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VOL II, NO. 15.

1886

JULY 7.

PUBLISHED EXCLUSIVELY IN THE INTERESTS OF THE HONEY PRODUCER

THE CANADIAN



JOURNAL

APR 4 1874

THE FIRST \$

WEEKLY

IN THE WORLD

ONE DOLLAR PER YEAR

THE GREATEST POSSIBLE GOOD TO THE GREATEST POSSIBLE NUMBER

PUBLISHED BY

JONES, MACPHERSON & CO.
BEETON ONT.

GRANT-LITTLE & CO.

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Send postal card for sample of leaflet, "Honey, some reasons why it should be eaten."

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ERRORS. — We make them: so does every one, and we will cheerfully correct them if you write us. Try to write us good naturedly, but if you cannot, then write to us anyway. Do not complain to any one else or let it pass. We want an early opportunity to make right any injustice we may do.

We can supply Binders for the JOURNAL 55 cents each, post-paid, with name printed on the back in Gold letters.

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TO CONTRIBUTORS

Communications on any subject of interest to the Bee-keeping fraternity are always welcome, and are solicited.

Beginners will find our Query Department of much value. All questions will be answered by thorough practical men. Questions solicited.

When sending in anything intended for the JOURNAL do not mix it up with a business communication. Use different sheets of paper. Both may, however be enclosed in the same envelope.

Reports from subscribers are always welcome. They assist greatly in making the JOURNAL interesting. If any particular system of management has contributed to your success, and you are willing that your neighbors should know it, tell them through the medium of the JOURNAL.

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WE CLUB

Price Both. Club

THE CANADIAN BEE JOURNAL and.....		
Cook's Manual (cloth).....	\$2 25	\$2 00
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"Foul Brood"

Its Management and Cure.

BY D. A. JONES. NOW READY.

This little pamphlet is presented to the Bee-keeping public with the hope that it may be the means of saving infected colonies from death by fire and otherwise. No expense is required to successfully treat the disease, other than the little time required for fasting.

Price, 10 Cents. By Mail, 11 cents.
JONES, MACPHERSON & CO.,
Publishers Beeton, Ont.

MUTH'S HONEY EXTRACTOR.

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

CHAS. F. MUTH & SON.
76 and 978 Central Avenue, Cincinnati, O.

THE BEEKEEPER'S LIBRARY.

We keep in stock constantly and can send by mail post-paid the following:

BEEKEEPERS' GUIDE OR MANUAL OF THE APIARY, by Prof. A. J. Cook. Price, in cloth, \$1.25 paper, 1.00

A. B. C. IN BEE CULTURE by A. I. Root. Price, cloth, 1.25; paper, \$1.00.

QUINBY'S NEW BEEKEEPING, by L. C. Root Price in cloth, \$1.50.

THE HIVE AND HONEY BEE, by Rev. L. L. Langstroth. Price, in cloth, \$2.00.

HONEY, some reasons why it should be eaten, by Allen Pringle. This is in the shape of a leaflet (4 pages) for free distribution amongst prospective customers Price, with name and address, per 1000, 3.25; per 500, \$2.00, per 250, \$1.25; per 100, 80c. With place for name and address left blank, per 1000, \$2.75; per 500, \$1.70; per 250, \$1.00; per 100, 50c.

FOUL BROOD, ITS MANAGEMENT AND CURE by D. A. Jones. Price, 11c. by mail; 10c. otherwise.

BEEKEEPERS' HANDY BOOK, by Henry Alley. Price, in cloth, \$1.50.

A. B. C. IN CARP CULTURE, by A. I. Root, in paper 50c.

SUCCESS IN BEE CULTURE as practised and advised by James Heddon—price in paper cover, 50 cents.

"A YEAR AMONG THE BEES," by Dr. C. C. Miller. Price, 75c.

A BIRD'S-EYE VIEW OF BEE-KEEPING, by Rev. W. F. Clarke. Price 25c.

ODD SIZED SECTIONS.

We have a lot of about 5,000 one-piece sections which were cut slightly too large for the cases for which they were intended, and as they are an odd size (4 1/2 x 9 one-nine-sixteenth) we will sell them at five dollars per thousand, to any one who can use them, and will take the lot Perhaps some of you use that size, if so, let us hear from you, and we will send a sample. They are nicely made, and are cheap at that money.

THE D. A. JONES (LD.) CO. Beeton, Ont.

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BEESWAX WANTED.

Will pay the highest market price for any quantity of pure wax. Comb foundation for sale to suit any frame or section. 35 cts. for wax. Wax worked on shares or for cash. All freight to Campbellville station, G. P. R. If by mail to

ABNER PICKET

Nassagaweya P. O., Ont.

Also agent for D. A. Jones' supplies.

Bee-Hives, Honey-Boxes, Sections.

Largest Bee-Hive Factory in the World.

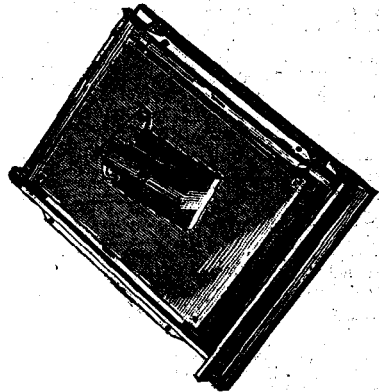
Write for our prices for one piece sections, delivered freight and duty prepaid.

G. B. LEWIS & CO.

WATERTOWN, WIS.

THE MITCHELL FRAME NAILER.

Saves the cost of the machine in nailing 500 frames, to say nothing of the extra quality of the work obtained by its use.



PRICES.

For Jones' Frame.....\$1.25

For Langstroth Frame.....\$1.50

Ready to go by express or freight.

THE D. A. JONES CO., LD., BEETON, ONT

HIVES! HIVES! HIVES!

Eighty "Jones' Hives," nearly new, for sale at a reduction, the owner having retired from bee-keeping.

Apply to A. REEVE,

Highland Creek, Ontario

HEAD * QUARTERS

IN THE SOUTH FOR EARLY NUCLEI & QUEENS.

Four frame nucleus, with pure Italian Queen, in April \$3.50. Three frame nucleus, with pure Italian Queen, in April \$3.50. Two-frame nucleus, with pure Italian Queen, in April \$3.00. After 15th May, 25c. less. I would advise the four-frame nucleus as giving the best result.

Italian Queens—untested in April, each, \$1.25, per doz., \$13. From 5th May to 1st June, each \$1.10, per doz., \$12. After 1st June, each \$1.00, per doz., \$10. Tested, \$2.50 ea. Selected Tested, \$3.00 each. 50 cents less after June 1st. Bees by the pound, in lots of five pounds and over, \$1.00 per pound, no queens; if queens are wanted add price of queens. Safe arrival and satisfaction guaranteed. Discounts, 3 per cent on orders of \$50 or over; 5 per cent on orders of over \$100. Illustrated catalogue now ready. Address

F. L. VIALLOU,

Bayou Goula, Louisiana

Queen City Oil Works!

The Highest Honors and Gold Medal For Our

PEERLESS OIL,

Manufactured only by

SAMUEL ROGERS & CO.

Toronto, Ont

BARNES' FOOT-POWER MACHINERY.



Read what J. I. PARENT, of CHARLTON, N. Y., says—We cut with one of your Combined Machines, last winter, 50 chaff-hives with 7-inch cap, 100 honey-racks, 500 broad frames, 2000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives etc., to make and we expect to do all with this saw. It will do all you say it will. Catalogue and Price-list Free. Address: W. F. & JOHN

BARNES, No 474 Ruby St., Rockford, Ill.

BEES AND HONEY

TO ALL that are interested in Bees and Honey, send for our Free and Illustrated Catalogue of Apian Supplies. Address

M. RICHARDSON & SON,

Port Colborne, Ont

30 QUEENS

To dispose of this month. Principally of the Heddon strain, but which have not been purely mated. Price 65c each or five for \$3 by mail. These produce the very best bees for honey gathering.

G. A. DEADMAN,

Druggist, Brussels, Ont.

ITALIAN & CARNIOLAN QUEENS

By return mail, bred in separate apiaries away from other bees. Warranted Italians or untested Carniolan Queens, in June, \$1.10; 6, \$5.00; July, \$1.00; 6, \$4.50. State which you prefer, BELLONA or GOLDEN ITALIANS. For full particulars and prices of bees, send for circular. Safe arrival and satisfaction guaranteed.

CHAS. D. DUVAL,

Spencerville, Mont. Co.

TO BEE-KEEPERS.

You will be interested in perusing a beautiful catalogue which explains fully about the best hives, and also gives almost as much information about the best methods of getting honey, as the regular works upon that subject. This is no catch penny scheme, but every statement made may be verified, because the implements used are of the simplest kind and at the same time the most practical. Send your name, plainly written, with your post-office address also plainly written upon a postal card, and the names and addresses of any bee-keepers you may know and get this pamphlet free. Address.

E. L. GOULD & CO.,
BRANTFORD, ONT.

W. Z. HUTCHINSON,

ROGERSVILLE, GENESSEE, CO., MICH.

