C. B. J. or C. P. J. by sending us a new subscriber with \$1.00 we will send them two of the trees.

Mr. Gemmell President of the O. B. K. A. informs us that the Perth Bee-Keepers Association will hold a meeting on May 20th.

We are in receipt of a nicely printed catalogue from F. W. Jones, Bedford Que., containing list of all supplies necessary for bee-keepers.

Waxing sections on the inside to secure the capping of the combs clear to the edge, was advocated, years ago by D. A. Jones. At least, so writes G. K. Hubbard, and he asks what has become of the idea. Is it a "lost art," or is it worthless?—Review.

We tested that matter thoroughly waxing the sections inside with a very slight coat of wax so slight that it could scarcely be noticed, and by putting the sections in the cases alternately we found the ones waxed inside invariably better filled, better capped over, more evenly bulging and fewer popholes. We then got several other parties to test the same matter and their experience was the same.

Do not be frightened if you find considerable of a brownish powder dropped on the floor board of your hives under the combs. It is the chipping that the bees throw down when they uncap the honey.

Our frontispiece this week contains Electro of Mr. S. T. Pettet a past President of the O. B. K. and was one of the delegates to the Colonial Exhibition. He is well known as an enthusiast, as well as a careful observer, being one of our largest bee-keepers.

In our next issue we expect to have an electro and give a biographical sketch of our President Mr. F. A. Gemmell, of Stratford.

We are in receipt of a nicely printed catalogue from J. F. Michael, Germain Ohio.

We have received a very nicely printed eight page catalogue of Italian and Carniolan bees and queens from, John

Andrews. Patten Mills N. Y. On this page will be found an article from friend Andrews.

Perfection Bee Feeder.

THIS BEE FEEDER of friend Hasting's is certainly very ingenious and seems to be very simple and easily managed, as will be seen by the screw which presses on the disc that rests on the honey comb cloth, allowing the honey to pass through fast or slow as you desire. By giving the screw a couple of extra turns the food may be shut off altogether, or by loosening it you can allow it to run through faster even than the bees could take it up. Accompanying each feeder are the following directions:—

Remove the cloth to dampen it, then place in position before putting in food.

Regulate the flow of food by thumb screw.

To increase the flow unscrew thumb screw inside the Feeder. Wash out cloth after spring or fall feeding.



Encouraging.

THE CANADIAN BEE JOURNAL comes to hand this month in an enlarged and much improved form. There are many of our readers who are interested in bee culture and we believe there is no better means of these gaining the necessary information for the proper cultivation of bees than by reading current literature on the same, and we heartily commend to them this excellent journal, which is edited by that well known apiarist, D. A. Jones, Beeton, Ont. The subscription price is only \$1.00 per year. Send for a specimen number. If you are fond of bees, you will be delighted with it.

—Pembroke Standard.

How To Get The Best Queen Cells

If it is possible to do so, I select a colony that is getting ready to swarm. If there are none in that condition, I feed one until it is in that condition. I then take away the queen, and let the colony stand for six or seven days. If honey is not coming in, I feed the colony, so as to get all the chyme prepared that is possible. Then, I prepare eggs according to the Alley plan, and with the point of my knife I roll out

the queen grubs started, letting the queen food remain unbroken, as far as can be done. I then insert my frames with prepared eggs, placing them among the brood. My frames run crosswise of my hives, and I use two frames in each, having a middle crossbar in each frame, thus making four courses of cells across the hive. Between the two frames of prepared eggs for queen cells I commonly put the two frames containing the most prepared queen food. Thus, you see, I have all the young and older bees to prepare still more queen food, and what is prepared will be used as fast as needed, and is a clear gain. The bees will keep preparing the food as long as there is a queen cell not finished, and the encouragement that the old bees get from the constant hatching of the young bees will press them to a diligent action. I made frequent experiments last season, and at no time did I get less than seventeen queen cells, and commonly, from twenty to thirty, two, and as fine queens from them as I ever reared or ever saw.

JNO. ANDREWS, Patten's Mills, N. Y.

Management of Bees.

AS I promised to contribute to the C.B.J., I will now try and frame an article for its columns. I have been through the mill, but do not pretend to know all about bee-keeping yet. I am going to try and say something to the novice. My subject for this time will be the "Old Box Hive or the Box Hive Bee-Keeper." As I have been traveling through the country considerably during the last few years. I sell a great many of this class of hives; probably it would be better for the bees if there were more. Wherever I come across a box-hive bee-keeper I generally find an apiarist who winters his bees successfully. Some may say—"what is the problem?"—that is easily solved. Such bee-keepers never try to winter over any hive that they can lift; but any hive he or she is able to lift is placed over the brimstone—that is the way the box hive bee keeper gets rid of his surplus. Now, my friends, I suppose you will think this way of managing bees very cruel, but stop to think for a moment, how cruel a great many of our rack or frame bee-keepers are because the honey is so easy to get at, they take nearly all of it, and leave the poor little industrious bee to starve and perish with the cold! A great many of them, when they lose their bees, will tell you they froze to death. Now, my brother bee-keepers, this is not so; my experience with bees in this fair Canada of ours is—they are something like the people who inhabit this part of the sphere, if you will give them plenty to eat, and in a manner they can get at it—they are pretty hard to freeze with a little protection.

D. ANGUISH.

Southwold,