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THE CANADIAN BEE JOURNAL

WEEKLY.

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

Vol. I. BEETON, ONTARIO, DECEMBER 2, 1885. Nc. 36

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ADVERTISING RATES.

All advertisements will be inserted at the following rates:

TRANSIENT ADVERTISEMENTS.

10 cents perline for the first insertion, and 5 cents per line for each subsequent insertion.

Space measured by a scale of solid nonpareil, of which there is twelve lines to the inch, and about nine words to each line.

STANDING ADVERTISEMENTS.

	3 MOS.	6 MOS.	12 MOS.
One inch.....	\$ 3.00	\$ 5.00	\$ 8.00
Two inches.....	4.50	7.50	12.00
Three inches.....	6.00	10.00	16.00
Four inches.....	8.00	13.50	20.00
Six inches.....	10.00	15.00	24.00
Eight inches.....	12.50	20.00	30.00

TERMS.—STRICTLY CASH.

Contract advertisements may be changed to suit the seasons. Transient advertisements inserted till forbid and charged accordingly.

PUBLISHER'S NOTES.

We will always be glad to forward sample copies to those desiring such.

JOURNALS will occasionally be lost in transmission through the mails. We are always ready to re-mail such when notified of the loss.

Subscriptions are always acknowledged on the wrapper of first number after receipt.

American Currency, stamps, Post Office orders, and New York and Chicago (par) drafts accepted at par in payment of subscription and advertising accounts.

We can supply Binders for the JOURNAL at 35 cents each post-paid, with name printed on the back in Gold letters.

Subscription Price, \$1.00 per Annum Postage free to Canada and the United States; to England, Germany, etc. to cents per year extra; and to all Countries not in the Postal Union, \$1.00

The number on each wrapper or address-label will show the expiring number of your subscription, and by comparing this with the Whole No. on the JOURNAL you can ascertain your exact standing.

North American Bee-keeper's Association at Detroit, Mich. on Dec- 8, 9, and 10, 1885- W Z. Hutchinson, Sec., Rogersville, Mich.

CLUBBING RATES.

THE CANADIAN BEE JOURNAL

AND "Gleanings," semi-monthly.....	\$1.80
"American Bee Journal," weekly.....	1.75
"American Apiculturist," monthly.....	1.75
"Bee-Keepers' Magazine," monthly.....	1.75
"Bee Keeper's Guide," monthly.....	1.75
"Bee Journal".....	1.80

TO CONTRIBUTORS

*Communications on an 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 thoroughly 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.

"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.

D. A. JONES & CO., PUBLISHERS,
Beeton, Ont.

NOW IS THE TIME TO INVEST.

One Hundred Colonies of Italian Bees, and 4000 pounds Extracted Clover and Basswood Honey for Sale. Also want to exchange Italian Bees for a 4 or 5 or 6 Horse Power Engine and Boiler, new or second hand or will pay cash for Engine and Boiler. All kinds of hives made to order. Write for prices.

JAMES ARMSTRONG,
Cheapside, Ont.

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 1/4 x 1 1/4 (ours), and 4 1/4 x 4 1/4 (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.

D. A. JONES,
Beeton, Ont

1-1f.

FARMERS BUY THE CELEBRATED LARDINE MACHINE OIL,

—AS IT—
EXCELS ALL OTHERS.

Manufactured solely by

McCOLL BROS.,
Toronto

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.

- A. H. NEWMAN, Chicago, Ill.,
- C. F. MUTH, Cincinnati, O.,
- JAMES HEDDON, Dowagiac, Mich.,
- DOUGHERTY & MCKEE, Indianapolis, Ind.,
- 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.,
- C. F. DALE, Mortonville, Ky.,
- EZRA BAER, Dixon, Lee Co., Ill.,
- CLARK, JOHNSON & SON, Covington, Ky.
- KING, ASPINWALL & CO., 16 Thomas Street, New York.
- C. A. GRAVES, Birmingham, O.

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

150 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. S. DADANT & SON,
HAMILTON Hancock Co., ILL

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.

120 Colonies For Sale!

Having too many colonies on hand I will sell the above number, all in movable frame hives, in first-class condition for wintering, and insured against fire. Purchaser can winter them in my cellar without extra charge. Address
J. B. LAMONTAGNE,
Box 964, Montreal.

BEES FOR SALE.

100 colonies Italian Bees for sale cheap! Price \$7 or five for \$30. Originated from Doolittle and Root stock. Are full of bees, in Jones hives, on frames from wired foundation, with twenty-five pounds of stores, and safe arrival guaranteed. References P. M., J. P., Mayor and station agent. Send for Price List of Hives and Supplies.
LEON E. DYER,
Sutton, P. Q.

GLASS JARS!

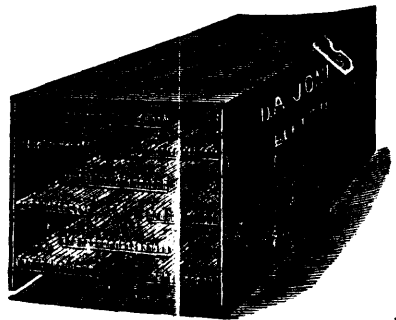
We have several gross of these jars ready for shipment y return freight or express, at the following prices:

	Gross.	Half gross
"Crown" brand" 1 Pint	\$14.75	\$7.50
" " 1 Quart	15.75	8.00
" " 1/2 Gallon	19.00	9.75

They are put up in half-gross cases—no charge for packing or cases.