Is ready Italian Queens for sale again this season, and can furnish them by mail, safe arrival guaranteed, as follows:—Single Queen, \$1; six queens for \$5; twelve or more, 75c each. Tested Queens \$2 each. Make money order, payable at Flint. Send for price list of bees (full colonies or by the pound.) Given foundation, white paper sections, hives, cases, feeders, etc.

ITALIAN - QUEENS - 1886.

Reared in full colonies. Satisfaction guaranteed. Untested, \$1; Tested, \$2. Queens also exchanged for colonies of black bees.

F. A. GEMMILL,
Harmony Apiary, Stratford

PURE * ITALIAN * QUEENS

By return mail Selected Tested of 1885, rearing \$1.50 each. Warranted Queens 90 cents each. Per doz. \$15. Every queen warranted first-class in every respect or money refunded. Don't fail to read my circular for 1886 sent to any address. Address,

J. F. WOOD,
North Prescott, Mass.

SECTIONS! SECTIONS!

4 1/2 x 4 1/2 made out of nice white basswood for \$1 per 1000. Sample free. Shipping crates 45c specially for comb honey. S. P. HODGSON Horning's Mills, Ont.

QUEENS BY MAIL

EARLY **ITALIAN**

In May, \$1.15 each; \$12.00 per dozen
In June, \$1.00 each; \$10.00 per dozen.
Tested in May \$2.50; in June and after \$2.00 each.

Safe arrival and satisfaction guaranteed. Special rates to dealers.
W. J. ELISON,
STATEBURG, SUMTER CO., S. C.

THE INVERTIBLE HIVE INVERTIBLE FRAMES,

Invertible Surplus Honey Cases, Entrance Feeders, Top & Bottom Feeders, Hive-Lifting Device, Honey Extractors, Wax Extractors, Comb Foundation, etc

My new Illustrated Catalogue is now ready, and will be mailed to all who apply for it. Address

J. M. SHUCK
DES MOINES IOWA

HONEY JARS.

Buckets and Tumblers of Crystal Glass, Corks, Tin Foil Caps, etc.
Hives, Sections, and Stanley's Extractors

Best Quality With Lowest Prices.

Address for prices, etc.

TYGARD SONS.

2119 S. JANE ST., PITTSBURGH, PA.
Mention C. B. I.

ITALIAN QUEENS

4 frame nuclei. Bees by the pound. Foundation and Bee-keeper's Supplies.
Send for illustrated price list to

J. & R. H. MYERS,
P. O. Box 94, Stratford, Ont.

Bees For Sale!

We will sell a limited number of colonies of bees—bred for business—being special strains which have been proven for their prolificness and honey-gathering qualities. Each colony will have seven to eight frames, and good laying queen.

Price per colony..... \$10 00
" " 5 colonies, each..... 9 50
" " 10 colonies, each..... 9 00
Smaller colonies at less prices.

Bees should always go by express unless they are personally cared for en route. Terms—are cash with order.

THE D. A. JONES CO., LTD.
Beeton, Ont.

IMPORTED QUEENS.

In April..... francs in gold
May and June..... 10 " " "
July and August..... 9 " " "
September and October..... 7 " " "

No order received for less than 8 queens. Queens which die in transit will be replaced only if sent back in a letter.

C. BIANCONCINI & Co., Bologna, Italy.

ITALIAN QUEENS 1886.

For Italian Bees and Queens in their purity for beauty and working qualities they are equal to any in the U. S. or Canada. Comb foundation 30c per lb. Untested queens \$1 each, \$11 per dozen; tested \$3.50 each. Queens reared in full colonies from egg; safe arrival and satisfaction guaranteed. Send for circular

T. S. HALL,
Kirby's Creek, Jackson Co., Ala.

A YEAR AMONG THE BEES.

A new bee-book of 114 pages, cloth bound. Price 75 cents. Sent postpaid by the aut. or.

DR. C. C. MILLER, Marengo, Ill.



"THE GREATEST POSSIBLE GOOD TO THE GREATEST POSSIBLE NUMBER."

VOL. II. No. 15. BEETON, ONTARIO, JULY 7, 1886 WHOLE No. 67

OUR OWN APIARY.

SHIPPING CRATES FOR THE COLONIAL.

WE are just making six hundred comb honey cases for the Colonial Exhibition, for Mr. Corneil of Lindsay, and they are certainly the neatest, lightest, and most perfect comb honey case that we have made yet. Mr. Corneil's sections are about 4 by 5 inches, and twelve of them take quite a large case. Yet fancy it only weighing about three quarters of a pound, and then stronger than is really necessary. If our English friends should mistake them for ladies' fancy work-boxes, it would not be surprising. We do not know whether Mr. Corneil intends to outdo all others in this line, but he certainly has made some very sensible improvements, and it seems to us, that the old fashioned, and cumbersome cases, made of such heavy materials, will be things of the past as soon as they are put in competition with these.

It would not be fair for us to describe fully his case, without his permission, but those intending to exhibit at the Colonial would do well to prepare similar cases, even though they pay Mr. Corneil a royalty. They must be made of the best material possible, and it requires superior machinery to manufacture them properly. They are so light that samples could pass through the mails, when put up in the flat. If friend C. will permit it we shall be glad to describe them in a future issue.

SEALING JELLY TINS.

Here is a new way to seal jelly glasses, with tin tops. Have a dish with hot wax: the wax may be kept at the proper temperature by allowing dishes containing the wax, to float in boiling water. Then take the jelly glasses, invert them, holding them inverted, and dip them into the wax, just

down to the rim, about $\frac{1}{4}$ of an inch; the wax coats the outside and top of glasses, but not the inside, for the reason that the air prevents it, besides if it is held in the wax a short time the heat expands the air, causing the wax to settle down in the centre under the glass, so a hollow may be seen in the wax under the glass when the lid is warmed and pressed on. It not only makes it air-tight at sides, but the wax on rim of glass fits tight against the lid, thus sealing it nicely. Try it and see if it does not please you. These packages are becoming so popular we find them in great demand.

PUTTING IN FOUNDATION.

We have just tried a new system of putting foundation in shallow brooding frames. The frames referred to are the closed end frames, as made by Heddon, in his new hive. They are dove-tailed together at the corners so firmly that they can scarcely be pulled apart. Then we take the top bar of each frame and split it down the centre from end to end, with a very thin, fine saw. The saw ought not to be more than a 26 or 28 gauge. Then take a board larger than the frame either way. Place on it another board just the thickness of the inside of the frame and half as deep as the frame; then take half of the top bar, place it against the top end of it, then nail another piece against the half top bar an inch thick, then place two blocks about one inch thick at each end of the frame, this completes the boards for putting in the foundation.

We thus have half the top bar lying in a stationary position and all on the same plane. We then lay our foundation on it pressing it up against the inch piece. The other half of the top bar is on top of the foundation tightly up against the inch piece. Two fine wire nails $\frac{1}{4}$ of an inch in length driven through the divided top-bar and through the foundation, holds the latter in place, and

that position is exactly in the centre of the frame. The whole work may be performed in one-tenth of the time that it takes to wire a frame, and so far as we can see yet, is equally as good for all ordinary purposes.

CLIPPING QUEEN'S WINGS.

We are asked by Mr. S. Corneil, of Lindsay, Ont., to describe the best method of clipping queen's wings, and here is the way we do it: If we remember aright it was Prof. Cook who told us how to do it; however, the method is not original. Catching the queen by the wings with the thumb and first finger of the right hand, and holding the thumb and first finger of the left hand together, allowing the queen to crawl over the points of the fingers. As soon as her feet are between the thumb and finger, close them slightly, thus holding her by the legs. Her body will remain almost motionless while she is trying to withdraw her legs; in this position her wings may be clipped with a pair of sharp pointed scissors. We always carry a pair for the purpose. We do not believe in cutting the wing too square and leaving only a stump. By passing the scissors down lengthwise and clipping the inside and thinner part of the wing off, and leaving the outside it does not disfigure the queen and is quite as effectual.

This will also be an answer to R. H. Smith, of Ealing, who asks "what is the best time and what the best and safest mode of clipping a queen's wing?"

FOR THE CANADIAN BEE JOURNAL. HONEY BOARDS.

REFERRING to your "Own Apiary" page 245, where you illustrate a queen-excluding honey-board of combined wood and metal surface, I will say that we are experimenting on an extensive scale with these boards. The idea of metal strips being let into grooves in the sides of our honey-board slats, having originated with at least four different persons, a year or more ago. I may name Dr. G. L. Tinker, who wrote about it not long since, C. E. Boyer, my foreman, W. Z. Hutchinson and myself, neither being aware of the other's device and all giving it to the public. Here we are using it as follows: We make our wood slats the same width and thickness as ever, leaving the spaces between them the same three-eighths inch, and slide in metal strips having one row of openings only and these strips we get made to order, with their edges all smooth and whole, and I cannot see how smooth edges are secured by cutting strips containing "two rows" of openings, any more than strip of only one row, which leaves the jagged edges, which work just as well in the boards, but are more trouble to insert. My experience and observation with bees, fully convinces me that one row of openings over

the centre of each top bar, below will give far more than ample passage room for the strongest colonies. I will tell you why I object to using metal strips wide enough to contain two rows of openings; it necessitates, as in friend Hall's case, five-eighths space between the slats. Now, if the bee-space is right between the surfaces of the slats and the surfaces above and below them, of course it is about one-eighth of an inch larger between the surfaces of this metal and the surfaces above and below it. I think we would be more apt to be troubled with brace combs where we used two rows of openings, than where we used one, as I have it. I am not sure but quarter inch between the slats would be better than our three-eighths. I can tell at the close of this season. I have used brood-frames with top-bars three-eighths inch thick, and varying in width from thirteen-sixteenths, up to one and one-eighth inch, and I have found brace combs built between their edges to a greater extent in proportion as the bars were wider and the spaces narrower; but this kind of bracing is between the edges of the bars, and not between their surfaces and other surfaces above and below them. In testing some thirty all-wood queen-excluding honey-boards, made so by widening our quarter inch slats till the spaces between them were the same as metal openings, in width, we were astonished to find that the bees built comb in these spaces till two-thirds of the passage way was stopped. We tried them two seasons, realizing this and other disastrous results, and have discarded them entirely.

