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CANADIAN BEE JOURNAL

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WHOLE
No. 375

Judging from E. E. Hasty's writings in the Review under the heading "A Condensed View of Current Hasty Feeling Bee Writings," he is feeling very sore because our Dominion Parliament are not willing to allow a fraud to be perpetrated upon the public in permitting sugar syrup to be sold as pure honey. We cannot be surprised that the law and those who have endorsed its views upon this question should not be pleased with the Canadian Bee Journal, or that Canadians have secured legislation which will give consumers confidence in the product of Canadian apiaries at home and abroad. Foremost in this work has been Pettit and J. E. Frith, while in the controversy in which W. F. Clarke tried to support our cause, the first to reply was the editor of the Canadian Bee Journal, S. T. Smith, R. H. Smith, Wm. McEvoy and the Doctor Duncan appeared to have given publicity to such unwholesome facts and because they plead appeared to be so sound the sentiment in favor of the principal members of the Canadian Bee Journal. When we read this paper we were told by the proprietor that the editor of the Review thought that there was no necessity for a Canadian Bee Journal, he offered to purchase the subscription list and the Review to be the journal for Canada. Mr. Hasty and the editor of the Review are one in considering that it is unnecessary to secure such legislation as we have secured, Hasty in his covert remarks is

but voicing the opinion of the editor of the Review. Their opinion has never changed, and we think Canadian bee-keepers can congratulate themselves that they have an organ at their beck, which speaks upon this question with no uncertain sound. In justice to Gleanings in Bee Culture and the American Bee Journal, the leading bee journals in the United States, we would say their views are in harmony with the Canadian Bee Journal and 999 out of 1000 bee-keepers. In Canada we do not know of one at all, dependant for a living upon the keeping of bees, who does not rejoice that the House of Commons has passed the act which voices the principle to which Mr. Hasty and the editor of the Review has objected so strongly.

* * *

Every little while the statement crops up that foul brood can be cured by means of some drug, and particularly is this the case in Europe. Drugs for Foul Brood. E. D. Till, Eynsford, Kent, says in the British Bee Journal in a discussion with Dr. Bartrum: "As to Naphthaline an naphthol beta affording proper security against foul brood. Dr. Bartrum knows it does not ensure exemption." We cannot see how it is possible to guarantee or even feel surely certain that a case of foul brood will be cured by the drug treatment. If the drug does not come in contact with every spore of disease it is liable to break out again if fed to the larvae. And who can expect that such contact is certain to take place when these spores

are contained in dried compact matter in the cell bases or lower sides of the cell, and in the honey, which when stored in the cells, sealed or unsealed, would be very difficult to reach with even a moderate degree of certainty. In Canada all practical men have abandoned idea of curing foul brood by any other method than taking away the old combs and stores, and putting them as to stores upon an entirely new footing. The brood need not be destroyed, it can easily be arranged to have it all hatch from the combs.

* * *

In this number of THE CANADIAN BEE JOURNAL will be found an article, "The

Past and Present of Bee Keeping" by G. M. Doolittle

It was written for the American Bee Journal. If our readers will study that article first they will better understand what we are about to say. Mr. Doolittle wants to know if the depreciation in price is not due to overproduction. In reply to that first question we would say that; When some of our best bee-keepers say they would sooner raise a pound of honey than a pound of pork, and pork is quoted at present @ \$1.75 per hundred. we can hardly say that there is overproduction. One of the essential characteristics of overproduction in our estimation is having to produce an article and sell it so as not to leave a living profit. We find cases in which people have sold honey at very low figures, but that does not necessarily prove overproduction. It may show that the man has not found the best way of marketing his honey, or that owing to carelessness or ignorance or disadvantage of locality or season, he has produced an inferior article. Again without being justified in using the term overproduction, there is in almost every business the survival of the fittest and in that management and locality plays an important part.

What has brought diminished prices today is the fact that \$7 will go further

to-day than it would in 1874. Take that very American Bee Journal, in those days it cost monthly \$1 or \$2, where to-day you can get it weekly for \$1. You can get a much better suit of clothes for \$10 today than you could in 1874, bee supplies are less and so on. Again everyone admits there was big money in bee-keeping in these days. Those who engage in a new business at that stage say it is a reward for shrewdness and quickness to perceive an opening for business, the same man if another man engages in the business, and he is the buyer, calls it "highway robbery prices" and so on, but as more engage in it prices come down to something like a living profit. As a study was made of bee-keeping, increase was kept down, comb foundation was used more freely, the value of shade and ventilation was, by some at least known, we were able to produce for much less money, and yet make the same profit. As men learned better methods of wintering, and were more certain to bring their bees out strong in the spring they could produce for less money. These are only directions in which every business must go without arriving at the stage of overproduction. But there is still another point to which we must draw attention, can we say that we have overproduction before we have developed and cultivated our market to the fullest extent? We think not. Beekeepers have gone on and on producing yet they have made little or no efforts to increase the demand for honey. Here and there true, an individual has made the effort, but he has become discouraged through lack of assistance from those who benefit as much as himself. He has done it without remuneration beyond what all other beekeepers would receive through his efforts and the necessity of winning bread for himself has prevented continuing that work. Unlike the States bee-keepers could well combine, and engage the services of not one man but several men, whose duty it would be through press and tongue to put the advantages to be derived from the use of honey before the public. We know of extensive manufactures who guard the fact they

honey in the preparation of their products as a trade secret, and they will and have been known to purchase no more from those who mentioned the fact to rival manufactures to secure further trade. Amongst such men are confectioners, bakers, vinegar makers, liquor and beverage manufactures, tobacconists, and makers of printers rollers. Here is a vast field to work on, as yet almost untouched. Again how few are using as a table article honey, one of the most wholesome and pleasant of foods. The people could be educated and induced to use one thousand lbs. where they use one to-day. This can be done by judicious items constantly supplied to the press, it is a case of "keeping everlastingly at it brings success." Keep honey before the people, in the paper, in the stores, and at the table, and success is as certain as it is sure that daylight follows darkness.

We have before spoken of educating and inducing the public to use honey. Honey at present prices is an economic and valuable food, one which has a right to appear on the poor man's table, but during and since the days of ancient history it has been looked upon as delicious food and a delicacy, and a food looked upon in the light which honey is, will suffer very much from the suspicion of adulteration. Much that suspicion is unjust, it is in part owing to the finish and perfection of comb and extracted honey, the quantity produced, and ignorance about bee-keeping that the bee is gaining ground. We can get nothing more powerful and quicker in action in returning confidence than legislature making adulteration a severe offence. A copy of such an act upon the package, to spread the fact abroad that such an act exists will give confidence as nothing else can, and if needed will apply the blister which will correct any evil tendency. No, brother, a little, we do not think any one is justified in throwing the blame on overproduction. Take action or get your government to take action along the above lines and bee-keeping will have a new era of prosperity. Let the developement of markets

go hand in hand with the developement of bee-keeping.

In the American Bee Journal, B. Taylor, Forestville, Minn., talks pretty plainly to E. Hasby, the father of the "Sugar Honey Doctrine." He writes:

Now Mr. Hasty I don't believe that when you invented the Famous Sugar Honey you intended any fraud or wrong. You just did not consider that it opened wide the door to fraud and deception, and came nearer to harmful results than any proposition suggested to bee-keepers. Some Minnesota bee-keepers said "Rascal!" when I attempted to excuse you, but I was moved by that charity that "thinketh no evil," reasoned most—but not all—of them out of it.

This is pretty plain talk even if dished up by a friend and in the most friendly manner and to a friend.

All Honey Should be Thoroughly Ripened.