D. A. JONES.

WINTER FEEDERS.



These are for feeding in winter, or at any other time when the weather is too cold to admit of feeding liquids

DIRECONS FOR MAKING THE CANDY.

Take pure pulverized, or granulated sugar—the former preferred—and stir it into honey, nicely warmed up, until the honey will not contain further additions. Allow it to stand in the dish until both are thoroughly mixed through each other, then place in feeders and set them on top of the frames, packing all around nicely to allow no heat to escape

Each, made up	...	30
Per 10,	...	75
Each, in flat	...	20
Per 10	...	1 75

We have a full stock on hand ready to go by return express or freight.
D. A. JONES, Beeton

THE CANADIAN BEE JOURNAL.

PUBLISHED BY

D. A. JONES & CO., BEETON.

WEEKLY - - \$1.00 PER YEAR

OUR OWN APIARY.

CANDY FOR WINTERING

MAKE pure ground or pulverized sugar, if this cannot be procured use the best granulated sugar; warm a sufficient quantity of honey to make the amount of candy you think you will require, (be careful that the honey is not allowed to reach boiling point,) then stir in pulverized sugar until there be no honey left to moisten further additions of sugar. Let the mixture stand in a temperature from 100 to 120 degrees for ten or twelve hours that the honey and sugar may become thoroughly incorporated, then place it in winter feeders according to instructions given on page thirty-five, issue number three of the JOURNAL. When the feeders are set on the hives precautions should be taken that no heat will escape.

PACKING FOR WINTERING IN CLAMPS.

We have been busy the past few days putting our bees into winter quarters. At time of writing the ground is frozen and covered with a light fall of snow. Half of the bees we are wintering outside are packed in dry chaff packing and the other half with dry sawdust; all are packed in clamps. The sawdust we are using this fall is the same we used last winter and having been kept under cover the entire summer is pretty well dried, and we anticipate even better results than last year. Damp sawdust is not as good to keep out the cold as dry, besides it causes a dampness about the hive which is anything but desirable. We have made no change in the thickness of the packing about the sides and bottoms of the hives

but we have placed more on top and we feel tolerably positive that we have them packed sufficiently warm to keep them in good condition through the winter. Where there is no more than six or eight inches of packing under the hives it is well to bank up the clamp to keep the frost from getting under and also to prevent the cold from reaching the bottoms of the hives.

TO KEEP MICE OUT OF THE CLAMPS.

Lay a small strip of metal down along the entrances to keep the mice from gnawing under, place another right over the entrances to allow just space enough for bees to pass in and out that they may fly when the weather is favorable. We are acquainted with some bee-keepers who have been in the habit of placing wire cloth over the entrances which we think is very objectionable.

PROTECTION OF ENTRANCES IN COLD WEATHER.

A board sufficiently wide can be suspended on hinges over the entrance, and when the weather is unfavorable this board is let down and closes the entrance; in fine weather, by lifting it up and fastening it against the clamp with a hook or button the entrance is left uncovered and the bees have a chance to fly.

PUTTING BEES INTO THE BEE-HOUSE.

The first row of hives we placed about one foot from the floor; on top of these we laid strips (2 x 2 inches) at front and back ends of hives, and another row was placed on top of these and so on until all were housed. The distance between the hives in the rows is from three to six inches; sufficient space is thus left for the moisture to escape from the hives through the porous cloth. The entrance blocks are all removed leaving full width at the entrance; ventilating pipe is freed from cobwebs to allow a free passage of air; and the slides to the chimney or top ventilators, which

carry off the surplus heat, are opened full width. We open the top ventilators because, in placing the bees in the house they become as a rule much disturbed and a greater amount of heat is generated than there would otherwise be. As soon as they attain their normal condition again the ventilating slides are adjusted to suit the requirements of the case. After this they require but little attention till the spring; we have frequently left our colonies without examination for a month at a time.

While moving the cloths which are covered with propolis we have a very good opportunity of examining each colony and we find a great difference in the way in which the colonies cluster—some being more compactly clustered than others. We would request bee-keepers to observe this particular when going over the hives for the last time then note the results in the spring. Another clue to successful wintering may thus be gained; note also the difference between the colonies with the combs close together and those spread well apart. By the way, we forget to mention that in carrying the hives to their winter quarters they should be lifted and carried with the edge of the frames towards you; the movement in walking will not then disturb the bees as much as otherwise, and this is an important point inasmuch as the shaking is apt to break the cluster and may cause the queen to be destroyed, and in other ways effect the wintering of the colony.

IN MEMORIAM—WM. W. CARY.

Born in Coleraine, Mass., on February 24th, 1815. Died on December 9th, 1884.

It affords me a melancholy satisfaction to review my long acquaintance with the late Mr. Wm. W. Cary, and to set out more fully than has yet been attempted, some of the important services he has rendered to bee-keeping. To do this seems to me the more obligatory, as he so seldom used his pen for the press that these

services might fail to be put on record.