HEDDON'S HONEY BOARD.

"What is it?" I receive many questions like this. Will you kindly let me reply to many at once. An implement, machine or manufacture, may take its name from him who constructed, devised or invented it. A device may, or may not be an invention, and it is a question as to whether placing these strips of metal in grooves in the slots, can be called an invention or not, but whether it is or is not, it is certainly a device and preferable to nailing it on to one side as before. My honey-board contains two important features each of which performs very useful functions, and which I invented some eight or ten years ago. First. Arranging slats within a frame or rim, in such manner that one of their surfaces shall be even with one surface of the rim, while their other surface shall be bee-space lower than the other surface of said rim. This gives us a honey-board containing a bee-space within itself. The rim gives it solidity. When the slats are made as thin as quarter inch, as we make them. Second. Arranging slats, forming a honey-board, in such manner that the centre of each slat shall run parallel with, and

rest directly over the space between two brood-frames below, and the centre of the top bars below, shall come directly under the spaces between the said slats. Any honey-board that contains neither of these principles, is not a Heddon honey board, but one that does contain either of them, is. Extensive and repeated experience with these boards not only gives me the knowledge that their usefulness by far outweighs their cost and manipulation, but they are in no way, whatever, any detriment or hindrance to the bees and their work. You will notice that by fitting your hives and supers to a honey-board containing a bee-space, the same can be used without the honey board, all bee-spaces remaining as perfect as when used in connection with it. This honey board has never been patented, except in combination with my new hive as described in past numbers of this JOURNAL. It is used and highly prized by such producers as Dr. C. C. Miller, R. L. Taylor, W. Z. Hutchinson, Prof. A. J. Cook and scores of other equally expert bee-keepers, less known to the public. I am confident that it has come among us to stay.

JAMES HEDDON.

Dowagiac, Mich.

FOR THE CANADIAN BEE JOURNAL.

THE HEDDON HIVE CRITICISED.

PERMIT me to write a few words in reply to Mr. Heddon's answer on page 227 to my communication on page 190 C. B. J. about the new hive. First, I wish to repeat what I have said heretofore and which it seems that Mr. Heddon doubts, namely:—That I have no envy, or as he calls it bitterness, etc., but what I have said in my communication on the hive is purely and solely the conclusion (after seeing the hive) of my studies of the nature and habits of the honey bee the past eighteen years, just about the same length as Mr. Heddon has been at it, although I must admit that Mr. Heddon can at times make bee culture look a great deal better on paper than is possible or profitable for many bee-keepers, if put in practice. His late year's management of bees does not warrant all bee-keepers to follow him without investigating first, no matter how good and simple they may look on paper. There are not many bee-keepers who can stand to lose \$1800, or nearly all their bees, in one single year with Mr. Heddon's management and then tell us of our weak understanding of it. If this is true who will be very anxious to adopt it?

Mr. Heddon knows also that the pollen theory is a mistake, but will not acknowledge it and as he got stuck on it (by many undoubted facts

which appeared in the bee-papers) he will let Prof. Cook hold to the tail as that is a good way for him to get out. According to the writings of chemists it is not very likely that Prof. Cook will analyse the cause of bee diarrhoea "correctly" out of pollen. Chemists tell us that there are different stones which contain the same ingredients yet one is the best of fertilizers and the other is worthless. Different flowers analyse the same, one has a very fine aromatic and the other a very disagreeable and offensive smell. We have different mineral springs and lakes whose waters contain the same ingredients and yet there is a vast difference in their healing powers, which analysis do not show and the chemists acknowledge that they have not as yet reached that point of excellency to find a way to show it. There is as much unfolded in their line, as is in the apiary and the Creator of all things alone knows, though we all hope that we may yet find out the cause of bee diarrhoea, however my late years experience satisfied me that cold is undoubtedly the main cause. We heartily and cheerfully give Mr. Heddon praise and honor for such inventions and writings as are really practical and in accordance with the unchangeable nature of the honey bee. Of the many contrivances that Mr. H. has invented or recommended the section case stands at the head, which is, to my estimation, the best and most practical in use. The slotted honey-board is probably another good invention and many other contrivances which may be good, but I have no use for any of them and I defy Mr. H., if he can produce more and nicer honey with all of them (except the section case) than I can other things being equal, not forgetting to have the bees in the best possible wintering condition on natural food when the honey season is over, and not create suspicion on the customers by feeding sugar. If I am not mistaken Mr. H. is also the inventor of the sugar feeding, at least he advocates; it is a pretty way to buy sugar to feed the bees and let the honey lay high and dry in a store-room for a year or two. But I can not imagine what struck Mr. H. when he invented his hive, with which he splits the very best part of a colony of bees right in two and holds them apart with a lot of sticks on each side of that split. Mr. Heddon and every practical bee-keeper will agree with me, that this is the worst part about the hive and the one that will fulfill my prophecy. Every practical bee-keeper, too, knows that no better results can be obtainable, other than to keep the bees in such a shape as to have their brood nest as much of a form as is the cluster of a natural swarm when hanging quietly on a branch of a tree. It is natural for them in

the spring to commence brooding in the centre where clustered most and extend it in a circular shape until the hive is filled and towards fall they will cease brooding in the centre and we can not make them do otherwise if we desire the best results and have them comfortable in winter. Their stores will be partly around and above the cluster and these necessary conditions are cut off by the split and sticks above mentioned and if only half of the hive is used these conditions can not be had. I for my part have no use for any colonies which will have room enough in one-half of the Heddon hive, either summer or winter, as I can't see any profit in small colonies. The larger a colony can be kept the larger the profits and the less the expense and trouble in proportion. It is almost impossible to keep a strong colony of bees in a small brood nest through swarming season with or without queen cells they will desire to go. What good does it do to wait twenty-one days after swarming to move one-half of the hive and interchange it, will it not be filled with honey and pollen? and what good is it after so filled, or is it any advantage over other movable frame hives? The whole management looks like a vapor with a lot of unnecessary trouble and expense. The best illustration that I can give in comparison with the hive is a ten acre lot, outside of my farm of over 600 acres; these ten acres of excellent soil are on the Jumbo River bottom and in nearly the centre of the piece there is a sink hole of about one-half an acre, which contains water in the bottom of it, so it is impossible for a team to go through when plowing and working the field, and on this account it is a very inconvenient piece of land to work. The boys say that they could work a piece nearly as big again with pleasure, as to turn around on that hole all the while with dissatisfaction. The readers will notice that this illustrates the point.

Now, if I have said anything in this communication which is not in accordance with the theories of Mr. Heddon, I will beg pardon as I have given Mr. H. victory at the commencement, for him not to ridicule or sting me to death on paper in his next. Yours respectfully,

C. THEILMANN.

Thielmanton, Minn., June 28, 1886.

FOR THE CANADIAN BEE JOURNAL.

EMPTY FRAMES OR FOUNDATION.

MR. HUTCHINSON says he was much interested in query No. 75 on the above subject. I have just tried it again, which is the third season and will be the last I hope. His attributions to large brood-chambers are as far from facts as the sun is from rising in the west. I hived all my first

swarms this year on six empty frames to test it once more and ruined every colony, having to take out every frame from all such colonies without the size of your hand of worker comb in the whole business, and would have lost every colony amounting to \$200 or \$300 in hard cash, if I had not been a little skeptical. I am speaking with respect, but when it comes to my bread and butter it is time to "squeal." Neither am I advertising foundation for any one. I think I know what we are talking about and am not through, if need be. I will admit that Mr. Doolittle can get a little worker comb built in nuclei from young queens, but every one wants combs now, not next year. I much prefer full sheets below and starters in top stories, then the drone comb will be found before the colony is ruined.

CHAS. MITCHELL.

Molesworth.

We find that first swarms with old queens build more drone comb than second swarms. Although second swarms may be very strong they seldom build much drone comb until they have sufficient worker comb for an ordinary brood nest. We are fully convinced that full frames where extracted honey is taken is a decided advantage.

Read at R. I. Bee-Keepers' Convention.

PRODUCTION OF HONEY.