The nectar which bees collect from the flowers is thin and watery, and must be fully evaporated to make the best honey. This is why the bees do not at once cap over the cells after filling them with honey. They wait till evaporation is sufficient to make the honey of such thickness or 'body' that it is in no danger of souring or fermentation after being sealed. The bee-keeper should be equally wise and not extract the honey till it is capped over. This, of course, requires the extra labor of uncapping, and more, for it is easier to extract thin honey than to throw out that which has reached the proper consistency. Thus, there is always the temptation to extract unripe honey. I knew of a very recent case in point: A bee-keeper sold to a large consumer a can of honey, with the advice to leave the screw cover off, or the can might burst. This meant that the honey was likely to ferment, or, in other words, it was unripe honey and had been extracted too soon. Had the purchaser known the facts, he would have refused to purchase the article.

The Dadants, of Hamilton, Illinois, who have gained such a wide reputation for their extracted honey, never extract, I believe, until the honey is all capped over; and indeed I think they add storey after storey, and do not extract at all until the season is over. This means more labor and

expense, and is sacrificing immediate gain for future profit and reputation. No doubt but it is very wise in the long run. It is true that unripe honey may be artificially evaporated, if proper pains be taken. But there is always danger that it will not be, so without any doubt the safest course is to never extract honey until it is entirely capped over. The Bingham uncapping knife is the best knife to use.

The extractor should be so made that the combs can be reversed without removal from the comb baskets. This requires the omission of a central shaft. It is also convenient to have the entire central parts—the comb baskets—so arranged that they can be removed at once and replaced. It is still better, especially in large apiaries, to have the automatic reversing arrangement where the frames can all be reversed at once without removal from the extractor. True, such machines are expensive, but they will very soon pay their extra cost.

It will pay any young bee-keeper to visit a large bee-keeper, who has a successful record, as one thus gains many hints that will be of great value to him.—The Rural Californian.

William F. Clarke's Pamphlet.

—D. W. Heise.

In the third paragraph of Mr. Clark's article on Absurd Legislation he says:—"It has been accidentally discovered that granulated sugar fed to bees is transmuted by them into honey or grape sugar and cannot be distinguished by experts from the best grades of floral honey." Now if this be true, (and I have no reason to disbelieve it, emanating, as it does, from the pen of one, who himself says that no one has ever questioned his veracity, except R. F. Holterman), and he has, no doubt, seen his mistake and withdrawn his charge (see back of pamphlet). Now why does Mr. Clark take such an inconsistent position in another paragraph, where he says: "No one proposes to produce sugar honey, and palm it off upon the public for clover or Linden honey. It is proposed to sell it for what it is—"only that and nothing more." But Mr. Clark has already said that sugar honey cannot be distinguished from the best grades of floral honey. To Canadians, at least, that means clover and linden. Now if the flavor, the aroma and general

quality of clover, linden and sugar honey are identical, and they must be, or experts would surely discover some difference, then why sell sugar honey for what it is, since they differ in nothing but the source from which they were obtained. If I were buying honey, it would matter nothing to me if the bees had sucked the sap out of rotten wood and converted into a good quality of honey that I could not distinguish from clover and Linden, I would buy it just as readily, since they must be identical in every respect, if, as Mr. Clark says, there is no difference. And I cannot see wherein the public would be deceived by offering them sugar honey for clover and linden, except in name, and that only.

Again, if, as Mr. Clark says, the feeding of cane sugar to bees, and having them transmute it into honey or grape sugar, is a legitimate article of manufacture, and a boon to dyspeptics, and if by his intellectual vigor he should ever be able to educate the public generally to accept his view of the matter (which I hope he never will, then the honey bee has fulfilled one mission, for which it was, no doubt, created, namely, to visit the flowers for a two-fold purpose. Because, under such management, bees would be more profitable (from one standpoint, at least) if they were prevented from visiting the flowers of the fields at all by surrounding the hives with wire cloth, and feed them sugar to produce honey, the same as we feed a cow to produce milk, and I hope the day may be far distant when such a state of things will be brought about. Furthermore, wherein would be the wisdom of allowing our bees to roam the fields sipping little nectar here and a little there, when, by keeping them at home we could feed them from 15 to 20, or possibly 25 pounds of sugar syrup per 24 hours and have them produce the same article which they were ransacking the flowers of the fields for, and securing probably 2 or 3 pounds per day, and at that rate of production, how long would it take to supply all the dyspeptics of America who dare not use cane sugar? Then what would Mr. Clark do with the surplus? Could he expect to get the commercial value of granulated sugar in its cane state, since for ordinary purposes grape sugar will not take the place of cane sugar. I hope and trust that while Mr. Clark is booming the production of sugar honey, in his great wisdom he will also secure a market where all that could be produced would find ready sale at not less at least than 8c per pound. If he cannot guarantee that to bee-keepers, then he had better go slow and select a spot of land before he jumps.
Bethesda, Ont.

The Past and Present of Bee-Keeping.

By G. M. Doolittle.

Having occasion, lately, to look over an old diary to find something that was called in question, I ran across an item which was written by a friend to prove that bee-keeping was always to be a lucrative business. which item read as follows:

"Notwithstanding the great demand for bees, and the immense quantities of honey that are produced from year to year, the amount largely increasing each year, I do not see any reason to think that overstocking or overproduction is a factor that need trouble us in this generation. At any rate, I don't see that the price of nice honey is any lower than years ago."

This was written in 1881, or about 12 years ago, and in reading there was a strange sound to it; strange not only from the standpoint of 1896, but from the standpoint of 1869, as well, at which time I commenced to keep bees. I fell to wondering if "this generation" that existed 12 years ago had passed away, for surely, if I read our present bee-literature aright, both "overstocking" and "overproduction" are causing a wail to come from nearly every hand. Hear Mr. Hutchinson telling in the Review how the forests have been cut off, the swamps been dried and the fence-corners cleaned out, till the flora which we had a few years ago—which invited the little busy bee to a sumptuous feast—was becoming nearly as scarce as the trails of the Indian. Then hear Dr. Miller and others asking if the good old times will ever come again. All of which point to the fact, that whether overstocked or not, from some reason the average bee-keepers does not secure the average good crops of honey that they did years ago.

Then look at the talk of low prices, the planning to form a honey-association, and the censure of our commission-men, who realize only 10 cents a pound for nice white comb honey to their consigners, where they sell at 14 cents, and ask yourself if overproduction is not figuring in this matter of low prices. If it is not overproduction that makes the low prices for honey, what is it? Commission-men were not formerly criticised for charging 10 per cent., or that was the usual charge during the early seventies. All must admit that the market price of honey is much lower than it formerly was, and when 10 per cent. is taken from a low price it hurts the honey pro-

ducer much more than it does to have the same per cent. taken from a high price. Small honey-producers can sell their honey to advantage about home, in neighboring villages, but the large producer must always seek a market for his produce in the large cities, and the prices obtained in these cities has very much to do with home prices; hence the "market price" is what we have to look to in determining whether overproduction has had anything to do with the matter of prices.

I commenced bee-keeping 27 years ago the present spring, and at that time honey in six pound boxes, having glass on two sides, brought 25 cents per pound, delivered at the railroad, while in the fall of 1869 I was offered by a party from New York city, 50 cents per pound for the little I had, the advance of 100 per cent. being caused by a very poor season during 1869, so that the supply was very much less than the demand.

The season of 1870 being an extra good one, the price fell back to 25 cents again, at which price I sold my crop of that year, as well as that of 1871 and 1872. Owing to the loss of bees during the preceding winter, the supply was insufficient again, so that in the fall of 1873 I sold at 27 cents, taking my whole crop light and dark, together, while in 1874 I received 28½ cents per pound for the whole of my crop. Those prices brought more persons into the business which, with but little loss in wintering, caused honey to drop, so that 26 cents was the price I obtained in 1875. while in 1876 the supply was again adequate to the demand, and 25 cents was the selling price.