After testing quite largely my movable-comb frames in West Philadelphia, in the bee-season of 1852, in the fall of that year I went to Greenfield, Mass., to introduce my hive where I was best known as a bee-keeper. Mr. Cary kept some bees in the adjoining town of Coleraine, and was among the first to take an interest in my invention. He was very fond of bees, and more than usually familiar with their habits—and as soon as he saw the working of the hive he believed that it would make a revolution in bee-keeping. For the six years that I remained in Greenfield, we were in frequent communication, such that in furthering my experiments his apiary was almost as much at my service as my own.

In the spring of 1860, I was invited by Mr. S. B. Parsons, of Flushing, L.I., to advise him how best to breed and disseminate the Italian (Ligurian) bees which he had recently imported. Finding that the person who came in charge of most of these bees, could not do the work that was expected of him, I advised Mr. Parsons to secure the services of Mr. Cary. To great energy of character and good business habits, he united long experience in the management of movable frame hives with an enthusiastic desire to see the introduction of those foreign bees made a success. From my intimate acquaintance with him, I could further assure Mr. Parsons that with all these requisities for the position, he possessed in as large a degree as any one I had ever known, that "highest fidelity" which Columella, nearly 2,000 years ago, declared to be an essential qualification for the superintendence of an apiary—and which he thought was very rarely to be met with. Is it much easier to find that now, than it was then?

Mr. Cary's work in Mr. Parsons' apiary fully justified his selection. While the foreigner, in a separate apiary established by Mr. Parsons, and furnished with just the same facilities for breeding queens, failed to rear enough even to pay for the black bees and feed that he used in his operations Mr. Cary supplied all the queens needed in Mr. Parsons' apiary, and filled all his numerous orders.

No better proof could possibly be given of the extent and thoroughness of his work, than the fact that 113 queens bred by him that season, were so carefully prepared for shipment under the joint supervision of himself and Mr. A. G. Biglow, that all except two of them were safely carried by Mr. Biglow from New York to San Francisco! Mr. B. had stopped over one steamer on the Isthmus of Panama to give his bees a cleansing flight, and one queen entering

the nucleus of another, both were killed. The colonies to which they belonged, were examined on their arrival at California, were each found to have reared another queen.

To appreciate fully the extraordinary success of Mr. Cary as a breeder and shipper of Italian queens, it needs but to be stated that during this very year but few queens came alive, out of the many sent from Europe, and that for years after, a large part of our imported queens either died on the way, or arrived in such poor condition as to be of little or no value. It will be remembered by some of the old readers of the *American Bee Journal*, that Mr. Cary was the first person to send a queen across the ocean, in a single-comb nucleus, with a few workers. She was consigned to my lamented friend, Mr. Woodbury, of Exeter, England, and reached him in excellent condition. Those who now receive the queens which are sent by mail from Europe, and even from Syria, should bear in mind that only after many and costly experiments has such admirable success been secured.

After his splendid achievements in Mr. Parsons' service, Mr. Cary greatly enlarged his own apiary, and placed himself in the front rank of reliable breeders of Italian queens.

When Dr. E. Parmly, of New York, imported a number of Egyptian queens, he entrusted them to Mr. Cary, having, as I know, as strong confidence as myself in his sagacity and fidelity. Mr. Cary first called my attention, in his own apiary, to the inferior appearance of the comb honey of those bees. It was capped in such a way as to look like honey damaged by "sweating"—so-called—after being kept in too damp a place. He was also the first to notice that Egyptian bees in extending their combs, built their lower edges almost perfectly square throughout the whole length—in marked contrast to the way in which black bees build them—and improving in this respect even upon the Italians. Although I imported the first Egyptian queen, Mr. Cary had the largest experience with this variety, and after a fair trial we both discarded them as very much inferior to the Italians.

While Mr. Cary was a great enthusiast in bee-culture, and always ready to accept every discovery and improvement, he was not carried away by plausible novelties or conceits. When near him, I always took peculiar pleasure in communicating to him all matters that from time to time were engaging my attention, and our occasional meetings in later years were highly prized. He seldom failed to detect any flaw in what was submitted to his judgment, and his deliberate "yes" or "no" had greater weight

with me in bee-matters than that of any other person.

Mr. Cary's location was inferior in honey resources to those who in this country have achieved the greatest pecuniary success from the keeping of bees; he was also quite lame from an accident in his youth, yet notwithstanding these and other obstacles, he built up gradually a large apiary. He was not only a strictly honest man, but a honorable one in all his dealings; and in cases of doubt he made it his rule to give his customers the benefit of the doubt, instead of claiming it for himself. Like myself he had the help of an only son in the management of his business, but happier in this respect than myself he was not called to lament his premature death.

Mr. Cary's interest in bees ceased only with his life. A few weeks before his death he was able to be out in his apiary, where he witnessed with much pleasure some novel arrangements for the safe wintering of a colony in the open air.

Samuel Wagner, Moses Quinby, Richard Colvin, Adam Grimm, Roswell C. Otis, Wm. W. Cary—they have all passed away! And probably no one knows or better appreciates more highly than their old friend who still survives to honor their memories, how much their various labors contributed to the splendid success of the movable-frame principle in America.

L. L. LANGSTROTH.

Oxford, O, Nov., 10, 1885.

Friend L. in writing states, that he expects to be at Detroit, and he says "I expect to take you by the hand there." We are glad to know that his health is much better now than it has been, and our earnest wish is that he may long be spared to assist us with his good council and advice.