THE rooms of the Rhode Island Society for the Encouragement of Domestic Industry, 128 North Main Street, were filled by the members of the Rhode Island Bee-Keepers' Association and people interested in bee-culture yesterday afternoon, to listen to the reading of a paper entitled: "Bees and the Production of Honey," by Mr. W. O. Sweet, of West Mansfield. Previous to the reading Mr. C. W. Smith, Secretary of the Domestic Society, stated that the last meeting was omitted on account of the death of one of the members. Also that the meeting next Thursday would be addressed by Mr. James H. Gregory, of Marblehead, Mass., on the subject of fertilizers, after which he introduced Dr. Charles Wiggin, President of the Bee-Keepers' Association, who stated that the objects of the Society were to prevent as far as possible the adulteration of honey and to encourage bee-culture. As yet the Society had no regular place for meeting, and it was through the courtesy of the Domestic Society that the session was held at the present time and place. The President continuing said: It may not be generally known, but adulteration of honey has been practised, more or less, for a long time by unscrupulous dealers, who use cheap syrups and glucose to sustain their bees. It has interfered with the business materially.

and the bee-keepers' interests are injured by the practice in the same manner as the dairy interests are injured by bogus butter. Not only is extracted honey adulterated, but the comb article fares no better. The aroma and taste, however, will show its worthlessness to experienced honey buyers. Bee-culture to a great many is a fascinating and interesting occupation, as is shown by the remarkable progress made in the past few years. Glowing accounts had been given of wonderful yields in some sections by bee-keepers, but they were found to proceed from individuals having bees or bee apparatus for sale. At the conclusion of his remarks the President introduced Mr. Sweet, who said :

A colony of bees in complete working order consists of 15,000 to 40,000 bees. In all this multitude of industrious insects there is but one queen or mother bee, which is the only perfectly developed female in the colony, and the thousands of workers, as we term them, are imperfectly developed females or heater bees. With February the queen bee commences to lay a few eggs near the centre of the cluster of bees, first laying within a small circle in one comb, soon extending to two or three combs, and in twenty-one days from the laying of the egg the young worker bee appears.

In March the circle of brood increases quite fast and by April the maple and elm begin to bloom, then comes the first flow of honey. Within and without the hive the merry hum of the bee is heard, while load after load of the delicious nectar comes pouring in from the first flowers of spring. As the queen still enlarges the cluster of eggs extending from comb to comb she comes to one that has much larger cells which we call drone comb, and is for the purpose of raising several hundred drones or male bees. These neither work nor sting, but being possessed of a capacious stomach, are much disposed to eat and grow fat on honey, but their life is short, seldom over four months. The worker bee lives but three or four months during the time of flowers, while those reared late in the season live until spring, but none except the queen live to be a year old. The queen lives to be 4 or 5 years old, so we might compare the life of the bee like that of a populous city.

"Though little leaves on trees the race of bees is found,
Now green in youth, now withering on the ground,

Another race the spring or fall supplies ;
They drop successive and successive rise."

During the month of May, the season of fruit bloom, the queen is the most active worker in the hive ; hundreds and thousands of bees are hatching every day, while she is constantly

traversing the combs and depositing an egg wherever a bee has hatched and left its cell.

This is the time for the bee-keeper to be busy also, for as the wealth of the community begins to unsettle the kingdom, new hives must be ready for the swarms that are likely to issue, and more room given to the colony by placing on the boxes for surplus honey. By the month of June the colony is running to its utmost capacity, and if given plenty of room to store the honey and a good field where white clover is plenty within two or three miles, they will often show wonderful results. Natural swarming takes place this month, whereby the instinct of the bees leads them to divide off and form a new colony. By conforming to the habits of the bee this can be accomplished by artificial methods, which, if properly done, will be as successful as the natural process without waiting for that to begin, for where many colonies are located in one apiary, the intelligent bee-keeper can divide a large number in one day, thus saving much time and perhaps loss.

As soon as the bees decide on swarming they begin to construct queen cells. They are built point downwards instead of horizontal like the cells of the honey-comb, and from three or four to twenty in number are attached to the sides and edges of the comb somewhat like a peanut in shape. An egg is deposited in each of these queen cells, which remains three or four days when it hatches in the grub form and it is then fed with a white jelly-like substance prepared by the bees called, royal jelly. It is then sealed over in four or five days within the cell, and comes forth the sixteenth day a perfect queen bee, while the worker bee requires twenty-one days and the drone bees twenty-four days.

The month of July finds the hive teeming with bees, and almost filled to overflowing, while the queen is still laying eggs vigorously, for the mortality is great in the height of the season, and they literally work themselves to death. The young bee, on emerging from its cell, is rather a weakly thing, but it turns its time to good account, helping to feed the still younger bees in the larvæ state. After becoming a week or more old it takes the position of comb builder without serving any apprenticeship. Each one is a master workman from the start. It attends to this kind of work until old enough to fly, which is in about four weeks. When six to seven weeks old it becomes a honey gatherer for the rest of its life. During August the condition of the colony remains about the same, and September finds it active as ever, but the queen is now gradually diminishing the number of eggs, and with the bloom of the golden rod and wild asters,

the honey season is about over. Atmospheric conditions have much effect on the honey harvest throughout the season, for instance, when the wind is east little or no honey is scented in the flowers, while if the wind is in the south, with moist air, the flowers are again yielding honey. When we have occasional thunder showers then is the greatest secretion of honey. As the honey harvest from any particular bloom is always of short duration, the intelligent bee-keeper will study to make the most of it, so by using the honey extracted at these times, with plenty of empty combs on hand to fill, so as to save the bees time in building it, a large quantity of liquid honey is often obtained. Artificial comb foundation is now used by all progressive bee-keepers, for like the honey extracted it enables the bees to gain time in the storing of honey. It is claimed that a new colony of bees supplied with foundation when placed in a new hive at times of swarming will gain as much in two days as they would in eight days without it. The invention of comb foundation is said to be the result of German thought and Yankee ingenuity. Many suppose that honey-comb is being manufactured entirely and filled and finished by the hand of man. The most scientific experts in bee-culture agree in saying that it has not and cannot be done.

That honey is adulterated and put upon our markets for sale, there is not a shadow of a doubt, and it is well known that glucose has been fed to bees and carried by them into the comb and sealed over and then sold as pure honey in the comb; but this process is a dangerous experiment. However profitable at first, it will prove ruinous in the end, and if cane sugar is fed in the form of syrup in sufficient quantity to induce the bees to put it in the surplus boxes, it is liable to crystalize and become sugar again within the comb, and is only advisable in time of scarcity of blooms in order to keep the colony in good condition.

In October and November the colony prepares for its long winter rest. The queen stops laying eggs, and the bees do little else but fly out on warm days for exercise. The first product of the bees of importance is honey, the next is wax. This solid fat-like substance is secreted by the bees in little wax pockets beneath the wings on the under side of the body of the bee. It is always a subject of admiration, so fragile and yet so strong. There are four of these wax pockets on each side of the bee, and the first we can see of the wax it is in the form of little tumbler-shaped scales, white and very thin. A new swarm of bees has to consume about twenty pounds of honey to pro-

duce one pound of wax, and soon after hiving, a large part of the swarm hang in festoons and clusters several hours, waiting for the wax to form. When fully formed these wax scales are transferred to the mouth of the bee where, by the use of its jaws, it is moulded into that beautiful structure, the honeycomb, so wonderfully delicate that it is only about 1000th of an inch in thickness, and so formed to combine the greatest strength with the least expense of material and room.

Mr. Sweet at the close of his address said, in answering questions, that from 80 to 90° of heat were required by the bees to mould wax; a colony of bees with a healthy queen will never be troubled with moth; during very cold weather, even as low as 2° below, the temperature inside of a bee-hive is at summer heat; the first queen born in a hive, if satisfactory, reigns; all the others are destroyed by the bees.

The meeting was adjourned with a vote of thanks to Mr. Sweet.

FOR THE CANADIAN BEE JOURNAL.

HOW SHALL WE MARKET OUR HONEY?

I WILL not attempt to give size of package although I would like to put the limit at 65 lbs., but permit me to say, and I think in the interests of bee-keepers that the day for kegs has gone by. From what little experience I have with selling honey I want tins every time for a wholesale package. Honey granulates; hoops have to be driven off barrels open never to be properly readjusted, the honey soaks into the wood and means a loss, for these and other reason honey dealers prefer a tin. It may be light, it never soaks honey, if the latter granulates it can be liquified by placing the vessel in warm water. Tins made from good material can be used again and again if, when emptied of honey, they are carefully washed and dried; if not they will rust and become injured. The prospects are we may have a large honey crop, and those having it in the most saleable shape will have the advantage in disposing of it.

R. F. HOLTERMANN.

Brantford, Ont.

Friend H. is right in this matter of using tin packages for honey, and right, too, in insisting that the package shall not be over 65 lbs. We make our standard just 5 lbs. less. Our packages all run to 30 lbs. and 60 lbs.—the latter being called a full case and the former a half-case. In bulk, we handle and prefer a tin holding just 60 lbs.—this coincides with the size of our case for smaller tins, and the standard of quantities is kept intact. The Commissioners decided that the tins we make, with large and small screw-top, holding 60 lbs. should be used,

but that only 56 lbs. of honey should be put in each. The reason for this is that the English hundred-weight is 112 lbs., and each package will then be a half cwt. This will make it all the readier of sale, to have our weights agree with the markets for which the honey is prepared. We have a large number of them ready for immediate shipment.

FOR THE CANADIAN BEE JOURNAL.

AS TO HIVES.