That the readers of the American Bee Journal may know something of the past, without going over the matter for themselves, I have carefully looked up the market report as given in our bee-papers, and here give an average of quotations as I found them. For 1874, 28 to 30 cents; 1875, 27 to 30; 1876, 23 to 25; 1877, 20 to 22; 1878, 12 to 16; 1879, 20 to 22; 1880, 18 to 20; 1881, 18 to 22; 1882, 22 to 25; 1883, 18 to 20; 1884, 17 to 19; 1885, 15 to 18; 1886, 14 to 16; and during the past 10 years the prices have ranged between those of 1886 and the 18 to 15 cents of the present. Previous to 1874 I fail to find any quotations in any of the bee-papers which I have.

From the above it will seem that honey quotations at present, and for the past 10 years, are fully 100 per cent. lower than they were in the early seventies. Another thing which is, that honey in such shape as was sold from 1853 to 1873 at 25 cents or above, per pound, would not net to-day over 6 to 8 cents in any market. To bring from 18 to 15 cents now, honey must be very fancy, in

one-pound sections, without glass, which means nearly if not quite six times the labor and expense to the bee-keeper that six pounds of honey, in one box, meant 25 to 30 years ago, so that honey really does not bring, taking all these items into consideration, much more than one-third what it did "years ago." Wherein lies the trouble? Is it not overproduction, which my old friend of years ago said would be no factor "in this generation?" If not in overproduction, wherein does it lie? Will not some one tell us, for when we know the cause we may be able to apply a remedy?—American Bee Journal.

Borodino, N. Y.

A Visit to the Apiary of W. C. Wells, Philipston.

Owing to sickness and other causes I have neglected giving a description of a visit to the apiary of Mr. Wells.

From Mr. Post's I took train to Belleville and from there drove to Mr. Wells'.

I found Mr. Wells in his apiary and hard at work. Mr. Wells was born near Napanee and has lived at his present location for 49 years. Forty years he has lived in his present house.

In reply to a question Mr. Wells said he wintered in a cellar 14x20 with a door opening to outside. The cellar was ventilated by means of a stove pipe connecting with the work shop chimney. The hives were set on shelves and the bottom boards hinged at the back were dropped two inches in front. Over them is put a quilt and a rim filled with sawdust which answers the purpose of a cushion.

The bees had been working lightly on basswood three days previous to my visit. The clover flow had been light. Mr. Wells said that he judged there would not be much honey unless the direction of the wind changed.

Mr. Wells uses a solar wax extractor, one of his own design and it has been in use for last twelve years; he uses this machine only for cappings. Old comb he breaks up and puts in a bag, then sinks the bag under the water, the wax runs to the top as it melts. The next question asked was, do you believe in ripening honey in the hive?

Mr. Wells said, "Most decidedly I do. I have tried to ripen artificially but have

never been able to do this to my own satisfaction."

"Do you try to prevent swarming? If so, how?"

"Yes, by means of shade ventilation and room in time."

Mr. Wells said he had sold \$1200 worth of honey several years, it was obtained from about 140 colonies, spring count. Speaking of comb foundation Mr. Wells was at the Centennial and there saw comb foundation. He came home and made a machine, it was cast from rabbit metal. The machine he now uses is made of brass rollers and flat bottomed foundation. Mr. Wells has a roller upon which he rolls up his foundation and he unrolls it as he cuts. He had a honey extractor before any others were made in Canada. He made it himself 20 or more years ago. The bottom is so arranged the honey runs to a point in the centre and from this it runs into proper vessels.

Mr. Wells keeps mostly Italian bees. He has a few hybrids. He has tried the fire banded bees but did not find them satisfactory.

Mr. Wells lives 12 miles north of Belleville, he has about 65 colonies of bees and no swarms up to that date. He kept bees before Thomas got up his patent hive, but the Thomas was the first patent hive he used. He is in a district of country having high and low land. There is lots of alsike clover in the vicinity, a fair amount of basswood and he gets a fair amount of buckwheat, last season 1894 of the latter 350 lbs. more than enough to winter. He uses a hive called the Wells hive 9x18 in. inside and ten frames to a hive. He adopted that frame owing to cutting off the Thomas frame and likes that frame better than the Langstroth which he tried after. For extracted honey he uses a two story hive and for comb honey a 4½x4½ section without separators. He, however, does not produce much comb honey.

In speaking of honey production in fact the question was asked, do you produce more honey now than formerly?

No the opposite. I used to produce more the last four or five years have been poorer. I used to keep 100 to 150 colonies and get better yields, it is doubtless due to poorer seasons. I used to feel quite sure of a crop of basswood honey.

"What did you get on an average years ago, 100 lbs.?"

"Yes, oh yes, spring comb on an average more than that."

"Do you use more than one super for extracting?"

"Sometimes when it is a strong swarm. I left for Brockville convinced more strongly than ever, that Mr. Wells was a

good, careful bee-keeper, a thoroughly practical man and one we should hear from oftener.

Weak Colonies in Early Spring.

—Rev. Stephen Roese.

The writer does not intend to direct his remarks in this article to experts in apiculture, nor masters of the art, but to those who are young in the cause and inexperienced. In the southern part of our country bee-keepers are not much troubled with weak colonies in early spring, for they need not remove their bees from their summer stand, for it is in winter repositories where the temperature varies and changes too often, especially in beehouses above ground, and it is there where bees weaken, both physically and in numbers. This seems to be the chief drawback, for bee-keepers in this northern climate. In frost-proof wintering repositories bees will winter fairly well. But a bee-house or cellar not frost proof is worse than nothing. The frost will create dampness, and unless this is taken out by slight artificial heat, the bees will be affected by it, and bee diarrhoea will be the result, and if their malady once takes hold of a colony in good earnest, (unless a cleansing flight can be given), it will prove the death blow to such colonies and in many cases in spite of a cleansing flight, they will perish in time.

We are often advised by writers on this subject to give bees a flight and then set them back in again, but I have never met with any good results in this respect now for two years at least. In early spring I gave part of my colonies a flight and returned them again and the rest were taken out later and left out, and nearly every one of them pulled through and of those set back nearly every one perished.

It is also a mistaken idea to unite two or three colonies in early spring they will do well enough in the fall of the season, but in early spring when the bees are all old, they will not pull together harmoniously as they should in order to prosper, for after all the passing with thus uniting two, three or more weak colonies they will play out at last. A weak colony which is not too far gone is far better left alone. Put them on a new comb snugly packed and protected, and in most cases they will pull through all right in the end. They may swarm late, perhaps, not at all, for it is not natural to

disturb their little home affairs in early spring and get everything out of gear. It annoys and discourages them to go on in their work. By opening the hive, the young brood may get chilled and not hatch and by the time the depopulated colonies tries to arrange another batch of brood, The few old bees have perished and there are none left to take their place in caring for the young, nor attend to household affairs, where on the other hand had the hive not been opened young bees would have hatched and taken the old-timer's places.

For several seasons the writer used to heat bricks night and morning, and place them over head of the brood nest, and in so doing he saved a good many weak colonies but this season another plan was resorted to, a 12 lbs. square screw top, honey can was filled every evening with almost boiling water and laid down over the brood nest. On this a chaff cushion or rags of any kind with screw top on upper side, so the pressure of the water does not cause it to leak and then covered with blankets or old clothing, grain bags, etc. The bees keep under it as warm as toast and it will keep quite warm for 24 hours. Try it and find out the result. Try it also on a cold winter night in a cold bedroom, not over but under your feet and in the morning you will be agreeably and pleasantly surprised.

Maiden Rock, Wis., March 30th, 1895.

An Experiment Conducted at the Ontario Government Apiary.

As reported in the Ontario Agricultural College and Experimental Farm report.