FOR THE CANADIAN BEE JOURNAL.

WHEN DOCTORS DIFFER, &C.

MR. Editor—Your answer to my question re matting colonies to be wintered air-tight above is, "We would not make them air tight by any means," and you go on to advise such a covering as will retain the heat and permit escape of moisture. Turning, however, to the *JOURNAL*, page 470, I find the following declaration by Dr. Tinker: "After making various tests on the different plans of ventilation, we came to the conclusion that upward ventilation, as generally managed, let the heat of the cluster escape too freely upward and outward, that the force by which the heated air arose being impelled by a strong current of cold

air drawn in at the entrance was far greater than anyone had supposed. We then began placing the little wooden strips between the top bars of the frames on nearly all of our hives to prevent the escape of the heat." He then adds; "The above plan has been a great success, resulting in the loss of fewer bees, and a consumption of far less stores than any plan of upward ventilation we have tried.

Now, I have been wintering in cellar, generally successfully till last winter when I lost nearly all. And this winter out of twenty-four stocks, I concluded to leave seven on their summer stands. For this purpose I had made seven hives with an outer and inner wall four inches apart, and some six or eight inches space between top of frames and lid. Chaff was packed between the walls and in the upper space, before your advice reached me. I placed three sticks, about an inch square on the frames, next to this a porous cloth, next an oil cloth, next a cushion of leaves, then three thicknesses of paper, and over all then, of course, the board roof, fitting closely. The entrance to the hive is six inches by one-half, which was to be left open, protected by a board in the shape of a "lean-to."

In this my object, as may easily be perceived, was to prevent the heat from the bees going up, and the cold outside gaining admission.

In laying my plans thus I knew I had on my side the bee instinct, as ever on the approach of cold will they close all apertures, except the entrance. Then I had placed over them for some time oil cloth, and I was unable to observe any moisture about them. Hence I thought if bees remain dry, with no upward ventilation during a moist October and part of November they will do so throughout winter.

Besides this, I had occasion to visit the Ottawa Valley in the beginning of the present civil year, and during my stay there called on a man who keeps bees in a very primitive way. His method of wintering was to remove the bottom board, and suspend the hives to the ceiling of a room built of stone at the end of his dwelling. Here, certainly was no upward ventilation as the top of hive was of wood, an inch thick, nailed down tight, and covered inside with wax and propolis. I asked the owner as to his success in wintering, and his reply was "I seldom lose any" and this spring after the extreme cold especially in the Ottawa Valley, I was informed they came through safely.

Still I feel that your statement in advocacy of top ventilation is not to be lightly treated as it doubtless is based on a large experience. But "when doctors differ" what is a poorbody to do?

J. R. BLACK.

Garafraxa, Ont., Nov. 24, 1885.

We do not recommend a strong current of air through the hive but that the absorbents or porous coverings be so arranged as to allow the moisture to escape and yet retain the heat as much as possible and have no visible current to affect the bees. In hives without this ventilation we have known such a condensation of moisture to occur that the distillation ran down the sides of the hives freezing at the bottoms and blocking the entrances. Have also seen hives split open from top to bottom allowing the moisture to escape through the openings, such hives wintered splendidly. The moisture in the hive must be got rid of in order to make wintering successful. In those hives which were suspended from the ceiling the moisture would condense and settle down and escape from the underside of the hive, especially if there was warmth enough generated in the hive to cause a downward escape and that would naturally carry the moisture with it. If the bees have no more combs than they can cover when tightly clustered, the space in the hive will be so contracted by the division board that the heat will escape through the entrance and this will prevent the condensation of moisture among the combs. We do not say that *it is not possible* for the bees to winter without upward ventilation in fact we have known bees to winter well in so many different ways that we might take almost any plan and prove it a success but from our own experience and from all the information we can gather we are fully convinced that what we advocate is best. It is not possible to be at all times successful with any particular method; sometimes when we think things are just right the result is not as we expect and we are at a loss to know wherein our method has proved a failure. Probably the best method to adopt is that one which each finds the most successful after a long course of experiments.

THE DIFFERENCE BETWEEN SYRIAN AND HOLY LAND BEES.

J. W. GARBER.—Will you tell me in C. B. J. if the Syrian and Holy Land races of bees are the same. I see Frank Benton makes a distinction, while S. M. Locke & Co., speak as though they were the same.

Rockwell, Iowa, U. S.

There is, as Mr. Benton says, a slight difference; the bees vary slightly from Lebanon all the way around the coast to Egypt. We found those from Jerusalem and Bethlehem more like the Egyptian bees than those of Lebanon. If there are any bees crosser than the Egyptian we would not care to handle them. Those from Mount Lebanon are our favorites, after trying those of Palestine and Syria.

FOR THE CANADIAN BEE JOURNAL

THE TEMPERATURE OF LAST WINTER IN ONTARIO AND MICHIGAN.

