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OUR OWN APIARY.

SINCE last we wrote (on 16th inst.) our bees have been booming on the maple bloom. Strong colonies have gathered large quantities of honey from that source, which goes to prove that if colonies were always strong enough to gather largely of the maple bloom in early spring there would be quite as large, if not larger, yields from that source than from fruit bloom as the former appears to produce the most honey when the weather is favorable. It is worth while for any person to examine the bloom on our hard and soft maples, the former yields more honey and the latter more pollen. If you examine the blossoms you will observe a tiny drop of honey, and each flower seems to contain as much honey as lasswood. Another noticeable feature is that our bees have gathered an unusual quantity of pollen, some combs next to the brood in strong colonies being literally packed with it. Dandelion is also yielding both honey and pollen. Last Wednesday as we were driving to one of our apiaries we noticed some blossoms in the woods. On stopping the horse and going over to examine them we found them to be dogwood just coming into bloom. This plant in some localities yields large quantities of honey. The bloom lasts nearly two weeks where the undergrowth is very dense. The students on examining the blossoms were struck with the fact that they first open on the outside of the cluster, and days after the bloom from that part has fallen the blossoms in the center begin to open out, thus maintaining a continuous bloom. The plum is in bloom therefore we expect that those who have bees to gather the honey will reap a bountiful harvest this year,

We do not remember having seen bees do as much brooding in proportion to their strength as during the past week. Such favorable weather as this must make all our brother beekeepers happy. We hope that those who have many combs will look after them and see that they are not melted into wax or allowed to mould and waste, as combs are very valuable and should never be melted unless there can be no other disposition made of them; they may be sold for much more than foundation, where the size is suitable. Wonders may be accomplished by those who have plenty of empty combs to use.

In our Home Apiary our boys are somewhat excited over an immense queen. She is looked upon as a curiosity. Her body is so long that she is unable to carry it, but drags it along the combs. Many visitors have examined her and pronounce her the largest and longest they have ever seen. She is not for sale but we shall take pleasure in showing visitors the "Jumbo" of our apiary. We will mark results from her, and see if she possesses any valuable traits over other queens. Several years ago we had a queen which we considered an unusually large one, and bred others from her. While they were very good, yet we did not observe any qualities which surpassed those possessed by other good queens, of smaller size. We have noticed one or two points about large well-developed queens, viz: they are much less liable to be balled or to become excited and rush about the combs, and are found much more easily.

FOR THE CANADIAN BEE JOURNAL.

SETTING OUT—SWARMING OUT, ETC.

THE winter of our discontent is past. This is the 18th of May and the fine weather has evidently come at last to stay—for a while at any rate. At last writing to the JOURNAL, which was not very long ago, winter, boisterous and blustering, was still lingering with us, apparently very: ~~with~~ to get out and be gone.

We had about one week of fine weather beginning April 19th, on which day I commenced setting my bees out of the cellar, and carried the last out May 13th. I never before had bees in their winter quarters as late as the first of May. Last spring I had finished setting out one day earlier than I commenced this year. The bees set out a few days ago (13th) were in just as good condition, if not better, than those set out nearly a month earlier. My notion about setting out bees in the spring is this, and it is being strengthened from year to year. If they are quiet in their quarters I do not meddle with them until the time of natural pollen. When the pollen appears, if the weather is suitable, I begin setting out—first those showing uneasiness and those having least pollen in their stores, a fact which I note in preparing for winter. I do not set them out any faster than I can clean them out and fix them up the following day after they are put out. And here we come to "swarming out"—its causes and remedies. I never lost but one colony from this cause. When a colony of bees will leave its home in early spring when there is no forage—leave the brood in all stages—there must be good and sufficient reasons for their so doing. The principal cause I believe to be an unclean house and unpalatable "grub." With sour honey, mouldy combs, and a mass of dead and decomposing bees in the bottom of the hive, giving out offensive odors, is it any wonder that the tasty and tidy little occupants should desert their polluted domicile and even their young? This is the reason why this house-cleaning should be gone through the very next day after the colony is set out. If it is not done there is danger of "swarming out." True, when there are not many dead bees to remove, and the combs and stores not much contaminated, the colony will set vigorously to work to clean house and purify itself; but the bees, with all their industry, are apparently unable to muster courage enough to attack an Augean stable such as some hives really are in the spring after bad wintering conditions. The one colony that I lost by this "swarming out" happened to have a great many dead bees on the bottom boards though the combs and stores were not in bad condition. As the weather was too cold the next day after setting them out to open and clean out the hive, and remained so for several days, they left their home-brood and all, the first snatch of sunshine.

The principal cause of "swarming out," being thus apparent, the remedies are easily inferred. When you are putting your bees in cellar for winter if you use a fast-bottom hive leave the entrances wide open and occasionally through the winter hook out the dead bees from and around the entrance. In all my fast-bottom hives I have

a ventilating hole about an inch and a half in diameter through the back and about three inches from the bottom board, with wire gauze inside and a button outside. This I also leave wide open during the winter. If you use a movable bottom raise the hive up three or four inches from bottom so that there can be a free circulation of air under, even though the bottom board should contain two or three inches deep of dead bees. When this is done the accumulation of decomposing bees in the fast-bottom hive will not be nearly so offensive as with clogged entrances and no other means of ventilation. Of course, in the case of movable bottoms no bee-keeper would think of setting out the colony on its own be-fouled bottom board even for one hour. By having one clean bottom board to begin with, the first colony carried out can be lifted off its own stand, either in the cellar before you start or outside when you are placing it, and put upon the clean stand, and so on. Then all will be on clean stands from the first. I have found by experience that it is not generally best to clean out hives the same day they are carried out unless they are taken out early and get through with their cleansing flight before you commence. Otherwise you will be subjected to a very unpleasant bedaubing and will be covered most of the time with bees, hands, face and all, as they will persist in taking a rest on your person as well as on every mortal thing around. However, in the case of fast-bottom hives, as it is necessary to have one clean hive ahead into which to lift the frames, this can be done speedily the day of setting out and a more thorough examination and crowding up gone into later on. In this way the "swarming out" may be reduced to a minimum.