The use of comb foundation has become general; in fact, few if any, keeping bees in the movable frame hive, attempt to do without it. At present comb honey, owing to quality of the comb foundation, is not generally of a kind satisfactory to the consumer. Although it is desirable to get a foundation which, when utilized and added to by the bees, gives a comb as thin as the natural one, many claim that comb a trifle heavier, is not noticed by consumers. When, however, the base and bottoms of side walls are materially thickened, and the comb has an artificial appearance, and the wax does not crumble when the comb is broken, the result is that the consumer objects and the objection is intensified by the comparatively harmless nature of the change. Again, comb foundation and wax is wasted in the extra thickness; and this

is no small item, as it is generally worth fifty to sixty cents per pound.

In our experiments, observations were taken along various lines—first, as to what

the hive, and half an inch up the side wall. The comb was put on ice, to harden it for the purpose of more accurate measurement—three measurements were taken in this case.

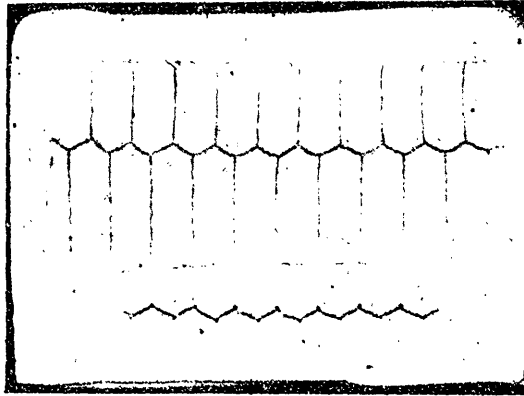


FIG 1 (c). Giving a side view of comb foundation, 15 sq. ft. to the pound, and above the same after the comb has been completed and capped by the bees. The honey has been extracted and washed away from the comb, which, after a thorough drying, has been filled with plaster of Paris and a section cut down.

extent, if any, the bees thin the base and side wall of the various thicknesses and of comb foundation. Measurements were made, whenever possible, of the weight of

Again, to see just how the bees utilized the comb foundations, three tanks of melted wax were prepared; one was colored with a preparation of Alkanet, another with a

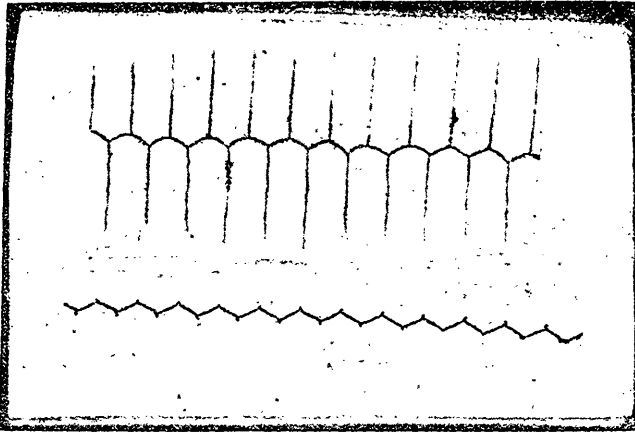


FIG. 2 (b). Giving a side view of comb foundation 12 sq. ft. to the pound, and above the same after the comb has been completed and capped by the bees. The honey has been extracted and washed away from the comb, which, after a thorough drying, has been filled with plaster of Paris, and a section cut down.

foundation compared with the number of square feet and the thickness of the base of foundation. Measurements were taken of the comb at the base, the side wall close to

preparation of carbon, and the third was pure beeswax, uncolored. The various stages in the manufacture of comb foundation were carried out, giving comb founda-

tion from each tank ten, twelve and fifteen feet square to the pound.

These were placed side by side and drawn out in the upper stories by the bees. It was manifested in various ways that the bees objected to the Alkanet, so this kind

able to expect that the bees keep adding scales of newly secreted wax and then pulling the side wall, thus decreasing gradually the percentage of colored wax. We also conclude that the quality of wax used in the foundation has an influence, not only on the

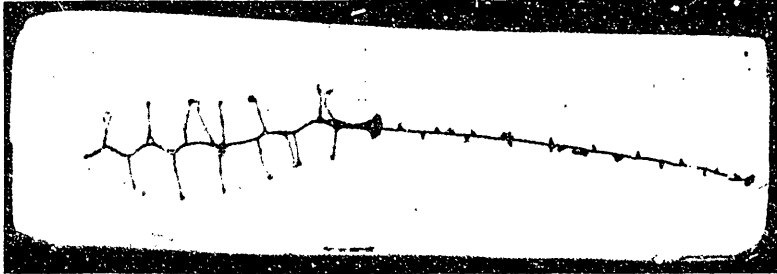


Fig. 3 (b). Giving a side view of comb foundation, flat-bottomed, 12 sq. ft. to the pound. This shows a continuous piece of foundation. One half of the foundation was covered over, the other half exposed and worked out by the bees.

was discarded. To the foundation, colored black with the preparation of carbon, the bees did not object. The object in placing foundation made of ordinary wax alongside of the colored, was to make measurements of each kind when drawn out by the bees. The measurements of the colored and uncolored being identical, gave us a basis for the statement that the bees did not object to this preparation; and the methods of drawing this comb were identical with that of ordinary foundation. The base and lower part of the comb were not as we might expect, of a black color, and the

base, but to a certain extent in almost the entire wall of the cell. The heavier the foundation, the greater the influence on the side wall. Again, notes were taken daily when the bees were beginning to draw out the foundation; and although the heavier foundation was scattered about in various parts of the upper stories, they gave the preference to the heavier foundation, working on it first. Great caution must, of course, be observed in coming to conclusions. The bees, if the heavier foundation had been taken away, might have been almost as willing to go to work at once

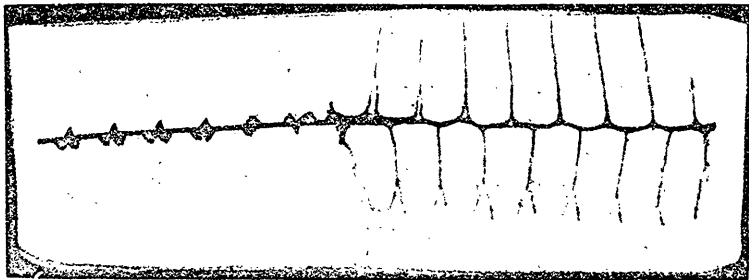


Fig. 4 (c). Giving a side view of comb foundation, flat bottomed, 4 sq. ft. to the pound. This shows a continuous piece of foundation. One half of the foundation was covered over, the other half exposed and worked out by the bees.

fresh and added wax, white. Instead there is a regular gradation from black at the base to white at the top of the cell. The heavier the foundation the darker the base and adjoining side wall. From the above it would appear reason-

upon the lighter grade. At present, no way appears open for conducting a satisfactory experiment to prove anything in this direction. The measurements taken at the base of the wall, and half an inch from the base, all tend to show that the wall is

quarters weak and sickly are subject to spring winding.

In wintering, you must study very closely each colony. What is the cause of its failure in wintering? Upward ventilation. What about it? I consider it a perfect farce. Does the nature of bees teach them to make holes through the covering over the top bars? I guess not. Do bees require an opening back and front at bottom of hive for ventilation? None whatever. Wintering without the bottom board might do in the sunny south, but not here.

The bottom board I use is very simple. It is reversible—one side for winter and the other for summer. The floor of your cellar should be so constructed that not a dead bee would mould on it. It is the mouldy bees that cause the foul air and make them restless. If you can get the bees to winter so quietly that when you went into the cellar you would not know they were there. You hear a sound, but it seems a long ways off. If you get your bees to that stage, they will come out well; you won't have to bother your head about that silver lining in the clouds that some writers talk about.

Well, I guess I will pull up stakes, and just say here I am not trying to tell my exact system of wintering, nor the construction of my cellar, which I am quite willing to give, if wanted, also the nature of my preparation previous to putting the bees into winter quarters, which I consider very important.

Lancaster, Ont.

Busy Bee.