WE are gradually getting away from the deep frame idea. Not even Mr. Jones' influence will long preserve it among us.

The pendulum is surely swinging to the side of the shallow frame. How far it will go and remain permanently is not so easy to state. Will it stand over the Langstroth, or pass by it and remain over one shallower still, or will it come back a bit and rest midway between the Jones and the Langstroth? I do not know and hence cannot positive say. But it seems to me that in Canada it will eventually be suspended just midway between Jones and Langstroth. Perhaps I am a little prejudiced here owing to my having for years had such a size in my apiary, and satisfactory results winter and summer from it. With this size we can raise comb honey on top, and for extracting a second story can be added, while for wintering there is still sufficient depth to allow the bees', forming that compact cluster to which, when space permits, they seem disposed.

I was considerably interested in your description of the "New Heddon Hive". In this the frames are shallow enough, but in our cool falls and springs I fear, that the joint in the middle of the brood nest will be fatal, as this cannot be made absolutely air tight. Then we had better have double walls. Too much warmth can scarcely be inside the hive—certainly not in April and May—months in which brooding must go on extensively if we are to have workers for the harvest in June and July. Now we cannot obtain as much heat in a single as in a double walled box.

Garafraxa.

We are not aware that we are exercising any influence at the present time in favor of either the deep or shallow frame. We are simply trying to follow in the wake of improvement and as far as possible advocate that which will bring the most dollars and cents to the pockets of our bee-keeping friends. Even yet we are not fully convinced which will have the preference. After a trial, however, we are already so cognisant of the advantages of the Heddon system that we shall use a large number of that style

J. R. BLACK.

this year. Thus far they have more than met our most sanguine expectations. We do not intend to decide hastily, but to let experience guide us in the matter. We have for some time been using the hive similar to yours, we suppose, with the Jones frame turned on its side, and we like it very much.

QUERIES AND REPLIES.

UNDER THIS HEAD will appear Questions which have been asked of, and replied to, by prominent and practical bee-keepers—also by the Editor. Only questions of importance should be asked in this Department, and such questions are requested from everyone. As these questions have to be put into type, sent out for answers, and the replies all awaited for, it will take some time in each case to have the answers appear.

BEES ROBBING CANDY FACTORIES.

QUERY No. 89.—My home apiary is but a short distance from two candy factories. In past years' before I had bees, for a few weeks in summer bees have troubled them and they have killed them with insect powder and shovelled them out by the bushel. Last year there was no such trouble. What would you suggest to prevent loss from this source?

DR. C. C. MILLER, MARENGO, ILL.—For the interest of both, prevent the entrance of the bees by screens.

JUDGE ANDREWS, MCKINNEY, COLLIN CO. TEXAS.—I cannot suggest anything for you to do,—the candy-man might gauze his factory.

DR. A. B. MASON, WAGON WORKS, O.—Try and make arrangements with the factories so as to put on screens to keep the bees out.

M. EMIGH, HOLBROOK, ONT.—Move the bees away or make arrangements with the candy men to use screen doors and windows.

O. O. POPPLETON, WILLIAMSTOWN, IOWA.—Make arrangements if it is possible to do so, to have the factory windows covered with wire screens.

PROF. A. J. COOK, LANSING, MICH.—Furnishing screens to doors and windows and some of the finest honey each year to the proprietor of the factory.

G. M. DOOLITTLE, BORODINO, N. Y.—Screen the factories or move the bees. Keep friends with the factories and it will go a long way toward overcoming the difficulty.

DR. DUNCAN, EMBRO, ONT.—Get the men in factory to put them out if they can and open the windows to let them out if they get in. To get them to do it depends on yourself how you treat them.

DR. J. C. THOM, STREETSVILLE, ONT.—If you cannot keep your bees out of the factories by

supplying them with wire screen protectors for doors and windows, remove your bees beyond reach of the factories.

ALLEN PRINGLE, SELBY, ONT.—I would suggest that you go to the candy factory people and kindly suggest to them the plan of putting up gauze windows and doors over those exposed in order to keep the bees out, and this to be done at your expense.

H. D. CUTTING, CLINTON, MICH.—I should have my doubts about the bees, being killed and thrown out by the bushel, unless I saw it myself. Let the parties owning bees club together and put screens to all doors and windows of the candy factories.

S. CORNEIL, LINDSAY, ONT.—Where bees are kept in town there is considerable loss about breweries and grocery stores at times when there is no nectar to be gathered. I know of no plan by which such loss can be prevented except by moving the bees to the country.

G. W. DEMAREE, CHRISTIANBURG KY.—If the candy factories were there before I was I would move my bees out of reach of them. If I was there first, I would get the proprietors to use wire cloth doors and windows to the factories. And under the laws of this state I would prosecute them for poisoning my bees.

J. E. POND, FOXBORO, MASS.—The only possible remedy I can suggest is to furnish wire screens for the windows and doors of the candy factories. These, if used, will prevent much of the loss, but some loss must be expected no matter what steps are taken to prevent. A few sections of nice honey presented to the proprietors of the said factories, will promote friendly feeling, and serve as a sugar coating for the pill.

BY THE EDITOR.—Have never had any experience but think we would give them wire screens or mosquito bars sufficient to protect them from the bees.

REGULATING ENTRANCE.

QUERY No. 90.—In regulating entrance to size and requirements of colony are you governed at all by whether bees are drumming (ventilating) at entrance? If it were possible would you prefer to have it so regulated that they would never be seen drumming or that they would always do it some?

DR. A. B. MASON, WAGON WORKS, O.—I. Yes. 2. Would prefer drumming.

M. EMIGH, HOLBROOK, ONT.—I have no objection to hear the bees drumming at entrance.

DR. C. C. MILLER, MARENGO, ILL.—I. Yes. 2. I don't think I should want to prevent it entirely.

O. O. POPPLETON, WILLIAMSTOWN, IOWA.—I would prefer to regulate entrances so that bees would drum a little, but that is impracticable.

G. M. DOOLITTLE, BORODINO, N.Y.—Unless the bees gnaw at the entrance, or cluster on the outside of the hive rest assured that their doorway is large enough.

S. CORNEIL, LINDSAY, ONT.—I do not mind a few bees fanning at the entrance, but if they show any inclination to cluster out, they need more room and more ventilation.

H. D. CUTTING, CLINTON, MICH.—No, but at the first indication of hanging out I raise the hive up from the platform about one-half inch with little blocks at the corners giving that space all around.

G. W. DEMAREE, CHRISTIANBURG, KY.—Yes. When many bees engage in ventilating the hive I enlarge the entrance till it is fully opened. Nothing pleases me better in early spring than to get my bees to "roaring."

PROF. A. J. COOK, LANSING, MICH.—When cold I keep them closed so as to prevent chilling of brood. When the weather is hot and the bees busy I open wide, and yet they ventilate. I guess they like to and I am willing to indulge them.

DR. J. C. THOM, STREETSVILLE, ONT.—I regulate entrance as to size according to the heat of the weather, and strength of the colony. I would ventilate if a colony were roaring and it were warm weather, the roaring or ventilating however, is chiefly for the purpose of evaporation of the watery parts of the newly gathered honey, necessary to the proper ripening of the same.

JUDGE ANDREWS, MCKENNY, TEXAS.—I. Yes, but I do not want either extreme—want to see drumming in hot weather, but not very vigorous drumming—that indicates that there is not enough cool air then being admitted; should they not drum in very hot weather, I feel sure they will be too cool on cool nights, as we have them in Texas even in midsummer. 2. Neither, as above foreshown.

J. E. POND, FOXBORO, MASS.—I expect to see bees drumming at the entrances, no matter what plan of ventilation is used. My aim is to prevent loafing as much as possible, and unless a cluster of loafers is found on front of hives I conclude

that "all is well," and "let them go it alone." If clusters do form I try to ascertain the cause; lack of ventilation being the principle one I find as a rule.

DR. DUNCAN, EMBRO, ONT.—I am governed by the weather more than the drumming of the bees—in very hot weather shade the hive from the sun and give them a large doorway, say three-quarter inch by 10 and you will have very little drumming or laying out on outside hives and they will work better, but they will drum some in hot weather any way.

ALLEN PRINGLE, SELBY, ONT.—In adjusting entrance to requirements of the colony I would not be governed by the "drumming," but by the outside temperature and the actual condition of the colony. The clustering outside the hive is the best indication to give more room and ventilation. Bees will "drum" more or less when honey is coming in freely no matter how much room and ventilation they have, and this has direct connection with the "curing" process.

By THE EDITOR.—We are governed by weather, size of colony, quantity of brood, etc.

SUNDRY SELECTIONS.

LEFT LOTS OF POLLEN AND WINTERED WELL.

F. MECHLENBACHER.—As I could not attend the Haldimand Bee-keepers' Association to give in my report of wintering, I will send it now. Went into winter quarters with 19 good, strong colonies on 7 to 8 combs of Jones' frame, and these were spread in due time to have them drawn out as you directed. Did not feed any last fall, either to stimulate or for winter stores, but left them with plenty of sealed, natural stores, and plenty of pollen—at least as much as they naturally saw fit to carry in, which I think was no harm but rather a benefit to them in early spring, in fact most of them had more stores than needed. Well, I lost none through the winter, but lost three in early spring, or at least had to double them up as their queens failed; wintered in clamp, and some of them were so strong the first of May, that they clustered largely on the outside below entrance of clamp; nearly all have cast their first swarms, some in May, yet never saw bees in better shape so early in the season.