Since my last, I regret to say, still further accounts of the death of the bees in this district have reached me. The loss will, I should think, amount to from seventy-five to ninety per cent.

The clovers seem to have come through in good order and the prospects for a good crop are encouraging.

ALLEN PRINGLE.

Selby, Lennox Co., May 18th.

You are quite right, Friend P. about early setting out being no advantage. We have set out bees, weeks after the first were out and had gathered pollen, and the second lot put on their summer stands seemed to thrive and do fully as well. The weather of course has much to do with this. This year if bees had been put back in their quarters after the 25th of April and left till the 10th or 15th

of May, it would have been better in many instances. The swarming out is sometimes caused by the bees having too much room and not being able to keep up the heat, become discouraged when the spring dwindling is going on. This state of affairs is most likely to occur after their brood circle increases and they decrease in numbers. They become discouraged from their inability to keep up the necessary heat to carry on their brooding successfully. Your very valuable article, Friend Pringle, no doubt, will be read by many with deep interest.

FOR THE CANADIAN BEE JOURNAL

TIN SECTION RESTS.

SOME VALUABLE SUGGESTIONS FROM DR. MILLER.

IN your advice to Bro. Doolittle (page 57) you allow the support for the 1 tins "to project inwardly about three quarters of an inch." I should consider this very objectionable when you come to take the sections out of the super. A projection of one fourth inch will hold just as strong as if three or ten times as much. One fourth inch with me has worked well. I use Russia sheet iron 1¼x1 inch.

With regard to my "baby" (numbers attached to signatures,) of which you speak so kindly, I am entirely willing any one may deck it out in any clothing he may see fit. In a word the matter is just this: When you meet a bee-keeper one of the first things you want to ask is, "how many colonies have you?" and we want to know just the same thing when we meet him in print. As first suggested it was to give the lowest number in spring, say May 1, or commencement of season, and also the number owned at date of writing. The *American Bee Journal* has for part of the year, the number put in winter quarters and the number at date of writing. There is little liability to misunderstanding if either way is used. For example I started May, 1884, with 200 colonies, increased to 300, and am now reduced to say 235. (I don't know just how many I have) whether I sign (200-235) or (300-235) I will be correctly understood. The number of years engaged in the business, given in figures preceding the name I believe was the thought of a Wisconsin bee keeper.

23-C. C. Miller, -200-

Marengo, Ill., April 30, 1885.

You are right, Friend Miller, about three quarter inch being a mistake, it should have been one quarter inch; it

was a typographical error. We are glad you have explained the "baby matter" more fully. It would be very interesting if all would follow your instructions in the matter; as regards ourselves we could hardly give an accurate report without sending some one to the yards before every issue of the *JOURNAL*, to count, as we are constantly selling large quantities and do not know exactly the number; however we will be able to give you the number we have *several times* during the season. If the tin rests fitted accurately one-quarter of an inch on each side would hold them.

"THE CANADIAN BEE JOURNAL."

ACCEPT my thanks for the first two copies of your new apicultural paper. No. 1 contains declarations in its "Greeting," that at once prepossessed me with its enterprise. First. Your avowal to discriminate a respect for inventions, patent or no patent. Second. A riddance from your columns of articles of spleen and spite, or controversies which attack individuals, rather than the principles they inculcate. I have always seen good in, and been fond of, vigorous controversies, but never of those that indulge in "home thrusts," arising from envy and jealousy.

Since reference has been made in the *C. B. J.* regarding the "pollen theory," I will here take the opportunity to say to your numerous readers that that theory has now practically by myself, and analytically by Prof. Cook, been proven to be correct. You may ask, "What good has the discovery done?" I will reply by saying that I have never at any time or place, either by tongue or pen, declared that I could winter my bees with certainty every time by the use of cheap practical methods. I have never before thought so. Since having proven the pollen theory I am now quite sure that losses of colonies in winter are never to occur with me again. I have no more fears of future winter losses than of losing my horses in attempting to winter them. "But," says one, "I have felt that way for years." "I don't lose any bees in winter, and I take no notice of pollen or the pollen theory."

I grant that many have been so situated that they could and did successfully winter their bees, but after they had published all they knew about it others could not follow them and realize the same results. I here claim that all who will

follow the laws of the "pollen theory," and carefully abide by its edicts, will meet with the same certain success. If desired, I will in another communication give the rules that must be lived up to, and then the matter will be one not of discussion but of demonstration and report.

JAMES HEDDON.

Dowagiac, Mich.

"In a multitude of councillors there is wisdom." Let us by all means have the exact way by which every person may be enabled to winter without loss. We think inventors have a just right to be respected, patent or no patent. Where would we have been to-day if Father Langstroth, and many others, had not given us valuable improvements in bee-keeping? We feel that we have not yet reached the top of the ladder of apiculture, and rather like to encourage such inventions and improvements as will assist us in our art, and we shall always be pleased to do all in our power towards explaining any new methods and improvements that may appear, let them come from whom they may.

FOR THE CANADIAN BEE JOURNAL.

THE MITCHELL FEEDER.