Perhaps the brightest song in "His Excellency," Gilbert's latest opera, which we shall soon have the pleasure of seeing, runs as follows, to a guitar accompaniment:

A hive of bees, as I've heard say,
Said to their queen one sultry day:

"Please, your majesty's high position,
The hive is full and the weather is warm.

We rather think with a due submission,
The time has come when we ought to swarm?"

Buzz, buzz, buzz, buzz.

Upspake their queen and thus spake she—

"This is a matter that rests with me,
Who dares undertake thus to form?"

"I'll tell you when it's time to swarm!"

Buzz, buzz, buzz, buzz.

Her majesty wore an angry frown,

So fact, her majesty's foot was down—

Her majesty sulked—declined to sup—

In short, her majesty's back was up.

Buzz, buzz, buzz, buzz,

Her foot was down and her back was up!

That hive contained one obstinate bee
(His name was Peter), and thus spake he—
Though every bee has shown white
feather,

To bow to fashion I am not prone—
Why should a hive swarm altogether?
Surely a bee can swarm alone?"

Buzz, buzz, buzz, buzz,
Upside down and inside out,
Backwards, forwards, round about.

Twirling here and twisting there,
Topsy, turvily, everywhere.—

Buzz, buzz, buzz, buzz.

Pitiful sight it was to see
Respectable, elderly high-class bee
Who kicked the beam at sixteen stone
Trying his best to swarm alone!

Buzz, buzz, buzz, buzz.

Trying his best to swarm alone!

The hive were shocked to see their chum
(A strict teetotaler) teetotum—

The queen exclaimed, "How terrible
very!"

It's perfectly clear to all the throng
Peter's been at the old brown sherry.
Old brown sherry is much too strong—
Buzz, buzz, buzz, buzz.

Of all who thus themselves degrade
A stern example must be made,
To Coventry go, you tipsy bee!"

So off to Coventry town went he.

Buzz, buzz, buzz, buzz.

There classed with all who misbehave,
Both plausible rogue and noisome
knave,

In dismal dumps he lived to own
The folly of trying to swarm alone!

A Question.

Please find enclosed my dollar to renew my subscription to the CANADIAN BEE JOURNAL. I find it a great help to a beginner. Kindly answer the following in THE CANADIAN BEE JOURNAL. In running for comb honey is it best to put the full super on and raise it pulling the empty sections underneath, or to put the empty super on top of that partly filled. JAMES KERR,
Seymer, Ont.

[Will some of our readers kindly reply to the above question, a reply from various sources will be of interest to our readers.—
Ed.]

Annual Meeting

Ontario

Bee-Keepers' Association

....

HELD AT BRANTFORD, ONT.....

Mr. Holtermann—Part of the work of the Experimental apiary this summer endorsed very largely just exactly what Mr. Taylor has said. That the amount which is lost is much larger than is generally supposed.

Mr. Frith—You would judge then it would not be very profitable to feed syrup for comb honey.

Mr. Holtermann—I would be inclined to think so.

Mr. McEvoy—If the brood chamber were full of brood, and you put on section pretty well drawn out and put a frame on top of that with syrup, at a time when they would carry it down 10 or 12 pounds at a night, I do not know but what they could make sugar go and go to pay.

Mr. Pringle—I think it is inconsistent not to say wrong, for any man in this Association who condemns the construction of sugar honey to instruct the people how to do it.

Mr. Frith—The paper will show to the people that they need not run away with the idea that we are adulterating comb honey, because it would not pay.

Moved by Mr. Pigot, seconded by Mr. Frith, that the best thanks of this Association be tendered Mr Taylor for his paper. Carried.

Mr. Darling—There was one sentiment in that paper which I thought was rich, and that is, "what is the use of wasting our time on these experiments that are doing us no good, and not doing something practical."

Mr. F. A. Gemmell, Stratford—I had an experiment last winter. I had an article in the Canadian Bee Journal with regard to it; I would like to have it discussed. I had some five colonies last winter that had no ventilation on top, and they were the best colonies I had in the yard last spring. You will understand that the colonies and hives were never allowed to be completely covered with snow at any time.

Mr. Pettit—Mr. Gemmell is right, but I want to emphasize this point, that it depends upon having plenty of bottom venti-

lation, if you fail in that, you fail entirely, the whole thing is up. Last year I experimented with seven different doors. In the first place there is a vertical entrance, you can keep a vertical entrance open very much better than you can a horizontal entrance, and that vertical entrance is made in a box that sets under a hive, not in the hive. These boxes were three inches deep and there was two vertical entrances the whole depth of that front, pretty well towards the corner of the hive; each of them three inches from the centre and the vertical entrance were $\frac{3}{4}$ of an inch, that would be quite sufficient if these would stay open, but less they might get partly choked, the boxes had around the sides other holes for ventilation 2 inches by $\frac{3}{4}$. One in the south, and one in the east and west. Now you will see taking these together it makes a lot of ventilation, and that was a great success. It is a great factor in wintering out door hives, to let the bees have plenty of air from the bottom, and then they do not want any above. I say they are better without it. These openings around the hive were covered with straw six inches deep, held there by binder twine, wound around the hive. That keeps the snow away, and insures them being open all winter. The bees come through in fine shape. They were not completely covered with snow. The top of the hive had about six inches of packing on it. This straw that I spoke of being around the sides came up to the top of the hive, and came out about six inches above, and then there were cushions on some of them, and chaff. There was six inches of packing on top.

A Member—What did you have between the packing and the bees?

Mr. Pettit—A cloth and no board.

Mr. McEvoy—I went over Mr. Gemmell's paper in THE CANADIAN BEE JOURNAL. I read it over and over. Now the entrance that he gave, the full width of the hive with such an entrance it would be dangerous to give upward ventilation, because it is actually giving too much ventilation at

the bottom. I hold that about two and a half or three in width, and about five tenths and three eighths in height, and in case of snow storms you must have a sort of safety valve, if you do not the boiler will burst, the snow will settle down, and it will steam up, but if you have the entrance as wide as he has it and give it an upward, ventilation it will cause the colony to suffer.

Mr. Pringle—This subject was discussed last winter pretty fully, some took the position that there ought to be a little upward ventilation, but that it would not do to seal them tight on the top, I said they could be hermetically sealed at the top if you are careful of the lower ventilation, and see that they do not get choked up. But if you have them hermetically sealed at the top, and you neglected them during a snow storm, you are apt to lose them. You must attend to the ventilation at the bottom during heavy snow storms, or you will lose your bees.

Mr. Gemmell—The old theory was that you could not winter bees at all unless you had upward ventilation, but I think in a great many cases they were never protected then as we protect them now with packing. In regard to a space between the hive proper, and the outside cover is that detrimental or a benefit to the colony? Now if we want solar heat, the heat from the sun is a great benefit, and if you have an air space between the hive proper and the outside case, you are going to destroy the benefits of the solar heat from the top of that hive, it is something like what you might call a tight air space, a non-conductor of heat. Now then, if we can secure good wintering without an air space on top of the hive proper on the outside case, cannot we use less packing and get the benefits of the solar heat by allowing some to strike on the hive and penetrate into the colony?

Mr. Pringle—Solar heat is so irregular that I do not think it would be well to depend on that!

Mr. Gemmell—Don't you think we have two or three times in the winter when solar heat would be a benefit to the bees?

Mr. Hall—I am sorry he is not satisfied when he is well off. He wintered his bees last winter a little contrary to what he did in the past. He says he was successful: do be satisfied with success. I have tried Mr. Hedden's theory, he is a bright bee-keeper, but like my friend, he is not satisfied with success. I have bees seven miles from home that are exposed to the sun, and they are also exposed to 10 below zero, and that frost lasts longer than the sun does, and I certainly take the non-conductor to keep the frost out and we will take the heat of

the bees to get up the solar part of it. Last winter these bees were covered after a big storm and I wasn't feeling well enough to dig them out, and I have what I call yards or drop boards to save me the trouble of cutting the grass and these hives that were snowed up the worst I dig well in front of them about twenty inches by thirty-three or thirty-six inches, and I laid the board on top of this hive and I did not do any more to them. One of the hives was queenless, and was lost but the six were equal to any in the yard, and three of them, the best. There was no top ventilation, and there was a space at the front about 4½ inches to five. The mice are at liberty to go in, but they do not go inside my hives. These hives did so well that if my hives become covered with snow again, I will go out and give each one a well, because my experience of last year was so satisfactory.