Hoping that the coming season may be a fruitful one to all bee-keepers, that the busy bee with its musical hum, may lively visit the beautiful and innumerable flowers, and bring home the "golden nectar" in abundance, that all bee-keepers may rejoice.

Fisherville, Ont. June 14th 1886.

Are pleased to learn that your bees are all in such fine condition, and now that the honey harvest has commenced you should see that they do not lack room to store the precious nectar that is now being secreted in the flowers.

FLYING IN WINTER—GIVING WATER.

J. W. GARBER.—Where a person has but a few colonies of bees in cellar, do you think it advisable to allow them to have a fly after a couple of months confinement and put them back into cellar?

We would not give them a flight unless the weather was very warm. If they are perfectly quiet there is nothing to be gained by giving them a flight, at least in this locality. There are favorable days when they might be allowed to fly, say two or three weeks before you set them out permanently.

Do bees need water in winter? If so how is the best way to give it?

We have never found bees to suffer from want of water when they had plenty of liquid stores in winter repository, but for a few days before putting them out, if the atmosphere is very warm where they are, put a dish of water on the alighting board with a small lamp wick with one end in the water and the other in the entrance, or if they are clustered up between the frames perhaps you could use a similar device by being careful not to allow it to leak on the bees. Some have reported very good results from damp sponges; we have never given bees water in winter. Perhaps some of our friends who have experimented in that direction could tell us something about it.

HONEY SOURING.

If honey that has been granulated swells much while liquifying in a warm room is it a sure sign of fermentation, or will it always swell considerably?

We all know that honey when heated occupies a larger space than when granulated. Sometimes honey which has granulated becomes sour and when being liquified rises up much like yeast. We have known honey to remain granulated for twelve months, when warmed to rise over the top of can, and even drive the corks out of bottles in which it had been sealed. We attribute this to the honey's having been sealed before being properly ripened.

STORING HONEY.

After honey has been put in cans ready for market is it better put in a warm or cool place if both are dry?

We would prefer leaving it in a warm room with screw top off until the honey had been thoroughly ripened.

OLD HONEY.

Will honey that is two or three years old be-

come partially liquid and remain so?

It sometimes does, especially on the top, but if the liquid is poured off it will be found granulated below and not unfrequently to have an unpleasant taste.

WOOD FOR SMOKERS.

What advantage has rotten wood over sound for the bee smokers? I have no difficulty with dry soft wood if cut up into small blocks.

We have used both with success but found that the sound wood makes more heat in proportion to the amount of smoke, while the rotten gives forth more smoke and less heat.

SPRUCE FOR HIVES.

How would spruce do for single walled hives, where pine is scarce and high?

Spruce will do very well for hives where pine is not obtainable.

QUEEN NURSERY.

STEWART SMILLIE.—Regarding the queen nursery illustrated in your issue of March 31st page . . . (1) Are the cages all together in rows or can they be taken out separately? (2) Is the rubber band stretched from side to side and tacked to the frame or to the cages?

Bluevale, Ont., May 6, 1886.

(1) The cages can be taken out separately.
(2) The rubber bands are in the inside of cage next the wire, and are tacked to the cage. We sometimes have hundreds of queens caged in them, and they are such a convenience that we could not do without them now.

WIRING FOUNDATION.

A. E. JONES.—(1) Do you advise wiring foundation? If so, please explain the method of doing the work.

The top and bottom bars should be pierced, which may be done with a brad-awl. The wires should be about two inches apart. No. 30 tinned is the kind generally used.

(2) What would be the weight of wire required for wiring (100) one hundred Jones frames?

A one pound spool we think would be quite sufficient.

(3) Do you make the foundation thinner when wired? If so, how many feet to the pound extra?

The foundation might be used very thin, one-quarter or one-third thinner would answer very well.

(4) Can I obtain labels desired by ordering by the numbers in your label Price List of '85.

Bruce, Ont.

Yes.

IS OLD FOUNDATION GOOD.

P. W. RUSSELL.—(1) Is section foundation two or three years old as good as new?

It may be made as good by softening it in warm water.

THE PLACE FOR SECTIONS.

(2) Is the body of the hive better than the top for section honey?

OUR PLAN.

(3) How do you put the sections on the top? Do you set them in the half-story as they are, or do you have a rack for them? Please give your plan in full.

It is easier to take it from the top. Some use both systems, but in future, the reversible cases filled with sections supported by broad frames, will be used extensively.

(4) What do you charge for making brood foundation?

10 cents.

(5) Have you a machine for putting foundation in sections? If so, what is the price?

25 cents.

I am very much pleased with the C. B. J. I am always glad to see it come. I shall be glad to hear you tell us again about "Our Own Apiary"; it seems as if you were talking to us, it is always so plain and practical. My bees seem to be doing well. I have only four hives. I have not done any great things at bee-keeping yet on account of the poor summers and bad winters; though at times I am almost discouraged, I would not give them up for anything.

Charing Cross, March 12th, 1886.

GOOD WORDS FOR FRIEND PRINGLE.

A. WAGON.—Please find one dollar for my renewal for the coming year—1886. I like your JOURNAL splendidly. You can get anything you want in it. This is my second summer with bees. I have succeeded well, but the secret of it is I have a friendly neighbor, that is friend Pringle, of Selby, Ont. Now, Mr. Editor, what friend Pringle don't know about bees is hardly worth knowing. My bees all came through in good shape and to-day are up to swarming point, with one exception where the colony lost its queen. They have one a few days old now. White clover is in bloom here at present. Common red clover is just commencing to bloom.

Napanee, Ont., June 6, 1886.

HONEY DEW.

B. LOSEB.—Your correspondent on page 254, says he finds bees working on pine trees. I have seen the same on red cedar, in quantities on the boughs and rough bark so thick as to daub the hands and run down the branches of the trees, without the presence of aphides any more than flies or wasps. Sweets in the atmosphere are in keeping with nature's laws, as well as in the soil, where it must be taken up in great quantities by vegetation.

Cobourg, Ont., July, 1886.

P. S.—First sections taken off yesterday. Bees booming.

cts. per lb.; extracted buckwheat honey, 5 and 5½ cts. per lb.; extracted California honey, 5 and 6 cents per lb.; extracted Southern, as to color and flavor, 5 and 6 cts.

McCAUL & HILDRETH BROS.

CHICAGO.

Without any material change. White comb honey in one pound frames brings 16 cents; very fancy 17 cents. Dark is slow sale. Extracted honey 6 to 8 cents per pound. Beeswax 25 to 26 for yellow, market steady.

Chicago,

R. A. BURNETT.

DETROIT HONEY MARKET.

No comb honey in the market. Beeswax scarce at 25 cents.

Bell Branch.

M. H. HUNT.

NEW YORK.

We quote quite an improvement in sales of comb honey the past two weeks, and owing to the lateness of the season prices rule low. In consequence of the low freight rates from San Francisco to New York, many dealers in honey are availing themselves of the rates and shipping extracted honey to this market at prices ranging from 4½ to 5½ cts. per lb. This has already had its effect on stale goods. We quote prices as follows: Fancy white comb honey, 1 lb. sections, 12 and 13 cts. per lb.; fancy white comb honey, 2 lb. sections, 9 and 10 cts. per lb.; fancy buckwheat comb honey, 1 lb. sections, 9 cts. per lb.; fancy buckwheat comb honey, 2 lb. sections, 7 and 9 cts. per lb.; off grades, 1 and 2 cts. per lb. less; extracted white clover honey, 6 and 7

EXCHANGE AND MART.

Advertisements for this Department will be inserted at the uniform rate of 25 cents each insertion—not to exceed 5 lines—and 5 cents each additional line each insertion. If you desire your advertisement in this column, be particular to mention the fact, else they will be inserted at regular rates. Cash must accompany the adv t.

FOR Bees, Queens, or honey, we will not be undersold. Bees, full colonies, by the pound or nuclei. Queens, tested or untested. Address, ILA MICHENER, Low Banks, Ont.

ITALIAN, Albino, or Hybrid bees (full colonies), for good young road horse, improved poultry, or offers. A. E. WOODWARD, Grooms Corners, Saratoga Co., N.Y.

ADVERTISEMENTS

CARNIOLAN QUEENS A SPECIALTY

My apiary consists of 50 colonies, each with a Carniolan Queen fertilized by an Italian drone last season. I have no other bees. Untested Queens, safe arrival guaranteed, July, August, Sept. and Oct., \$1 each. Send for circular.

S. W. MORRISON,

Oxford, Chester Co., Pa.

J. W. GREEN, ALDERSHOT, P. O.

Manufacturer of Roots, Chaff and Simplicity Hives and Apiarian Supplies, Catalogue free, by sending your name or P. O.

A BIRD'S EYE VIEW OF BEE KEEPING

—BY—

Wm. J. Clarke

WILL BE READY IN ABOUT THREE WEEKS.

The Price is 25c., five for \$1.

Special terms to the Trade. It is Interesting, Readable and Practical.

JONES, MACPHERSON, & CO.,

PUBLISHERS, BRITTON, ONTARIO.