It is stated by leading bee-keepers that the cold of last winter was so severe in the south-west part of the State of Michigan that many colonies of bees were literally frozen to death without any disease whatever. The loss of bees in Ontario was very heavy, particularly amongst bee-keepers who keep only a small number of stocks, but I have not heard of any case in which the bees were frozen to death without any sign of disease. A farmer, residing twenty miles north of Lindsay, left about a dozen stocks in box hives, on the summer stands, without any packing and lost none. I lost six out of 77, wintered on their summer stands. On examination I found the sugar syrup fed too late in the fall still unsealed in the combs, while what little honey there had been beneath the top bars was consumed. These circumstances with some evidence of dysentery, were I thought sufficient to account for the loss. If the bees were frozen to death in South-western Michigan, but did not perish from that cause in Ontario, the query naturally arises, what was the difference in the temperature in these two places. In order to obtain accurate information on this point I asked the Chief Signal Officer of the War Department at Washington, and the Superintendent of the Meteorological Service at Toronto to furnish me with extracts from their records, and through their courtesy I am enabled to place before our bee-keeping friends the subjoined tables which show at a glance, the absolutely lowest temperature in each month, the mean monthly temperature at each Station, and the difference from the average mean monthly temperature since the station was opened. An inspection of the tables shows that instead of the cold being greater in

south-western Michigan than it was in Ontario it was less severe by several degrees. There is no Signal Service Station in Michigan further south than Detroit and Grand Haven. The mean temperature at these stations was from 8 to 10° higher than it was at either Lindsay or Barrie, while during the lowest dips the cold was not as severe by from 18 to 20°. Since there were many cases in Ontario in which bees were wintered safely on their summer stands, in a temperature averaging 10° lower than it was in South-western Michigan may we not infer that the loss of bees at the latter place should be attributed to some other cause than being simply frozen to death.

Statement showing the absolutely lowest temperature, at Stations in Michigan and Ontario for December, 1884, January, February and March, 1885.

NOTE.—In this table the figures preceded by the minus sign indicate that the temperature was so many degrees below zero.

NAME OF STATION.	DEC. 1884	JANY 1885	FEB. 1885	MAR 1885	Avg for Win'r
	Deg.	Deg.	Deg.	Deg.	Deg.
Alpena, Mich	-10.0	-18.6	-23.0	-15.7	-16.8
Detroit, "	-6.1	-7.0	-11.6	-2.0	-6.7
Escanaba "	-14.1	-26.1	-25.0	-24.1	-22.3
Grand Haven	-12.0	-0.5	-7.2	-4.9	-6.2
Mackinaw Cy	-5.0	-24.2	-33.4	-21.3	-21.0
Marquette,	-15.9	Office burnt		-15.2	-15.6
Port Huron,	-10.8	-15.0	-25.0	-13.9	-16.2
Windsor, Ont	-8.8	-15.0	-20.6	-3.9	-12.1
Stratford "	-7.0	-21.8	-25.3	-21.2	-18.8
Simcoe, "	-12.5	-11.5	-22.0	-15.0	-15.0
London, "	-9.1	-11.3	-22.9	-15.0	-14.6
Woodstock "	-16.5	-15.8	-25.0	-24.7	-20.5
Toronto "	-13.3	-16.1	-14.9	-8.4	-13.2
Barrie, "	-27.6	-29.1	-28.1	-13.8	-24.6
Lindsay, "	-28.0	-26.0	-27.4	-18.2	-24.9
Ottawa, "	-28.3	-21.4	-26.9	-20.6	-24.3
Pembroke, "	-33.9	-25.4	-28.2	-28.7	-29.0
Desseronto, "	-20.8	-24.3	-22.2	-18.1	-21.4
Cornwall, "	-26.8	-22.0	-29.0	-26.1	-26.0

Statement showing the Mean temperature for Dec., 1884, and Jany., Feb. and March, 1885, at Stations in Michigan and Ontario.

	Deg.	Deg.	Deg.	Deg.	Deg.
Alpena, Mich	23.2	12.4	7.7	18.1	14.1
Detroit, "	30.5	23.0	16.6	26.2	24.1
Escanaba "	19.7	6.9	5.8	14.0	11.6
Grand Haven	28.4	20.7	15.0	23.4	21.9
Mackinaw Cy	25.1	12.4	7.7	12.0	14.3
Marquette	20.4	Office burnt		12.0	16.2
Port Huron	25.9	16.3	10.6	18.6	17.8
Windsor, Ont	25.8	16.9	11.4	23.2	19.3
Stratford "	23.3	14.6	7.4	14.7	15.0
Simcoe, "	26.6	18.0	10.1	19.1	18.4
London, "	25.3	16.7	9.4	17.8	17.3
Woodstock, "	24.5	16.6	14.0	16.9	18.0
Toronto, "	25.9	18.0	11.1	18.4	18.3
Barrie "	21.2	12.8	5.6	14.1	13.3
Lindsay "	20.1	13.5	5.6	14.1	13.8
Ottawa "	16.3	12.0	4.4	12.2	11.2
Pembroke "	14.4	9.5	5.0	10.8	9.9
Desseronto "	23.3	17.2	7.6	16.6	16.1
Cornwall "	18.0	14.4	5.4	13.7	12.9

Statement showing the difference of last Winter's Mean Temperature from the average at the following Stations, since observations commenced to be taken.

NOTE.—In this table the figures preceded by the minus sign indicate that the temperature was so many degrees lower than the average. Those having no sign indicate that the temperature was so many degrees higher.