IN the first place, let me say, I have spent some money and a great deal of time in the last five years, on making and buying feeders, and trying to get a combined feeder for Fall and Spring. In spring I use one at the entrance raised with quarter inch strips on top and cover with a strip of glass which keeps bees warm and dry, and there can be no robbing, feeding a little from time to time, according to weather and honey flow.

In fall I want to use the same feeder on top and go to a colony *only once* and be able to feed *twelve lbs.* in one night. On one side at each end they are raised with quarter inch strip for bee passage and half inch face chamfered off the front bottom corner for passage over the section rests; for fall set four feeders, holding three lbs. pounds each in any half-story or super, and put on top of hive. There is no guessing about how much you are feeding, no matter if the hive isn't just level either way, and gives more passage for bees, quantity considered, than the Heddon feeder, and right over the bees. No storage room needed for Winter. With fifty feeders I can give

fifty colonies three pounds each on one favorable night in spring, and feed forty colonies twelve pounds each in four nights in Fall.

C. MITCHELL.

Molesworth, Ont.

We wrote Friend Mitchell about making a cut of his feeder, and received the following letter, which we publish just to show how honorable and upright a bee-keeper we have in Friend M.:

Yours received. I have just received a letter from Prof. A. J. Cook, who says it is nothing new, except fitting feeders into the super. It is *new to me*, and I did not think I was copying any feeder. It is the only system I know of, for speed and convenience. Perhaps you had better not publish the feeder in that shape, as it might be more than I could claim. However, I am innocent of copying feeders from any one, as it is the outcome of my own experience. I think you could do a good thing with a practical feeder and you are welcome to go into them if you wish. A great many wonder why you don't sell a feeder, as hives leak so often. If you see fit you could describe my system without making me say it is my invention, and if you want to make them I can give you some hints.

CHARLES MITCHELL.

Molesworth, Ont.

We think your feeder would work very well. The idea of putting a number of them in the case over the brood frames is quite new to us too. You could doubtless feed a colony very rapidly by this means. From your description we think the feeder might be made very cheaply, as they appear to be the simplicity feeder, or very much like one, grooved out of solid wood. There are many feeders being invented. We have just received an eight story one a description of which will appear in a future issue of the JOURNAL. We thank you, Friend Mitchell, for your kind offer, and will be quite willing to make them for any person who may want them. We have received many orders this season for feeders and will make any kind desired. If any one does not understand what the "Mitchell Feeder" is like from the description now given Friend Mitchell will doubtless favor us with further explanations.

FOR THE CANADIAN BEE JOURNAL.

BEES IN EXCELLENT CONDITION.

THE very severe winter, and continued cold and raw winds we have had, did not permit one to give the bees a flight until very recently, and no doubt these were mainly the cause of the heavy losses reported in the apicultural papers. For over a month I have been waiting anxiously for a fine day to give my bees a flight, as I really believe a cleansing flight during the winter months means more than half the safe wintering of them; but it did not come till the 17th inst. On that day the thermometer registered 50° Far., with no wind. I then carried bees out (twenty-three colonies), which had been in the cellar since Nov. 6, (161 days), and found them, against my expectations, all alive, and not only alive, but very strong. There was no marked difference in them between fall and now, except that some colonies had consumed more stores than others. They were all put into winter quarters without chaff cushions, with but one cotton and some woolen quilts of "farmer's flannel." Those having only two thicknesses of quilt consumed the most stores. Temperature in cellar, mostly 42° Far. Some of the colonies showed signs of dysentery; they spotted the snow somewhat, but not bad. I examined a few and found brood in all stages, others had no brood, having no pollen. I then selected two colonies and gave each a comb of pollen, that they might raise brood. Would like to know if I have done right or not. The time is not far hence when they will be set out permanently. Shall report again after I set them out.

E. SCHULZ.

Lethbridge, Mus.

The giving of pollen will assist them in carrying on brood-rearing; setting them out and giving them a flight will stimulate them to feed the queen, and commence brood-rearing; or, presuming they are set out permanently before this time, if they had no pollen it would be better to give them a comb each. In our section of the country we get pollen from the black willow, soft maple and other sources, as soon as the bees are out of their winter quarters. The fact of you wintering yours so successfully is a proof that the cold winters in our northern locality are no serious objection in bee-keeping, providing scientific management is applied.

FOR THE CANADIAN BEE JOURNAL.

A PIONEER IN BEE-KEEPING.

I WAS very agreeably surprised by receiving the first number of the CANADIAN BEE JOURNAL, it having a broad field of usefulness and competent co-workers in the art of Bee-Keeping. I have no doubt of its success. The winter has been extremely severe, and my health is such that I am obliged to hibernate far more than my bees. They are on their summer stands in double walled hives, packed above and below with paper only, it being the best material, no top ventilation. They have ventured out on every sunny day since the 25th, of February, all such as were in condition for wintering, some always failing to come up to the standard of a perfect colony. There are ten out of fifty which have failed to leave their mark on the cover and to-day those with the most marks are the strongest stocks. It is now about sixty years since I first saw bee hives and bee houses in the Bay of Quinte district, being of the old U. E. L. stock. I had opportunities to see the manner of bee-keeping at that early day in Canada. Great disasters came among the bees of those times and only a few succeeded in keeping their bees: the moth was supposed to be the great difficulty. This being my first letter to you I presume you will excuse my unsteady hand while I relate my beekeeping life of about fifteen years in movable frame, hives wintering indoors and the introduction of Italian Bee, artificial swarming, &c.

B. LOSEE.

Cobourg, April 4th. 1885.

We shall be pleased indeed to hear from you as often as possible. Articles from veterans in the business like yourself, who have had experience, do much towards making the JOURNAL interesting.

QUERIES AND REPLIES.