BEE-KEEPERS' SUPPLIES

Having just completed our Large Factory we are prepared to offer all kinds of Bee-Keepers' Supplies at

BED ROCK PRICES.

WE MANUFACTURE

5 Styles of Hives 6 Styles of Honey Extractors,
7 Styles, Foundation Etc., 2 Styles of Smokers
2 Styles Wax Extractors, "V" Groove, Section, Etc.

WE GUARANTEE OUR WORK FIRST-CLASS.

Liberal Discount on Large Orders.

Send a Postal Card for our Illustrated Catalogue

ASPINWALL & TREADWELL, BARRYTOWN, N.Y.

THE YUCCA BRUSH!!

BY MAIL SIX CENTS EACH.

I also manufacture a first-class article of Comb Foundation, and keep in Stock Sections, Honey Knives, Cane, Smokers, etc. Write for particulars.

W. W. BLISS,
Duarte, Cal.



Flat Bottom Comb Foundation.
High side-walls, 4 to 14 square feet to the pound
Wholesale and retail. Circular and samplestives

J. VANDEUSEN & SONS,
SOLE MANUFACTURERS,

SPROUT BROOK, MONT. CO N. Y.

Queen Bees and Nuclei.

Italian and Albino Queens bred from Northern mothers, equal to any in the United States, being hardy and superior for honey gatherers, as my surplus is stored largely from red clover. Three frame Nuclei a specialty. Vandusen and Given Foundation. Extra nice dovetailed white popular sections. Also one Apiary of 75 colonies of bees. Prices reasonable. Satisfaction and safe arrival guaranteed. Cash with order. Reference, Schenectady Bank.

A. E. WOODWARD,
GROOMS CORNERS, SARATOGA CO., NEW YORK

HELLO! LOOK HERE!

I manufacture the best comb foundation in Canada and after the 1st of July I will sell brood foundation at 48 cents per lb., and section at 58 cents per lb. Brood runs about 6 feet to the lb. and section 11 feet, until my stock is exhausted. 10 lbs. or over 1 cent per lb. less. Order now.

WILL ELLIS,
St. Davids, Ont.

50 COLONIES OF BEES FOR SALE.

ITALIANS, \$9. HYBRIDS \$8.

Also bee-smokers, honey knives, comb foundation, perforated metal and apiary supplies. Write for wants.
D. P. CAMPBELL,
Park Hill, Ont.

SYRIAN QUEENS

By return mail. Tested \$1.50 each, untested .75 cts., twelve for \$8; to Canada 10 cts. more each unless six or more are taken at one time.

ISRAEL GOOD,
Sparta, Tenn.

HOW TO RAISE COMB HONEY.

An illustrated pamphlet, *just out*, by Oliver Foster, describing improvements in methods resulting from 10 year's practical work and extensive experiment. Price 5 cents. Send also for free circular of Italian bees and queens, bred for honey and for sale. The "Adjustable" Honey Case, and other standard supplies for the apiary. Address

OLIVER FOSTER,
MT. VERNON, LINA CO., IOWA.

QUEENS. 1886. QUEENS.

Bred from Imported Mothers. Two, three, and four frame nuclei. Safe arrival and satisfaction guaranteed. Send for price list. Address

FRANK A. EATON, Bluffton, Ohio.

FARMERS BUY THE CELEBRATED LARDINE MACHINE OIL, —AS IN—

EXCELS ALL OTHERS.

Manufactured solely by

MCCOLL BROS.,
Toronto.

ESTABLISHED MAY 1ST, 1883.

The * American * Apiculturist,

A JOURNAL OF 82 PAGES DEVOTED TO

PRACTICAL BEE CULTURE

SEND FOR SAMPLE COPY.

We also deal in first-class supplies, and under the direction of Mr. Henry Alley, we run the largest queen rearing apiaries in the world. Circular and price list free Address

AMERICAN APICULTURIST

Wenham, Essex Co. Mass.

ESTABLISHED 1855.

BEE SWAX HEADQUARTERS.

We have constantly on hand a large stock of Domestic and Imported Bee-wax in original shape, which we offer to manufacturers of Comb Foundation at lowest prices. We guarantee all our beeswax absolutely pure. Write to us for prices. Address

R. BOKERMAN & WILK.

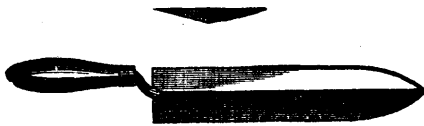
Beeswax Bleachers and Refiners. Syracuse, N. Y.

BEAMS OF LIGHT.—A new publication devoted to Bee-keeping and Poultry-raising. A number of the leading, most practical and successful Bee and Poultry-Keepers have already been secured as regular contributors. Its principal aim will be to advance progressive ideas upon the various topics of modern scientific Bee-Culture and Poultry-Raising. Subscription, 50 cents a year. Sample copy free.

J. J. MARTIN & CO.,
North Manchester, Indiana.

HONEY KNIVES.

We have just to hand a large shipment of honey knives from the makers, Lockwood Bros. Sheffield, England. These are undoubtedly the finest we have had, and yet, being the most perfect in shape and neatness of manufacture.



These Knives are made of the Finest Razor Steel

Ebony Polished Handle, mirror polish\$1 35
Ebony Polished Handle, glazed polish..... 1 15
Wood Polished Handle, glazed polish..... 90
If by mail, add 15c extra for each knife.
THE D. A. JONES CO., LD., Beeton

WHAT EVERYBODY WANTS.

—THE—

CHAMPION EGG TESTER.

PRICE, 50 CENTS.



Use it at home, everywhere. Take it with you in your pocket when buying eggs. Save money and trade. Bad ones are seen at a glance. For incubating purposes they are far superior to anything out—durable, nice form, and will last a long time.

THE CHICK'S HEART can be seen beating through the shell in three days, and dead ones are plainly noticeable. After eggs have been under a hen or incubator for five days, the unfertile ones should be removed. This can be done by using an Egg Tester

We will send one of these Egg Testers free to every person sending us \$1.25, the price of one year's subscription to the "POULTRY MONTHLY," the best magazine of its kind. If you have already paid your subscription, induce one of your neighbors to subscribe, mail us the amount (\$1.25) and we will send you the Egg Tester free of charge for your trouble. Send for Free List of Poultry Supplies. Address.

THE POULTRY MONTHLY,
P. O. Box 415, Toronto, Canada.

1881 **TAR HEEL APIARIES.** 1881
71-66.
ABBOTT L. SWINSON,
PROPRIETOR

Goldsboro. Wayne Co. N.C., U.S.A.

Price list of warranted American Albino Italian, (the best Bees in America) Syrian and Carniolan Queens

	For the Year 1886	April	May	June	July & on
Untested laying, each...	\$1 50	1 00	1 00	1 00	1 00
Untested laying, 1/2 doz..	8 00	6 00	5 25	5 00	5 00
Fine Tested Q's each...	3 00	2 50	2 25	2 00	2 00
Fine Tested Q's 1/2 doz...	15 00	1	12 50	11 00	11 00

My AMERICAN ALBINO ITALIANS, all show 3 yellow bands and many the 4th and 5th, with an equal No. of white silvery bands of fine fuzz, these are my specialty for 1886. Syrians and Carniolans are bred from imported mothers of Mr. F. Benton. The Syrian was specially selected to order, for producing the gentlest and whitest banded bees to be found in Syria. Nuclei—Add 75 cents for each L. frame of Bees and brood to price of queen. Bees by pound, same price each month as untested queens. Pelham foundation 45c. and 55c a pound. Untested queens by April 15th. Circular free.

NOW THEN ORDER.

Having determined to devote my time exclusively to the production of

PURE ITALIAN BEES & QUEENS

the coming season, I am enabled to offer the following prices:

Tested Italian Queens.....	\$1 00
Bees per lb.....	1 00
One Frame Nuclei with Tested Queen, 1/2 lb.	
Bees and 1 Frame Brood.....	2 00
2 Frame Nuclei, 1 lb. Bees & Tested Queen	3 00
3 " " 1 1/2 " " " " " "	4 00
4 " " 2 " " " " " "	5 00
1 Tested Queen and 1 lb. Bees.....	2 00
50 choice Colonies for Queen rearing for \$10 each.	

See what last season's customers say:

PENETANGUISHENE, CANADA.

Queen received all right. She is a noble looking queen and pleases me better than any I have yet received.

HARRY L. LEACH.

The queens are both giving satisfaction.

R. M. TAYLOR,

Port Dover, Can.

Those two queens I got from you are giving excellent satisfaction.

JNO. G. KNIDENGER,

Kilmanagh, Mich.

I am very much pleased with the tested queen I got from you last summer.

J. S. SEELEY,

Sodus Point, N.Y.

and hundreds of others.

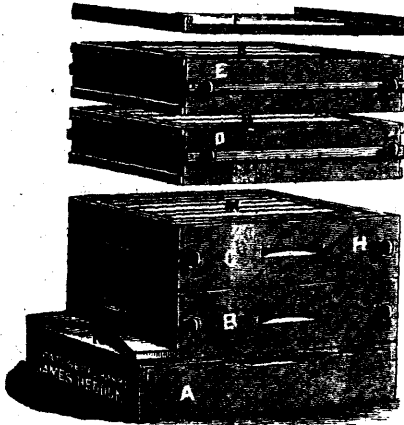
I will commence mailing soon after May 1st and of course first orders are first filled, so order now. Terms cash with order. Safe arrival, and satisfaction guaranteed in every case. Sample of live workers free by mail.