	Deg.	Deg.	Deg.	Deg.	Deg.
Alpena, Mich		Recently opened			
Detroit "	2.3	-2.3	-10.5	-6.9	-4.4
Escauaba, "	-1.1	-9.7	-7.5	-9.9	-7.6
Grand Haven	-0.8	-5.3	-11.6	-7.2	-6.9
Mackinaw Cy		Recently opened			
Marquette,	-2.0	Office burnt	-12.9		7.5
Port Huron,	-1.1	-6.6	-14.2	-11.6	-8.4
Windsor, Ont	-0.7	-7.8	-14.2	-9.1	-8.0
Stratford "	-0.2	-5.0	-13.0	-11.2	-7.4
Simco "	0.1	-6.0	-14.2	-11.2	-7.9
London, "	-2.0	-4.1	-14.2	-11.6	-8.0
Woodstock "	-1.2	-3.8	-7.7	-11.4	-6.0
Toronto "	0	-4.9	-11.9	-11.3	-9.5
Barrie "	-2.5	-6.1	-14.8	-11.3	-8.7
Lindsay, "	-1.2	1.6	-14.3	-10.3	-6.1
Ottawa "	0.1	1.8	-7.4	-9.5	-3.7
Pembroke "	-0.7	-2.9	-9.1	-11.1	-6.0
Dessaronto,	-0.7	2.9	-8.1	-7.1	-3.5
Cornwall, "	-0.1	0.2	-11.2	-11.2	-5.6

Comparing last winter with that of 1880-1 we find that in the latter case the cold of December and January was very severe, and that it moderated in February and March while last winter December and January were only slightly colder than the average but in February and March the cold was intense. The excess of last winter's cold over the average was about double as much as the excess over the average in 1880-1.

The above tables will enable bee-keepers to form a correct idea of the degree of cold which must be met and overcome in different localities. Those who were successful in bringing large apiaries through last winter without much loss may feel confidence in their ability to save their bees in the future because such severe winters hardly occur more than once in a generation.

Lindsay, Ont., Nov. 24, 1885.

S. CORNEIL, ^{1st}

The above shows clearly that Mr. Corneil is bound to probe this matter to the bottom, and it is fortunate for us all that we have one who will take the interest and trouble friend C. has to get facts to enable us to see clearly that the bees can stand almost any amount of cold providing their stores are just what they should be, and they are put up in proper shape. We know that we can stand a greater amount of cold when the air is dry, and we have frequently suffered more from cold and

dampness in the fall of the year even though it was not freezing, than when the temperature was twenty degrees below zero and the air dry. Dry cold weather is preferable, in our opinion, to damp cold weather.

FOR THE CANADIAN BEE JOURNAL.

ORGANIZATION.

IN a former article I endeavored to point out the necessity of a more thorough organization amongst bee-keepers then exists at present in Canada. Since it appeared in the C. B. J. there have been several able articles on the same subject; which have brought to light some excellent ideas. Friend Pringle suggests that we call the new association "The Canadian Bee-Keepers' Association" instead of one of the names I proposed in my article. I do not know that it makes any material difference what we call it so long as it fulfils the office that it is intended to do. I will now attempt to describe the method by which I think we can obtain re-organization. In the first place, let the Secretary of the O. B. K. A. write to every member and ask them if they think it necessary to reorganize, and when they have sent in their answers the Secretary will be able to tell if the majority of the members think it necessary, and if the majority are in favor of it the time and place of meeting can be decided upon. In conjunction with the head Association let the local Associations co-operate and form a part of it. Let the membership fee be as low as it can be made—just enough to meet the necessary expenses. Let the fees of the local societies be not more than 75c. per member.

The Secretaries of the local societies should call their meetings about September so that they could make their report to the head Association. The report should contain the No. of colonies; the fall before; No. in spring; how wintered; No. of lbs. of honey produced, comb and extracted; and also the name of every member of the society, together with 25c. each to pay the Head Association expenses. That would leave 50c. per member for the local societies. By working in that way every member of the local societies would be a member of the head association, with all its privileges. Anyone who wishes to become a member of the head Association without joining local associations should pay about 50c a year. I think by working together that way we would be able to have a complete organization. I fully agree with friend Pringle remarks about offering taffy to bee-keepers to induce them to join the Association for they would

soon learn how to produce "honey on a stick" which would be much better than "taffy" for them. I would like to see a meeting called together this winter if the officials could see their way clear, and let us have one of the best meetings that we ever had.

EDWARD LUNAN.

Buttonville, Ont., Nov. 25th, 1885.

We think you are looking upon the Ontario Bee-Keepers' Association as though it were in a state of hibernation; this is not the case, the Association is alive though probably not so lively as it could be by a little exertion on our parts individually be made. The object we should seek is to make the association of greater usefulness; the affiliation of the local associations will be one step towards this end, and this matter has been "on the table" for the past two years, though nothing of any consequence has yet been the result. If it could be arranged to hold two meetings each year, the amount of good to be gained at the extra meeting would more than counter-balance the expense of attendance. The majority of the members do not care so much who the officers are, their main object being to derive as much practical benefit from hearing discussions on interesting and important topics as possible. If the selection of officers was relegated to a committee appointed for that purpose much of the time now spent in that way could be devoted to matters of more moment.

FOR THE CANADIAN BEE JOURNAL.