UNDER THIS HEAD will appear each week, Queries and Replies; the former may be propounded by any subscriber, and will be replied to by prominent bee-keepers, throughout Canada and the United States who can answer from experience, as well as by the Editor. This Department will be reserved for the more important questions, others will be answered in another place. We hope to make this one of the most interesting departments of the JOURNAL.

FASTENING FOUNDATION IN FRAMES.

QUERY No. 15.—PETROLIA, ONT.—In fastening comb foundation into frames and sections it sometimes pulls off and drops down. Will you tell me the best way to fasten it to prevent this?

PROF. A. J. COOK, LANSING, MICH.—Wire the frames. I like this so well that I shall always wire after this. It has much to recommend it.

MARTIN EMIGH, HOLBROOK.—For sections, the Parker press is good enough; if the weather is cool, warm the sections before pressing.

G. M. DOOLITTLE, BORODINO, N. Y.—I use melted wax applied to the top bar and foundation, with a small brush, and do not have one in 500 fall down.

A. B. MASON, WAGONWORKS, OHIO.—I work for extracted honey and use only wired frames. Have had no experience in fastening foundation into sections.

C. C. MILLER, MARENGO, ILL.—When wired I have no difficulty with brood frames; and Clarke's foundation fastener *properly* used fastens foundation securely in sections.

DR. J. C. THOM, STREETSVILLE, ONT.—When we have had trouble of this kind, the sections have become a little damp or the foundation has been pressed in some one part too thin, thus being easily torn by the weight of the bees. Care in doing the work is the remedy. The proper warmth of the foundation has a great deal to do with it.

S. CORNEIL, LINDSAY, ONT.—When comb foundation is well fastened in sections with a machine worked with the foot it hardly ever drops down. We always wire our brood frames and would do so if for no other reason than the ease with which we can fasten in full sheets of foundation and the facility with which the frames may be handled before the foundation is built out. We have a machine with which we perforate bottom and top bars as fast as the pieces can be handled. It can be made for \$5.00. The most tedious part of the work is weaving the wire in the frames.

ALLEN PRINGLE, SELBY, ONT.—I wire all my brood frames and think it much more than pays for the little extra trouble and expense it entails. Get No. 30 tinned wire and put it in your frames from two to three inches apart. Then in a warm room lay your sheet of foundation on a flat board made to fit inside the frame, over which place the wired frame and impress the wires into the foundation by a simple fixture—a long rail with a little groove filed in the end will answer. As to the sections get a little "Parker" machine, costing but 30 or 40 cents and you will have no trouble.

H. D. CUTTING, CLINTON, MICH.—Take a tin tea steeper, put in one part beeswax and two parts resin, melt it over a lamp or on a stove. Place your foundation in the saw-cut in top bar, hold the frame with the left hand on an angle

and with the right pour the mixture when the foundation and top bar comes together. It will run the length of top bar and make a good connection. One side is enough. It will tear in two, before it will come from the wood. If you use a board a little larger than your frame it will help you to hold the foundation in place until fastened. To fasten in sections use a Parker, Gray or Burk, section foundation fastener.

H. COUSE, THE GRANGE, ONT.—Of the many plans tried for fastening comb foundation in frames I consider the following the best, which I adopted last season (an invention of friend McGregor's, Inglewood). Take the ordinary board used for this purpose, which Mr. Jones has often described, and allow the foundation to lap about one quarter inch on the top bar; then take an ordinary case, or putty knife, and, after heating the point, give it one or two draws over the foundation, a piece of wood being fastened near the point of knife as a guard to prevent it from running down too far on the foundation. Heat the knife by placing it on a box which should raise it slightly above the blaze of a candle or the chimney of a lamp. By using two knives one can be heating while the other is in use. That part of the foundation which laps should be warmed a little and the top bar should be free from dampness. I think a similar plan would work well with sections.

O. O. POPPLETON, WILLIAMSTOWN, IOWA.—I use comb guides and bottom bars in brood frames similar to the ones Mr. Jones uses in his frames. I use a couple of boards half inch thick a little longer than the frame is deep, and narrow enough to go between the bars. The frame is slipped over one of these boards until stopped by the comb guide and bottom bar, the sheet of foundation laid in its place in the frame, and the whole placed in the sun or some other warm place, until wax is softened, when the edge of the sheet of foundation is thoroughly mashed against the side of comb guide. An excellent tool for this work is a cold chisel, which needs repeated dipping in honey to prevent wax sticking to it. While one sheet is being fastened, an other one can be warming on the other board. I have no trouble about foundation dropping down when the mashing has been thoroughly done. Have had no experience with foundation in sections.

R. MCKNIGHT, OWEN SOUND, ONT.—In the underside of most top bars there is a groove cut. When this is the case a ready plan is to insert the comb foundation in the groove, melt some beeswax in a tin cup or saucer, place this on a

hot brick and hold the frame, having the inserted foundation, bottom side up with the left hand, with the fingers around the side bar and the strip or sheet of foundation steadied by the thumb and first finger, then rest the right hand end of the top bar on the bench or table, raise the left at about an angle of forty five degrees, then with a teaspoon or some other suitable article lift some of the melted wax, pour it in at the high end of the groove, and when it has run to the lower end of the strip of foundation, raise the lower end of the frame by a slight turn of the wrist till the flow of the hot wax is towards the hand. The groove will then be found to be filled with wax flush with the frame and the foundation will have been fixed in its place. It only occupies about three seconds to perform the operation of fastening. When the frame can be set aside, bottom up, until the wax has thoroughly stiffened. A little practice will soon enable one to judge as to the exact quantity of hot wax required to flow to the end of the sheet. Where the top bar has no groove the frame may be turned bottom up on a table, the foundation laid flat on the top bar with its edge about an eighth of an inch projecting beyond the centre of the bar, then with the bevel of a two inch chisel rub the wax vigorously into the frame, keeping the edge of the chisel along the centre line of the top bar. If the weather is warm the fastening is easily effected. Where the top bar is made of three-sided pattern, the foundation may be as readily fastened with the chisel as if it is flat, or a very thin strip of wood may be placed over the foundation on the top bar and firmly tacked with half inch wire nails.