Mr. Frith.—This solar heat theory is discussed all over the province especially in individual minds. Mr. Hedden I believe has the credit of starting this theory, but we must remember that Mr. Hedden lives in a different section of this hemisphere to what we do; where we are living we get one sunshiny day in twenty, from sometime in the beginning of December, to the end or middle of February. Where Mr. Hedden lives I think he gets about seven sunshiny days in eleven. In the Eastern part of this Province down where Mr. Brown lives they get eight or nine sunshiny days, but all through this section we simply get about one sunshiny day in twenty, so that it would be very uncertain for us to depend upon solar heat. I have carried on a great many of experiments in this line, and I find where you winter out doors the better way is to keep out the frost. I have come to this conclusion that the bees require so much oxygen during the winter, that it makes very little difference as long as you don't put the draft right into the cluster of bees. It makes very little difference whether you get the oxygen from the top of the hive or the bottom, or the sides.

Mr. Gemmell—What about the moisture?

Mr. Frith.—They must have sufficient dry atmosphere to carry off the moisture, and if you know just how many cubic feet of air per day it will take to carry off the moisture and supply the bees with oxygen it makes very little difference where they get it from.

Mr. Pringle.—If you intend to ventilate by calculating the amount of oxygen that will enter during any given time you will make a great mistake, because three times

the amount of oxygen will enter the same entrance at one time that it will at another.

Mr. McEvoy—One of the main things in wintering is to keep the constitution of the hives itself right, that is to have the heart of the hive pretty well packed with sealed stores at the beginning of winter, the bees crowd on this division board, and the Queen Bee has not a chance to lay, and the bees are at rest, and the more rest they get the better they will winter, you can get ventilation more or less according to these conditions. If you have a hive with the centre pretty well consumed and the honey is to the walls, if you give a large entrance to that colony, and if in the winter there is a good many sunny days, and if the Queen is young and she sets to laying, the cluster is broken and the colony will be worthless the next summer.

Mr. Hall—What do you mean by the constitution? Do you mean, a large lot of bees, or do you mean a hive full of bees, or do you mean a hive where the bees cover three combs?

Mr. Pringle—How far apart?

Mr. McEvoy—Just space enough so that the bees can go up and down, a reasonable bee space.

Mr. Hall—I only see my bees from home once in the winter, and I find that I have sufficient stores. It makes no difference whether there is three combs or eight. If the entrance is not clogged they come through all right. I find that if there is insufficient bees they are prone to come out weak in the spring, and I find if the hive is covered with bees from top to bottom, and corner to corner they are not going to live.

Mr. McEvoy—I agree with what Mr. Hall says with regard to a weak colony or a strong one. It may be filled from corner to corner and empty in the centre, and with a young queen they might start brood rearing. The way to get around that is to remove these combs and put in about six division boards, and you shut the queen off she has no chance to lay, and the colony can be put in shape so that it will winter. I winter out doors and I will guarantee that if the stores are right, and they are all sealed, unless you lose the queen and if you look out for snow storms, you will bring the colony through every time.

Mr. Best—I have had them drifted up with snow considerably, and thought that surely they were dead, and I looked for the bees to be dead, but they came out better than some of those that were not snowed up. I suppose they received air through the snow. I took the snow away as soon as I could conveniently. I admire Mr. Gemmell's idea of bee-keeping. He is trying new things; it is not very profitable for the

bee-keeper, but it may sometimes be for others, if he happens on a good thing, and I think we ought to encourage him.

A Member—Will Mr. Hall give us his method of wintering bees?

Mr. Hall—Mr. Gemmell tried an experiment last winter, but I say let old Sol do as he likes, we will keep the heat we have got, and do as Mr. Gemmell does with the packing. We have a space between the packing on the top of the hive proper. The only difference between Mr. Gemmell's packing and mine, he has got a beautiful case that the water cannot get in, neither can moisture get up, and in my case you can put your fist through the sides of some of them, but the tops are perfectly water tight, there is sufficient air spaces between the leaves to keep in the heat and to keep out the cold. I give mine a larger entrance and give them no top entrance whatever, and except they are buried under the snow and left there, they come out good.

Mr. Evans—I would like to ask what is the best kind of packing?

Mr. McEvoy—Leaves. I have been trying sawdust, but it is no good.

Mr. Gemmell—If you use sawdust with Mr. Hall's case you won't succeed, but if you use leaves there is a certain amount of air that will circulate through the leaves, and they will dry out, if they happen to get wet.

Mr. Armstrong—Our mode of wintering is much the same with the exception that you cannot get your fist through the side of my outside cases. My cases are made out of rough lumber, but they are bevelled on the side so that water won't run in. I use sawdust, and a little upward ventilation.

Mr. Hall—In the case of sawdust or chaff you require a case to keep out the water.

Mr. Armstrong—What depth of packing have you on top and on the sides?

Mr. Hall—The sides $3\frac{1}{2}$ inches deep, 6 inches on top. I have a cover that I lay on top, that hold the leaves down solid. The main thing I have to contend with is the water from the melted snow, or rain, that is only from the top, I do not care about the sides.

Mr. Armstrong—You are not careful at all about having any spaces between the leaves and packing on the top of the hive.

Mr. McEvoy—Would it be desirable to have no packing whatever, or less packing on the front of the hive or south side.

Mr. Gemmell—I think I would have a little packing. I do not think it is essential to have it on the south side.

Mr. McEvoy—I have experimented on that line. The south side wants to be a little less, if the distance is too thick

heat of the day has gone past before the colony is warmed up right.

Mr. Pickett—It is a question whether the solar heat is any benefit or not, unless it is sufficiently strong to induce to have a fly, if it is only sufficient to cause a commotion, and cause the breaking of the cluster. It strikes me that solar heat is rather detrimental than otherwise.

Mr. Gemmell—I am trying a little of it this winter.

Mr. Heise—I understand that it will be necessary to have a committee to wait upon the Government to secure an increase of grant, and I therefore move that Mr. Holtermann and Mr. Pickett be recommended for that purpose.

Mr. Pickett—I prefer that we get along without it. If it is an absolute necessity, then perhaps we had better appoint a committee.

Mr. Evans—The Committee might ask the Government to make that \$650 grant the regular grant.

Mr. Pickett—I think this additional grant will be forthcoming. In case it is not, they can communicate with the Minister of Agriculture and find out whether it is an established fact or not, as I understand it, we expect it as a matter of course.

Mr. Holtermann—It might not be necessary to go to Toronto at all, but the way the matter stands at present I know that the idea was that the \$150 would be for that year, and was only put in the supplementary estimates.

Mr. Frith—I think \$650 ought to be the regular thing. I think we are entitled to it.

Mr. Darling—As I see the state of our finances now I think we need not be ashamed of our past year's records. And I do not see how we can give our local Associations anywhere near the \$20 we are supposed to give them unless we have an increase of grant from the Government. Motion carried.

Moved by Mr. Pettit, seconded by Mr. Pringle, that Dr. Mills be the Director of this Association to represent the Ontario Agricultural College staff.

Moved by Mr. Hall, seconded by Mr. Heise, that the best thanks of this Association be tendered to the citizens of Brantford the mayor and to the hotels, for the accommodation they have given, and the Telephone City Quartette, and the Press. Carried.

Moved by Mr. Pringle, seconded by Mr. McEvoy, that the resolution of condolence with regard to the death of Mr. Cornell be incorporated in the forthcoming report. Carried.