THOS. HORN.

Box 1691, Sherburne, N. Y.

THE NEW HEDDON HIVE

We have bought out the interest of the inventor in his Canadian patent, and we are in a position to make and sell the Heddon Reversible Hive, got up in any shape to suit the purchaser—either in the flat or nailed.



The engraving gives a good idea of the hive. The brood-chamber is in two sections; also the surplus arrangement, which may be interchanged or inverted at will. The cover, bottom-board, and top and bottom of each sectional case has one-half of a regular bee-space, so that the surplus cases with the sections may be placed between the two brood chambers, or the latter may be transposed or inverted—in fact, all parts of the hive are perfectly interchangeable. The brood-frames will ALL be bored for wires.

A SAMPLE HIVE

includes the bottom board and stand; a slatted honey board; a cover; two 6-inch brood chambers, each containing 8 frames, wired; two surplus arrangements, each containing 28 one-pound sections, both with wide frames and separators, both of which can be interchanged or reversed at will. Price, nailed \$2.90; nailed and painted \$3.25. It is absolutely essential to order one nailed hive as a pattern for putting those in the flat together correctly.

HIVES READY TO NAIL.

We have arranged several different combinations in these hives, so that our customers may make a selection from the sample hive nailed without waiting for us to quote prices; in ordering ask for the number which you desire, and no mistakes will be made.

No. 1 consists of the stand, bottom-board, cover, two 6-inch brood-chambers, 16 frames with holes punched for wiring, and the slatted honey-board, price \$1.25 each.

No. 2 is the same as No. 1, with the addition of one surplus arrangement, containing 28 sections, with separators—interchangeable and reversible. Price \$1.75 each; without sections, \$1.60.

No. 3 is the same as No. 2 with the addition of another surplus arrangement, and sections

and is the same in all particulars as sample hive. Price \$2.30 each; without sections, \$2.00.

Those who wish the hives *without* the stand, or honey-boards, may make the following deductions from above prices: Stands 10 cents; honey-boards 7 cents. For extra brood chambers, with frames in flat, adds 45 cents each; and for extra supers adds 40 cents each. Separators of tin are included in these prices throughout. If separators are not desired, deduct for each super 4 cents.

DISCOUNTS IN QUANTITIES.

For 5 or more hives, 5%; 10 or more, 7½%; 25 or more, 10%; 50 or more, 15% off these prices.

THE D. A. JONES CO., (Ld).

BEETON ONT.

Beeton Printing & Publishing Co.,

FINE BOOK, JOB, & LABEL PRINTING.

Send for our FREE "Honey Label" circular. Printing furnished promptly, and neatly done. Estimates of "circular" and other work on application.

F. H. MACPHERSON,

3-t.f. Manager, Beeton, Ont

IF FRIENDS It you are in any way interested in

BEES AND HONEY.

We will with pleasure send you a sample copy of our **SEMI-MONTHLY CLEANINGS IN BEE CULTURE**, with a descriptive price-list of the latest improvements in HIVES, HONEY EXTRACTORS, COMB FOUNDATION, SECTION HONEY BOXES, all books and journals, and everything pertaining to Bee Culture. Nothing Patented. Simply send your address on a postal card, written plainly
A. I. ROOT, Medina Ohio

BEE-KEEPER'S GUIDE,

OR

MANUAL OF THE APIARY.

13,000 SOLD SINCE 1876,

The fourteenth thousand just out. 10th thousand sold in just four months. More than 50 pages and more than 50 costly illustrations were added in the 8th edition. It has been thoroughly revised and contains the very latest in respect to Bee-Keeping.

Price by mail, \$1.25. Liberal discount made to Dealers and to Clubs.

A. J Cook, Author and Publisher

State Agricultural College Michigan

STANLEY'S

AUTOMATIC HONEY EXTRACTOR.

The only self-reversing Honey Extractor known, will do double the amount of work of any other extractor. Send for new circulars, just out April 1st. Californians, send to Baker and Barnard, San Buenaventura, Ventura Co., Cal. Canadians, send to E. L. Gould & Co., Brantford, Ont. All others address

G. W. STANLEY, Wyoming, N. Y.

APIARIAN SUPPLIES

MANUFACTURED BY

W. T. Falconer - Jamestown, N. Y.

Are unsurpassed for Quality and fine Workmanship. A specialty made of all styles of the **Simplicity Hive** including the **Van Duesen-Nellis**. The "**FALCON**, **Chief Hive**, with movable upper story, continues to receive the highest recommendations as regards its superior advantages for **wintering** and handling bees at all seasons.

DOVE-TAILED SECTION.

Same price as one-piece. Also manufacturer of **VAN-DERVOORT FOUNDATION**. Dealer in a full line of **Bee-Keepers' Supplies**. Send for Illustrated Catalogue for **5c** - always reasonable. Ment. **Barnado Rev P**

I. R. GOOD'S PRICE LIST.

Italian Bees and Queens For 1886.

HAVING again located at NAPPANEE, where I expect to devote my entire time to the breeding of **PURE ITALIAN BEES AND QUEENS**, can also procure and furnish **SYRIAN BEES AND QUEENS** bred in my Tennessee Apiary. All queens warranted pure to name and untested Queens warranted purely fertilized.

- Six Warranted Italian Queens for.....\$ 5
- Twelve..... 9
- Single Queen..... 1
- First quality Sections.....\$3.75 per 1000.

I am up with my orders and expect to be able to send Queens by return mail from this on.

Bees by the pound same price as untested queens. Will also furnish all kinds of sections and hives at A. I. Root's price.

I. R. GOOD, Nappanee, Ind

DADANT'S FOUNDATION

is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color evenness and neatness, of any that is made. It is kept for sale by Messrs.

- T. G. NEWMAN & SON, Chicago, Ill.,
- C. F. MUTH, Cincinnati, O.,
- JAMES HEDDON, Dowagiac, Mich.,
- F. L. DOUGHERTY, Indianapolis, Ind.,
- CHAS. H. GREEN, Berlin, Wis.,
- CHAS. HERTEL, Jr., Freeburg, Ill.,
- E. L. ARMSTRONG, Jerseyville, Ill.,
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- E. F. SMITH, Smyrna, N. Y.,
- C. F. DALE, Mortonsville, Ky.,
- EZRA BAER, Dixon, Lee Co., Ill.,
- CLARK, JOHNSON & SON, Covington, Ky.
- J. B. MASON & SONS, Mechanic Falls, Me.
- J. A. HUMASON, Vienna, O.
- C. A. GRAVES, Birmingham, O.

and numbers of other dealers. Write for SAMPLES FREE and Price List of Supplies, accompanied with

COMPLIMENTARY

and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1883. We Guarantee every inch of our Foundation equal to sample in every respect.

CHAS. DADANT & SON,
HAMILTON Hancock Co., LL

1886. **ITALIAN QUEENS.** 1886.

Six Warranted Queens for \$6. Send for circular No circulars sent unless called for.

J. T. WILSON,
Nicholasville, Ky

E. L. GOULD & CO,

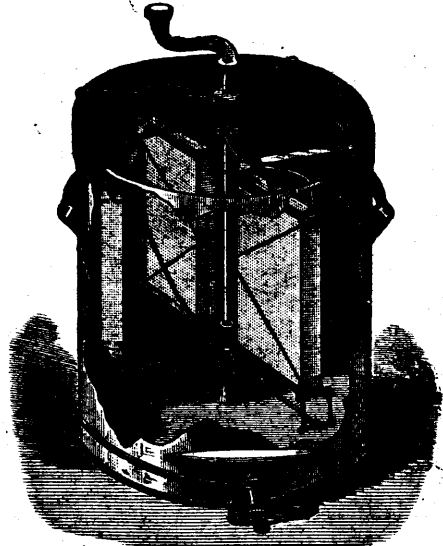
BRANTFORD, ONT.

Manufacturers of and dealers in a full line of

BEE KEEPERS' SUPPLIES.

Honey Cans and Glasses, Labels and Crates

Also Bees, Queens and Honey. Sole Manufacturers in Canada of



THE STANLEY AUTOMATIC HONEY EXTRACTOR

The only self-reversing, as well as the most perfect, complete and durable Honey Extractor known. It reverses the combs all at once by simply reversing the motion. There is no danger of breaking or time lost in handling combs when reversing. These machines have taken all first prizes wherever shown for the past two years. We have now made arrangements with the patentee and manufacturer, Mr. G. W. Stanley, of Wyoming, N. Y., so that we can ship them from our manufacturing establishment, Brantford, Ont., at about his prices. Every machine is warranted to work perfectly and to do more than double the work of other Honey Extractors taking the same number of combs. These Extractors are made to take 2, 3, 4, 6, 8 and 10 frames. The greatest demand is for the 4-frame machine. Send for free circulars and price list. Agents wanted to canvass every County in the Dominion.

FRANK W. JONES,

BEDFORD, QUE. AGENT FOR

Pelham, Vandervort and Root Foundation Mills

and Manufacturer of Apiarian Supplies.