WILL ELLIS GOES NUTTING.

AND TELLS THE JUVENILES ALL ABOUT IT.

WELL, little chicks of the C.B.J., did you ever go nutting? Here where we live there are lots of hickory, walnuts, butternuts and chestnuts, but there are not so many chestnuts, as there were a few years ago; the trees are cut down for fence posts and rails. One morning, about two weeks ago, I concluded to try and get a few hickory nuts, so I and sister started with a basket, pole and axe about eight o'clock. We walked about a quarter of a mile and came to a tree just loaded.

I was soon up the tree and began beating the branches, when down they came. It was hard work as we had no frost and they did not come off as easily as they do sometimes. When I had knocked off all I could I got down and helped to pick up. When they were all gathered up there was a bushel and a half with the shells on; I put them on my shoulder and went in the timber and found a little walnut tree, just enough to fill up the bag, and when it was full I hid it in among some bushes and leaves. If the boys—that is some boys—had found them while I was absent I would have went home without them. We then started for the next neighbor's farm where there was a group of six or eight splendid trees, when I got there I saw the owner and asked him if I could have some of the nuts: he told me to take all I wanted and I was soon up another tree. They came off easier. The next one I climbed had not many on, but from these two trees I got a bushel with the shells on. Just then I heard the whistle in the quarry blow for twelve o'clock. I was a little over a mile from home but I threw them on my back and started and you may guess that bushel was heavy when I got home. I had to go away in the afternoon so about four o'clock I took the wheel-barrow and went up on the mountain and brought down the first bag. (Our house is in a valley.) So ends my first half-day's nut hunt. On the east, west, and south of our place it is all hills and hollows.

I was going to stop here but I have a little more to tell. A week ago to-day at noon I asked a neighbor if he wished to go for some nuts. He said that he would like to go but could not that afternoon, so I took a basket, bag, and hatchet, and started. I walked about a mile and found a small tree and got about a peck off of it. After hunting some more I came to a large hickory tree. Such a sight to behold; just as thick as they could hang. It was the largest tree of this kind I ever tried to climb but after a good deal of hugging and grunting I got up and hammered away for about an hour. If you had been there you would have been happy to see them rattle down like a hail storm. I thought there was as many down as I could pick up so I got down I took my basket and picked, and picked, and picked. Yes, I filled the bag; then I put the rest in a pile. When I had them all gathered I took the bag and carried it about half a mile, then left it and went home, had supper, got a bag and lantern, and myself and a neighbor went over to the pile of nuts. There was a bag chuck-full. We carried them where I left the other bag, and left them there too. This neighbor came by my place next day and brought them

over. I got home at 11 o'clock at night, tired and sleepy. I have since spread them out on the floor and now evenings, when not busy, I sit down and husk or shell them. I will have about a bushel and a half when shelled.

WILL ELLIS.

St. David's, Oct. 30th, 1885.

Friend Ellis supposes that there are some juvenile subscribers and readers of the CANADIAN BEE JOURNAL. There are too, lots of them, and a little story like the above will, perhaps, be eagerly read by them. We have never as yet inserted in the JOURNAL any matter foreign to bee culture, nor shall we do so to any great extent, but a little change occasionally will, we think, not be considered an intrusion.

NORTH AMERICAN BEE-KEEPERS' ASSOCIATION.

REDUCTION IN RAILROAD RATES.

Do not publish the notice that I sent you a day or two ago, saying that the promise of reduced rates had been withdrawn. The telegraph has been set to work, and the result is that we will have reduced rates just the same as though they had not been refused. The prospects are now quite fair for getting reduced rates all over Ohio, and *everyone* who is coming should send for a certificate, and if I do succeed in getting reduced rates in Ohio, I can send certificates even at the last minute.

W. Z. HUTCHINSON,

Sec. N. A. B. K. A.

Rogersville, Mich., Nov. 21, 1885.

A day or two ago we received from friend H. notice that the Railway Companies had refused to give us reduced rates, and the notice was already in type when along came the above. Of course we are more than glad that the arrangement has been made, and we willingly withhold insertion of the same.

FRIEND DOOLITTLE'S THIRTEEN YEARS' EXPERIENCE.

The net proceeds of the apiary of Mr. G. M. Doolittle, a noted bee-keeper of Borodino, N. Y., for thirteen years from an average of forty-six hives, was \$12,300, an average of \$946 a year. Mr. Doolittle thoroughly understands the business and gives nearly his whole time to it. He is a frequent contributor to the various bee journals and papers devoted to this interest.—*Lewis-ton Journal*.

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.

SUGAR PRODUCING MORE HEAT THAN HONEY.

QUERY No. 45.— We are told "that sugar contains heat-producing elements to a greater degree than honey." What are the facts of the case?

G. M. DOOLITTLE, BORODINO, N. Y. — Have not studied the thing up.

DR. DUNCAN, EMBRO.—As sugar and honey i.e. grape sugar, are the same chemically I don't think there is any difference.

P. H. ELWOOD, STARKVILLE, N. Y. — Liebig says 249 parts of cane sugar produces as much heat as 263 parts of dry grape sugar.

JUDGE ANDREWS, MCKENNEY, TEXAS. — I do not know what the facts are. There are no such things as "heat-producing elements," heat is a result of chemical action.