Mr. Pettit—I would like to ask the ques-

tion, do bees that winter right in the cellars break cluster?

Mr. Pringle—They do when the time comes for breeding, towards spring, until that time comes if the conditions are right, and they are wintering properly, the clusters won't be broken. They have to have feed occasionally, but it does not mean to break cluster in your sense.

Mr. Pettit—It has been suggested that they do break cluster and clean up house, and change their stores. I used to have that idea, but I have been watching them for two winters, and I have come to the conclusion that bees which are wintering right do not break cluster till they are set out. I go into my cellar twice a week, take a light, lift the hive from the bottom board and I find it in the same situation for weeks, and weeks, and I never found them to break cluster so as to be scattered around on the frames. How is it that you find dirt dragged out and dead bees dragged out? My present impression is that just a few bees do that work and the rest lay perfectly quiet. I believe from my observation that when you find bees scattered they are not just right, they are breeding and taking harm.

Mr. Pringle—There is one thing that I cannot agree with you in, of course it may be different in your locality, you say you do not expect them to breed before you set them out. That would not answer my case I do not set mine out sometimes until the last of April. I have set some out on the 16th of May; there is no time between that and the honey harvest to breed. If I find the colony do not require setting out, if the weather is unfavorable, I leave some in very late. I have began setting out bees about the 10th of April and have extended it up to the 16th of May.

A Member—I would like to know from those that winter in the cellar and also out of doors, which they prefer, and a few reasons for their preference.

Mr. Hall—My views for the last five years have been that the cluster stays about as it is, when they get nicely settled down after being two or three days in the cellar until February, and then that cluster does not scatter all over the hive, but keeps growing and growing, those that were only medium, perhaps touch the bottom board with three frames. I can only account for this by their starting brood rearing and extending the number, and therefore they have to extend the cluster. I believe they stay in the cluster they have no occasion to move except those that want to die. My furnace is in my cellar, and I have to go down once a day to attend to that, and in the evening it is very tempting to go down

in the bee cellar and hear this contented hum. Then February comes the colony begins to grow, and keeps growing till March. As far as keeping them in until the 16th of May, I have kept them in until the second of May, which was a mistake. Two years ago I put out some twenty hives on the first of March, and the reason I did not put out more was because it turned out too cold, and they could not fly, and they did not fly again for some time. The thermometer went down to 10 below zero, and those bees were in hives $\frac{3}{4}$ inch thick with no protection whatever, and those in that hive were the best in the apiary when the honey season commenced.

Mr. Frith—Have any of you been in Mr. Hall's cellar? If not you had better take the train with Mr. Hall to see the bees, you will never get as clear an impression as you would if you had just come over and see them.

Mr. Pettit—I want to re-assert that every hive of bees that winter as they should winter, do not make a noise, and when they begin to make a noise there is something a little off.

Mr. Hall—He is perfectly right, "those that have no music in their soul cannot appreciate the tune." There was a gentleman in my cellar this winter, and I said to listen to this hive, and I said you hear something, and he said "Yes I hear something just as if it was wind in the trees a long way off." He could hear it, but others could not.

Mr. Holtermann—I generally think I winter my bees pretty well. Mr. Couse and I were up to the house last night, and saw the way the bees clustered. I followed as closely as I could Mr. Pettit's method of wintering, and I have been in Mr. Pettit's cellar. And last year towards spring I thought I would slip up and see how he wintered his bees, and the way the slats were laid on the cellar floor he could not remove bees, and there were very few. I think Mr. Pettit winters his bees a little better than I do. Mr. Pettit said, "do you hear the hum?" Yes I do. "Oh yes," he says, "it is coming near spring."

Mr. Darling—I want to say this with regard to that contented hum, I have heard Mr. Hall, and Mr. Pettit, and I have read Mr. Doolittle's articles; I believe Mr. Hall is correct. I do not bring my bees out in the spring just as I would like to. My cellar is dry, the air is pure and clean. I go into my cellar and put my ear to the hive but I can hear nothing, but bye and bye I come to a hive and you can hear a little sound. I have 140 stacks of bees in the cellar now, I never expect to see the day when I will

have 150 stacks and they will all be quiet at once. I will go down to the cellar another time and hear another hive that was making a noise the day before, part of the time they are making a noise, and part of the time they are not.

A Member—I go into my cellar often, and as Mr. Darling has said, I have never yet been able to get them in all parts of the cellar quiet, but where I find the noise this week I find it next week, I find it right along, there is something in the circulation of the air. Those that are in the most favorable position in the cellar are the ones I find are still.

Mr. Couse—At a former part of our meeting there was some discussion in regard to approaching the Government, or having our Dominion Government take some steps to export honey to the Old Country, to what they call their Produce Stations. I believe a resolution from this Association would have some effect in having this done, and I think right now it might be shortly discussed, and a resolution passed to have them to do so, and if you think fit to have a Committee appointed to write them or see them, or in some other way approach them, it would be a good thing.

Mr. Pettit—I will second that, and I think it is of much importance because I noticed in the Press a short time ago that a leading bee-keeper had a thousand tons on hand. (Great laughter).

Mr. Hall—It will do no harm if this Association asked the Canadian Government to include in its exhibits Canadian honey.

Mr. Holtermann—The Ontario Government is sending comb and extract honey to the Imperial Institute, this is a Dominion matter, and those who have followed the question will know this, that the present Minister of Agriculture proposes sending slaughtered animals over in cold storage, and depots are to be established in different parts of Great Britain in which this meat is to be sold. Prof Robertson told me they proposed handling this meat in May, and that he could not undertake to handle any other product for two or three months. I tried to get a definite promise out of Prof. Robertson, and he said he would not make any definite promise at present as some difficulty not at present seen might prevent, and I think a resolution from this Association would add weight. Motion carried.

Oppression.

"Did you ever feel that oppressive something which comes on one in a deep coal mine?"

"No, but I've felt it in paying coal bills."

Parry Sound District.

P. C. WASSAN, Sept. 20th 1895

To the Editor of C. B. Journal.

DEAR SIR.—I wrote you some time ago saying that my bees had given me a surplus of 56 lbs. per colony. I fully expected at that time, that they would at least stow up as much more. Some of them have done so, but some have not, although they have given me seven swarms, five of which have filled a top story each. These top stories with an average of 56 lbs., three of those are from one hive, so you see that five of them never swarmed at all.

I can sell twelve hundred weight of honey, and seven hives, and still be where I started in spring, so you see I have no reason to complain of a poor season, as so many are doing. The bees here came out very strong this spring, and worked hard upon willow, then dandelion spruce and balsam. Afterwards they worked upon white clover, alsike clover, buckwheat, thistles, golden rod, and michaelmas daisy. We had nothing from basswood or soft maple. A late frost spoiled our chances on that score. Last year we had a top story filled on each colony from this source alone.

The people here think they have no need to go to Florida or California, or yet Australia, to keep bees, and for my part I am certain that we have as good a country for bees and honey, as there is on earth, right here.

Some people want to know whether I lose any bees in winter, and in answer I have never done so when properly cared for. I have never lost a colony that I could not trace the loss to my own ignorance or want of care.

The biggest trouble with me has been dysentery, from allowing them to store improper honey late in they fall. I had no disease of any kind in my bees this spring.

Can anything be done with combs when the honey gets too thick, so that the extractor cannot throw it out?

Yours truly,
A. H. CRAIG.

[Uncap the combs put in the centre of brood chambers in any colonies after warm weather sets in, let the bees clean out and utilize what they can.—Ed.]

I have been an old subscriber of the Bee Journal, but have not taken it this two years, and I miss it very much. I have heard since I have stopped taking it, there has been some improvements made in it. Will you please send me a sample copy.

MRS. TOMPKINS.

How the Bee-Keepers Might Receive More Benefits from the Experiment Station, by Hon. R. L. Taylor.