By THE EDITOR.—We are now putting foundation in frames without the use of melted wax. Although we have used various ways we find the best tool to do it with is a wooden paddle from one to two inches wide, about two inches long, and the blade about half an inch thick at the back, and rounded off to a sharp edge; if this is kept in water, when not in use, it will prevent the wax from sticking to it. The handle should be strong. It may be an inch wide and about six inches long. Have the frame warm, either from heat of sun or otherwise, then lay the wax on the bar, press it in the centre, then at each end, and half way between them, then one or two long strokes are sufficient to tighten it down. We find if the frame is cold the

wax cannot be pressed so firmly as when it is warm; if the foundation is cold then it will stand more pressure, and as it comes in contact with the warm surface of the frame it softens and adheres to the wood. Hot wax dropped on a cold frame may be peeled off easily; cold wax dropped on a hot frame will melt and incorporate with the wood. Thus it will be easily seen that when the foundation is to be pressed on, it is necessary to have the wood warm and the wax cold.

SUNDRY SELECTIONS.

DAVID BOYER, MARKHAM, ONT.—Last fall I packed 117 colonies, some in chaff and some in sawdust. The hives with sawdust proved to be the best. I lost eighteen, four were queenless, three starved for want of honey, and the rest starved with plenty of honey in one side of the box. Most of them were late second swarms. I was poorly in the fall and not able to attend to them in proper time. I think that September is the best time to put bees in good condition for winter. I have ninety-nine all in good condition excepting five which are rather weak.

REV. D. P. NIVEN, DROMORE, ONT.—It is with great pleasure that I acknowledge the receipt of the CANADIAN BEE JOURNAL through your agent, Mr. Davison, Mount Forest. I wish you all success in the undertaking of such a noble work. We have got at last what we long stood in need of—a bee-paper in Canada, and the name you have chosen is certainly most natural and appropriate. I would have written sooner but have been waiting till I got my bees out that I might report as desired. My report then is as follows: Commenced the season a year ago with five colonies, which I had wintered without loss. Increased the five stocks to nineteen and took 250 pounds comb honey. Sold one swarm and went into winter quarters on the 29th of October last with eighteen, all of which I took out on April 22nd, strong and in good condition. There were symptoms of dysentery in a few of them, owing I presume to the low temperature of cellar, ranging from 34° to 38°, most of the winter. Have a very dry cellar which I can keep at about 45° in an ordinary winter. For ventilation I have a five inch tin pipe in connection with kitchen stove pipe above."

QUESTIONS & ANSWERS.

ICE IN HIVES, MOVING BEES IN WINTER, ETC.

JOSEPH SCHARBONNEAU, PLANTAGENET, ONT.—
In connection with my report, on page 72 of
JOURNAL for April 29th, I would like to know
the cause of the bees all dying off in that way?

You might as well or better have left
them on their summer stands without
any protection whatever. A bee-house
in this locality with only one foot of
sawdust packing in part, and pea straw
in the balance, would be like a cold cel-
lar, one of the best possible places to kill
bees, as a proof of which the moisture
condensed in the form of ice is sufficient.
Bees to winter safely in a repository,
must have a frost proof one, one that
will not allow the temperature to fall
below 40°.

The cause of the ice in the hives?

Much of the moisture escaping from
the cluster becomes condensed on the
combs, and if it is cold enough to cause
ice to accumulate inside the hive it is
worse than their remaining out on their
summer stands.

Did it hurt to move them as I did?

No. Your bees would in all proba-
bility have died any way. You could
have packed your bees on their summer
stands and have brought them through
safely. A cave in the ground is far
superior to a bee-house unless the latter
is prepared with great care.

Will the bee-house be better for another year,
by filling it with sawdust all around, and should
I put a floor in it?

A floor is not necessary to the safe
wintering of bees, but the sawdust
should be more than one foot thick.
Some of our bee-houses have twenty-six-
inch walls.

HONEY AND HIVES.

HOW SWEETNESS MAY BE MADE, PRESERVED
AND SOLD.

(CONTINUED FROM LAST WEEK.)

A.—To what age do bees live? A.—
Sixty to 90 days in the working season.
I have had bees in winter quarters for
six months and seventeen days and
come out all right. Keep your hives
closed up in cold weather, and for several

days after setting out in the spring open
only for a couple of hours in the middle
of the day when very warm. If you
get stung, just wipe off the bladder
of poison with your hand; the sting
will follow, and you will experience
no bad effects; if you do, just bathe in
cold water. Dress in duck or any
other goods without a nap on it. Singe
the hair off your hands so the bees will
not get their feet tangled in it; make
no false motions; use a straw hat,
and if you have long whiskers wet them;
if you have frizzy hair wet it. If you
mash a bee go at once and wash the
poison off.

Q.—Would you advise wearing veils?
A.—Yes, for new beginners, if they are
nervous.

Q.—Do you make any size section
boxes? A.—Yes; any size and 25,000
per day. If you want to make money
use thin ones; to lose money use thick
ones.

The speaker thanked the audience
for their attention, and said it had been
a great pleasure to him to be present.

Mr. D. A. Jones explained why bees
build the comb the way they do in the
hive.

Mr. Aches said; "Build up your
swarms as large as possible."

Mr. McNaughton said that 46 years
ago he found a bee tree, cut it down, and
out the place where the swarm was, and
ever since that time had been a bee-
keeper. He uses deep hives—18x15x12
inches, and only lost one swarm out of
25 last year, and that was because of
his own neglect. He had five shallow
hives and had lost four swarms out of five.

Mr. O'Neil said he had no trouble
keeping bees—the trouble for him was to
sell the honey.

On motion, Mr. Jones, of Beeton, was
tendered a hearty vote of thanks for his
presence and assistance, and for the
charts presented the association. A
vote of thanks was also tendered the
Town Council for the use of the hall,
lights, etc., and to Mr. G. B. Jones for
his presence and counsel.

On motion of Vice-President Campbell,
seconded by Mr. McNaughton, it
was decided to have a meeting in
Craig about the middle of May. The
retiring Secretary was tendered a
vote of thanks for his services, after which the
convention adjourned.

WESTERN MAINE BEE-KEEPERS.

THE spring meeting of the Western Maine Bee-keepers' Association was held at Mechanics Falls, with Mr. Charles Bonney, Tuesday and Wednesday of last week.

There was a very good attendance and much interest notwithstanding the rather depressing influence of the condition in which many bee-keepers find their bees this spring. The winter loss throughout the State, as far as accounts have been received, is heavy. It has been asserted by some that the mortality among bees the past winter exceeds that of any year for the past 20 years. But for all that the history of the business seems to indicate that with proper care and precautions to state it mildly, three-fourths of the loss sustained in wintering bees might be avoided.

As might be expected, the discussion at the meeting ran largely upon subjects of timely importance and relating to spring management.

After the routine business opening, an essay was read prepared by Isaac Hutchins of Wellington, on

HANDLING BEES.

Mr. Hutchins summed up the points in his essay as follows:

1st. Never attempt to strike down a bee if she attacks you in the apiary.

2nd. Never blow smoke into the entrance of a hive before opening it.

3rd. Never open a hive on a cold or stormy day unless it is absolutely necessary, then close it as soon as your object is accomplished.

4th. Never excite the bees with smoke or any other means to cause them to fill with honey before or while handling them.

5th. Never jar the frames or make any quick motions in the apiary.

6th. Never open a hive and expose it to robber bees.

7th. Never crush bees in handling.

The fourth proposition of Mr. Hutchins' called out a lively discussion, as it is believed by many apiarists that the use of smoke to alarm the bees and induce them to fill their sacks with honey is the principal object of the use of smoke. Most of the members present expressed an opinion favorable to the use of smoke in the apiary and that it was not injurious to the bees.

At the winter meeting of the Association the subject of forming a New England Association to be subordinate to the Northeastern Bee-keepers' Association, was discussed and laid over till the present meeting. To complete the consideration of the question, a committee was chosen to report, which they did subsequently, and in favor of forming such an Association.

EVENING SESSION.

The first work of the evening session was the reading of a congratulatory letter from Mr. E. P. Churchill, formerly of North Auburn, now of Tampa, Florida. Mr. Churchill spoke of the contrast between the two sections of country in the apiarian pursuit. Portions of his letter we give as of interest showing the difference in climate. He says: "Here, bees fly nearly every day all winter, and even now, the last of April, I have sections nearly completed. From what I learn in the brief time I have been here, bees gather enough stores in winter to support themselves."

"I transferred a number of colonies in January and to my surprise I found them very strong, in brood of all stages, and new honey and comb were quite plenty. But we have one difficulty. All the upland is usually burned over for cattle range about April 1st or last of March, which for a time cuts off a large flora. However, it must be more than balanced in a few weeks by a new and fresh growth. Where an apiary is in bee-range of swamps the case is very different, as there is always much bloom there. I am told that June, July and August are the best honey gathering months. This goes about with Maine excepting early apple bloom. My twenty colonies are in reach of an immense swamp where they work from 2 p. m. till quite dark. I used to hear of Markotto hawks but have not seen anything of the kind until lately. About sunset one day I had a large number of them in the bee yard. They are what we call in Maine, devil's darn-needles, (and one of them is large enough to be father to all darn-needles.) I think they do catch a few bees, at least, by the way they darted about the hives. But at the same time they kill thousands of insects, and no doubt kill far less than the cold climates do."

REARING OF QUEENS.

W. H. Norton of Madison, read an essay upon queen-rearing, before the close of the evening session. The first point to be considered as regards the object of rearing queens, was whether it would be cheaper to raise them or to purchase them of some one, and the answer depended upon how many one desired to use. If one wants only a few queens it would be better to buy them. If we raise them how shall it be done? Nature points out this way. Commence operations at such times as drone brood is far enough advanced so the drones will be flying by the time the young queens emerge from the cell. Proceed this way: Build up a colony by adding frames of hatching brood to a swarming condition, and also stimulate the brood-rearing by feeding daily, if the honey is not coming in freely from the fields.

Mr. Fuller, of Oxford, had strengthened his weak swarms this spring by purchasing a colony from a distance and dividing it among three weak ones, when set upon the summer stands, and the plan thus far seemed to work well.

Mr. J. B. Mason further expressed his views by the reading of an essay relating to the spring management of bees.

An essay was also given by L. F. Abbot of the *Journal* entitled "The Bee at its best."

BUILDING QUEEN CELLS.