READ AT THE MEETING OF NORTH AMERICAN BEE-KEEPERS' ASSOCIATION, HELD AT TORONTO, ONT., SEPT. 1895.

I shall attempt to answer the question implied in the subject given me, briefly, under eight heads, as follows:

First, by the increase of the number and resources of the apiarian adjuncts to the experiment stations. Of course, the most conscientious and ablest men whom it is possible to obtain should have charge of these branches of the experiment stations, but such men cannot well be got unless the stipend granted is sufficient to enable them to do credit to themselves, and to their office without too much risk of financial loss. The apiarian branches of the stations, too, may still be counted, I believe, upon the fingers of one hand. The number ought to, and might, be doubled within one year. This, with a substantial increase of resources, can be had by courage and organized effort. Those who have the decision of these matters are men like ourselves, and subject to the same influences. As a rule, they earnestly desire to do what is right. They are quite willing to listen to our requests and to the reasons for them. But bee-keepers must remember that organization creates the force that doubles the power of influence and makes it effective.

Second, by the encouragement of the experimenters, by the manifestation of a more active interest in the work on the part of bee-keepers. The experimenters are human. To some extent they are feeling their way, for the work is new. They would like to know that the importance of the work itself, if not their particular part in it, is appreciated. Such a knowledge would prove a powerful stimulus to the production of more valuable results.

Third, by the more active co-operation of apiarian journals. Many valuable hints might be given by the editors and their able correspondents. I do not seek flattery, nor even just praise. Courageous, incisive, honest criticism would be more welcome. If the journals do not disclose interest in the work, it is likely to die early.

Fourth, from confirmatory experiments undertaken by individual bee-keepers. Reports of such experiments would prove a valuable aid in determining the value of results obtained at the stations; but, better than that, such experiments would be an education to the individuals and at the same

time would make the fact manifest that bee-keepers are interested.

Fifth, experiment stations are not to be employed for the benefit of existing apiarists only—they should be used for the advantage of the whole people. Most of the honey-resources are made to yield nothing for want of bees to gather the offerings. It would evidently be for the advantage of the country if all its surface which produces honey-secreting flora in any abundance were dotted with apiaries no more than three miles apart. To accomplish this, or even to make a beginning at it, would require the popularizing of bee-keeping. Apiarian lectures and discussions, under the auspices of the station in imitation of the course pursued in some other rural branches, would not fail to be fruitful. But it will be objected that this would not benefit bee-keepers. True it would not benefit an existing apiarist as such, but it would as a citizen. My respect for a man receives a severe check when I learn that he is willing to prosper financially at the expense of the well-being of his country. This work cannot be done unless the favorable influence of bee-keeper is felt by those who control the resources of the experiment stations. With proper support from the stations, this work would be successful.

Bee-keepers conventions are not always well attended, because only bee-keepers are invited, and they, in order to attend, must generally go long distances; but let competent men go into the country school-houses, in districts where the farming communities are starving for want of social and intellectual excitement, during the months when they enjoy comparative leisure, to speak on this subject, with an invitation to everybody, and the seats would be crowded with eager listeners.

Sixth, by the earliest possible publication of the results of experiments made by those in charge of the station apiaries, in the apicultural journals. The importance of this is manifest. The journals cannot conveniently criticise in a proper manner the work of the stations if the entire report of that whole year comes in a body. For similar reasons it would be much more profitable to the bee-keepers if he were allowed to digest it in sections, than to be expected to perform that operation at a sitting, at the end of the year. At best the reports are dry reading, so that they *must* be served in moderate portions if they are to be generally digested at all.

Seventh, by the co-operation of the several persons in charge of the agricultural departments of the experiment stations, and all perhaps under the direction, in a sort of advisory way, of the United North Ameri-

can Bee-Keepers' Association and the Bee-Keepers' Union, should the 'marriage' of these organizations be happily accomplished. Such co-operation would be used in securing confirmatory experiments under different supervision, where such were deemed advisable, and to prevent repetitions when they could be attended by no valuable result.

Last, but I may safely add, not least, by the advent of better honey seasons. In my opinion, many of the more important lines of experimentation depend for their success upon swarming, or on abundant honey-flows, or both. Neither has occurred here for the last two years—an embarrassing state of things when considerable preparation has been made for work depending upon them. But times change; what has been will be again, old time honey-flows will surely return, and "we will reap if we faint not."

R. L. TAYLOR.

Lapeer, Mich., Aug. 30, 1895.

CONVENTION NOTICE.

Brant Bee-Keeper's Convention.

The Brant Bee-keepers Association will meet at the Court House, Brantford at 2 P. M., Saturday, May 9th 1896. Spring Reports will be received, necessary business transacted and discussions take place upon bee-keeping. Members will please accept the above as a notice.

C. EDMONDSON, Sec'y.
Brantford, Ont.

JAS. SHAVER, Tres
Cainsville, Ont.

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The enormous circulation of such a magazine as the Ladies' Home Journal can, in a sense, be understood when it is said that during the last six months of 1895 there were printed, sold and circulated over four million copies—(in exact figures 4,053,891). Figures such as these give one some idea of the influence which may be exercised by even a single one of the modern magazines.

My subscription for THE CANADIAN BEE JOURNAL is out and I want to renew it for another year, as I cannot get along without it. My bees are all right they took a good fly on the 27th of Feb. I have done away with my hens, they scratch up the garden, bees do not intrude on other business.

HENRY TRUITT.

York Co. Ont., March 18th, 1896

Mr. Frank Benton, in regard to mailing queens across the ocean, says:—

"In selecting workers for the journey, do not put in more than two or three that have filled their bodies with honey, and select for the most part, such as have empty or nearly empty honey sacs, and none of course that are too old—only those that are bright and young, though preferably those that have flown. I generally put in two or three that have honey in their sacs, (they feed the queens at once) two or three that have just emerged, if such are present. but old enough to cling well, and the rest such as are five or ten days or two weeks old as it happens."—Australian Bee Bulletin.

I have put my bees in a stone cellar, it is clean and ventilated, temperature 40° to 50°.

Please let me know if granulated sugar syrup is good for them, and how to give it to them. I have eight colonies out of the two I received from you.

A. F. DUCLOS.

Dundas, Ont., Nov. 16th 1895

[You should not have to feed your bees during the winter, give them stores in the fall of the year, not later than the first week in October. Use a Boardman or Miller feeder, give a warm syrup made of two parts by measure of granulated sugar to one of water brought to a boil.—Ed.]

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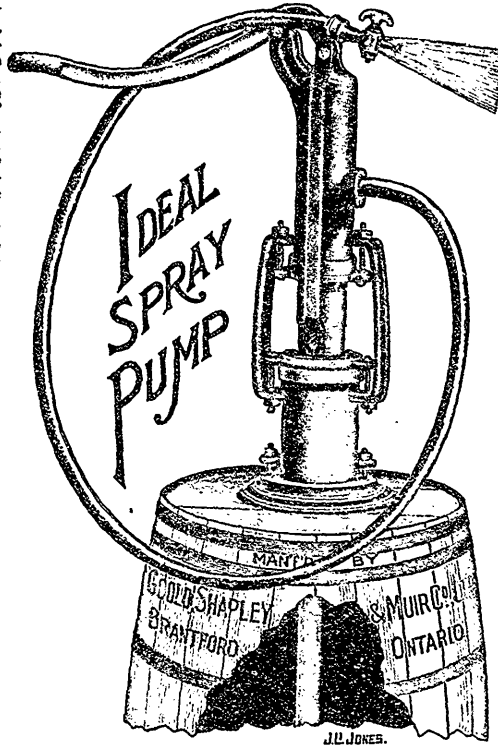
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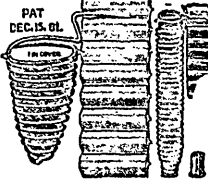
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