About this time the colony will begin to form queen cells with a view to swarming. Carefully watch them and as soon as the bees commence to cap the cells remove the old queen, as a colony will usually swarm on the second day after the first cell is capped. On just eight days after the cell is capped over the young queens will begin to hatch. Then if you choose you can carefully cut out the cells just before they hatch and place in nucleus colonies when needed. But his method is more natural he thinks. He kept watch and took them from the hive as fast as hatched. Sometimes four or five can be taken at once. He had taken sixteen queens from a hive in a single day. This condition of things is when the old queen has been removed. One thing must be kept in mind, that is, not to let the colony swarm, but keep the fever up else there will be trouble and loss by the bees killing off the queens.

These young queens are placed in nucleus colonies, which are all right to receive them. Here the queens remain and become fertilized as the drones are now flying, and work goes on in the little colony to all intents and purposes as in a larger hive.

WHEN QUEENS ARE BEST.

Mr. Norton gave his preference to queens raised under the swarming impulse to those raised in the common way of depriving a colony of its queen, and thus forcing the bees to go about repairing their loss, and thus raise up a dozen or so of queens from broods in a stage as far advanced as a queen could be raised from it.

Mr. Norton raised the following question: Are queens raised from worker brood as long lived as those raised in the more natural way under the swarming impulse?

Also, are workers produced from such queens as long lived as those reared from a fully developed natural queen?

All are interested in these questions. We want bees that will live long enough to go through our long cold winters for it may be said that our winter losses and spring dwindling are due to old bees. He reasoned that a perfectly developed queen would live from three to five years, and the workers which were undeveloped females lived only sixty to ninety days in the active season, and six and seven months in the cold season, the better developed the queen and worker the longer lived the latter would be. It looks quite reasonable as queen larvae are only fed five days before the cells are capped if the larvae is fed as a worker one day, or half a day even that it would make some difference.

This is a subject for careful experimenting, as we want bees which are hardy and long lived. Mr. Norton thought some races of bees were better developed than others, a point which he intended to furnish proof upon at a later date.

DISCUSSIONS.

Considerable discussion was elicited by Mr. Norton's essay.

At the opening of the morning session, Wednesday, Dr. J. A. Morton, of Bethel, president of the Association, gave an address in which he reviews at some length the phases of bee-keeping,

encouraging and discouraging features. He rather favored making a specialty of the business or keeping but a very few colonies.

MANAGING WEAK COLONIES IN SPRING.

Mr. W. W. Dunham introduced the subject of management of weak colonies in spring. His idea was regarding weak colonies early in May, and how to carry them along till the weather becomes warm and brood rearing would go on and the colony becomes in condition to build up.

The unanimous opinion of those who had experience was, that doubling up colonies was not to be recommended, neither was it thought best by some to attempt to build up such colonies when the weather is cold, by the introduction of brood. A better way was to contract the hive to the requirements of the swarm and make it as warm as possible.

Mr. Norton of Madison had practiced changing the positions of colonies, putting a weak colony in the place of a strong one in the middle of the day, when the bees were flying freely. This method he had found by practice to work well.

Mr. Mason thought, as a rule, any method of dealing with weak swarms which caused excitement was not to be recommended. Any of those plans—introducing bees or brood—caused undue excitement and thus loss of both bees and brood, and sometimes the queens would be killed.

OFFICERS.

The election of officers resulted in the choice of W. W. Dunham, North Paris, President; J. F. Fuller, Oxford, Vice President; F. D. Wellcome, Poland, Secretary; Dr. J. A. Morton, Bethel, Treasurer.

Mr. A. O. Crawford of South Weymouth, Mass., was present and joined the Association. Mr Crawford is a practical bee-keeper, and the inventor of a carton, a capital device for the preservation and transportation of honey in sections. Every one producing comb honey in that form will find the carton an indispensable article.

MORTUARY.

The losses of bees during the winter have been larger than for many years previous. A partial list of losses by members of the Association are given

below. The figures show, first the number of colonies in the Fall, and second, the number alive this Spring. Dr. J. A. Morton, 23-14; F. D. Wellcome, 27-7; A. O. Crawford, 7-5; W. W. Dunham, 42-32; J. F. Fuller, 17-9; A. W. Valentine, 5-; H. O. Blake, 3-2; —Pierson, 9-8; J. B. Mason, 37-34; E. M. Dunham, 8-7; W. C. Jordan, 6-2; Charles F. Bonney, 2-0; L. F. Abbott, 2-2; George Bridgman, 7-0.

The next meeting will occur early in September at North Paris, with Mr. W. W. Dunham.

CONVENTION NOTICES.

IN THIS DIRECTORY we will keep continually standing the names, dates, and places of meetings and conventions throughout the year, together with the name of the Secretary of each Association. Secretaries will please keep us posted as to the dates set for their Conventions, that this directory may always be kept complete.

ONTARIO BEE-KEEPERS' ASSOCIATION, at Toronto, during the Industrial Exhibition, between September 10 and 20, 1885. Exact dates will be given hereafter. Jacob Spence, Sec., Toronto, Ont.

HALDIMAND BEE-KEEPERS' ASSOCIATION will meet at Nelles' Corner, May 29th 1885. E. C. Campbell, Secy., Cayuga.

THE WILLIAMITE VALLEY BEEKEEPERS' ASSOCIATION will hold its second annual meeting in the Court House, Lafayette, Oregon, June 16th, 1885. Frank S. Harding, President; E. J. Hadley, Secretary.

MICHIGAN STATE CONVENTION, at Detroit, Mich., on December 8th, 9th, and 10th, 1885. H. D. Cutting, Sec., Clinton, Mich.

LISTOWEL BEE KEEPER'S ASSOCIATION, at Queen's Hotel, Listowel, Ont., May 29th, 1885. Geo. Brown, Sec.-Treas., Molesworth, Ont.

EAST ELGIN BEE-KEEPER'S ASSOCIATION, at St. Thomas, at the Hutchison House, on the first Saturday in June—6th—at one o'clock. John Yoder, Sec., Springfield P. O.

NORTHERN MICH BEE-KEEPERS SOCIETY will hold its 2nd Annual Pic-Nic at the apiary of F. A. Palmer, 1 mile west of McBride, on May 28th. Teams will be in waiting at the depot in the morning to convey passengers to the grounds and will also return them in time for the trains homeward.

THE WATERLOO COUNTY BEE-KEEPER'S ASSOCIATION will meet at Berlin, on Saturday, Sept. 5th 1885. Anson Groh, Secretary.

NORTH AMERICAN BEE-KEEPERS' SOCIETY, at Detroit, Mich., on December 8th, 9th, and 10th, 1885. W. Z. Hutchinson, Sec., Rogersville, Genesee Co., Mich.

THE Kansas *Beekeeper* came out in its new dress week last and is as a consequence much improved in appearance. We wish it continued success.

W. E. CLARK,
SUCCESSOR TO L. C. ROOT.

Dealer in all kinds of **Apiarian Supplies**, the Quinby Smoker—the best made—a specialty. The Quinby Hives made and sold finished and in the flat. Also all other kinds of hives. The Vandervort Foundation kept in stock, both wired and light. Send for illustrated price list, free.

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Garwood's Reversible Frame Device

Will fit any frame, is simple and cheap; any one can make it. No nails or screws required to fasten it to the frame. Send ten cents for photograph with instructions, or 25 cents for a model. Friend Root turned this down as "too much machinery; but quite ingenious." You will smile.

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High side-walls, 4 to 14 square feet to the pound. Wholesale and retail. Circular and samples free.

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- CHAS. H. GREEN, Berlin, Wis.,
- CHAS. HERTEL, Jr., Freeburg, Ill.,
- E. L. ARMSTRONG, Jerseyville, Ill.,
- ARTHUR TODD, Germantown, Philadelphia Pa.,
- E. KRETCHMER, Coburg, Iowa,
- E. F. SMITH, Smyrna, N. Y.,
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Is second to none in the market. **Square Gears, Honey Jars, Tin Buckets, Langstroth Bee Hives, one-piece Sections, etc., etc.**

Circulars mailed on application. Send ten cents for "Practical Hints to Bee-Keepers." Address

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THE NEW ONE-PIECE SECTION.

Though these sections cost more to make than the old style, still we are supplying them at the same price. We keep in stock $3\frac{1}{2} \times 4\frac{1}{2}$ (ours), and $4\frac{1}{2} \times 4\frac{1}{2}$ (Langstroth), and can make any other sizes to order on short notice. Prices:

Per 1,000.....	\$ 6 00
" 5,000.....	27 50
" 10,000.....	50 00

Sample sections sent on application.

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Italian Bees Queens, and Honey.

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Strawberry Pinnis, Wilson's Albany, 40 cents per dozen.
Red Phis. Raspberry, \$1.00 per dozen.



Italian Queens, Tested \$2 to \$4; Untested, \$1.50 to \$omb
Edn., Root's Improved Cell, Sheets 12 in. wide, 46long, cut to order

WM. BUEGLASS, BRIGHT, ONT.

TINNED WIRE.

We have just bought a large lot of Tinned Wire, No. 30, which seems to be the number best suited for wiring frames and we are able to sell it very low:

Spools holding one pound, each.....	30c
" " " one-half pound, each.....	18c
" " " one ounce, each.....	07c
Reels, of from three to five pounds, per lb.	25c

The spooled wire is much more convenient than the reels as there is no danger of tangling. These price will supersede those in our price list.

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IMPORTED QUEENS BY MAIL

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FROM ASIA AND FROM EUROPE.

Cyprians, Syrians, Carniolans, Italians
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ALL REARED IN THEIR NATIVE LANDS.

Imported Cyprians and Imported Syrians.

Grades and Prices of Queens:	before		July After	
	June 1	June	Aug	Sept. 1st.
Finest Selected Queens, each	\$12.00	10.00	9.00	\$8.00
Fine Prolific Queens, each...	10.00	9.00	8.00	7.00
Smaller & darker Queens each	8.00	6.00	5.00	4.00

Owning an apiary in Cyprus and another in Syria, I have facilities equalled by no other person for obtaining choice queens of these races. I shall visit these apiaries during the coming winter and return in early spring bringing with me a fine lot of queens. Those who desire Imported Cyprians, or Imported Syrians VERY EARLY can have them mailed direct from Cyprus or from Syria to their addresses during March, and on all queens so sent I will assume three-fourths of the risks, that is, will replace at one-fourth the regular price any that die in transit, provided the purchaser receives mail from New York City within five days time.

Imported Carniolans and Imported Italians.

Grades and Prices of Queens:	before		July After	
	June 1	June	Aug	Sept. 1st.
Finest Selected Queens, each	\$7.00	\$6.00	5.00	\$4.50
Fine Prolific Queens, each...	6.00	5.00	4.50	4.00

I have several times visited both Carniola and Italy, inspecting at each visit a large number of apiaries, and also have, for several years, kept side by side imported stocks of both of these races, and I unhesitatingly give the preference to the Carniolans. They are the gentlest bees known, equal the Italians in honey-gathering qualities and in point of beauty, and far excel them in prolificness and hardihood.

Cyprians and Syrians Fertilized in Carniola.

Prices two thirds those of Imported Cyprians and Imported Syrians.

All these queens are selected daughters of fine imported stocks, are reared in full colonies, and are fertilized in Carniola itself, where of course ONLY Carniolan bees exist. From these crosses bee-keepers may expect the best results which can be obtained through crossing any two distinct races.

Imported Palestine Queens.

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