J. E. POND, JR., FOXBORO, MASS.—To give a satisfactory answer to this question would require more space than can be afforded. In order to explain the subject fully, it would be required to enter into a disquisition of the causes of heat, and the way and manner in which it is produced by the action of food. It is assumed that certain elements produce food when digested, but whether the changing of cane to grape sugar of itself is, I think, an unsolved problem. I should ask, "are we told correctly?"

DR. J. C. THOM, STREETSVILLE, ONT.—Sugar (C 12, H 22, O 11) is contained in all honey. In combination with other constituents, make a saccharine solution having the same proportion of cane sugar that honey contains weight for weight, and the heat production would be the same in both cases, but in the honey we would also have other heat producers of a lower order than pure sugar. Dextrose or grape sugar and levulose or fruit sugar. Thus, I would say that a solution of pure cane sugar of equal density with honey would be its inferior as a heat-producer.

PROF. A. J. COOK, LANSING, MICH.—I doubt it. If it is better fitted to nourish us then, yes; otherwise, no. A recent German master and experimenter in physiology says when we eat cane

sugar a kind of digestion transforms the sugar into a glucose-like sugar. Bees do the same. Is it not possible that honey is a better food than corn sugar; that the bees do for us what we otherwise would have to do for ourselves? I do not believe that starch glucose, honey and liver glucose are the same, though chemically identical.

G. W. DEMAREE, CHRISTIANSBURG, KY. — Who tells you so? It is not a generally admitted fact so far as I understand it that sugar is more heating in its nature than honey. Some persons who have had a purpose to serve, or some "theory" to bolster up, have made such assertions. But they are mere unsupported assertions. I believe that Mr. James Heddon, of the State of Michigan, first advanced the idea that sugar contains more heat producing elements than pure honey does, but the facts show that he lost a large number of colonies last winter that were fed on pure sugar syrup and were well protected with chaff packing, while other persons in his own State wintered their bees on natural stores without any loss, though they were no better protected than Mr. Heddon's were. Facts are worth more than mere theories and assertions.

ALLEN PRINGLE, SELBY, ONT.—There is no standard or invariable chemical formula of honey for the reason that it varies so much relatively in its constituents, and as a consequence, the richness as well as flavor and color are very different in different samples. The best the chemist and physiologist can do for us is to tell us that "honey is a concentrated solution of sugar, mixed with odoriferous, coloring, gummy, and waxy matters;" while Prof. Cook, "can only say that it is a sweet substance gathered from flowers and other sources, by the bees;" and he "cannot, therefore, give its chemical composition which would be as varied as the sources from which it comes." And even if we had an invariable formula of its constituents as well as one of best cane sugar the above question could not be answered authoritatively or with certainty until a physiological problem further back is solved, viz., How is animal heat produced in the living organism. Liebig's hypothesis that it is produced by the combustion in the blood of the oxygen taken in at the lungs and the carbon of the food is, perhaps, more generally received by scientists than any other. Without attempting therefore, to settle this chemico-physiological problem I will venture to express the opinion that pure, extracted, A number one honey stands at the very head of the list of the carbonaceous foods.

S. CORNEIL, LINDSAY, ONT. — Otto Heiner, F. C. S., F. T. C., Analyst to the British Beekeepers' Association, in his lecture on, "The Adulteration of Honey," says, "Sugar, whether taken in the shape of cane sugar, starch sugar, or honey, produces the same amount of heat and muscular energy." Liebig and Lethby make a difference between the calorific, giving a slight preference to the latter as a heat producing food. Besides the calorific of the saccharine matter of honey the pollen contained in it contributes to the generation of heat. Lethby says "nitrogenous matters assist the assimilation of the hydrocarbons, and in this way may help the development of heat without contributing directly to it." Dr. Parkes says, "The nitrogenous substance plays two parts, first that of the organic frame work, and second it may form a non-nitrogenous substance which is oxidised and transformed. The experiments of Voit, Lawes and Gilbert as well as other considerations, prove that the fat of tissues may be derived from nitrogenous substances." In the economy of the bee, therefore, pollen not only builds up the "organic frame" work of the furnace, but it furnishes a least a portion of the fuel. If no pollen is supplied there is not only lack of fuel, but the framework of the furnace falls into decay, through want of material to replace the waste by wear and tear. The vital powers are thereby weakened, there is inability to digest and assimilate the food, the heat produced gradually diminishes until death at last ensues. Frank Cheshire is clear on this point. He says, "When honey is replaced by sugar pure and simple, the absolute absence of albuminoids affects the bee prejudicially. Any properly conducted experiments would prove that severe and protracted cold could not be so successfully resisted by the bees if they were provided with sugar alone, and for reasons which every physiologist will understand." In confirmation of Mr. Cheshire's statement we have the experiment of Mr. Heddon during the "severe and protracted cold" of last winter, and on page 235 of the present volume of *Gleanings*, we have the post-mortem examination by Prof. Cook. He says, "I received bees from James Heddon, victims to the cold winter, which were fed entirely on sugar syrup. In these bees we find the sugar so entirely undigested that the characteristic sugar taste and odor is very marked." Mr. Heddon says seventy-five stocks succumbed to the cold without any sign of disease. There is evidence to show that the cold was not severe enough in his locality to kill bees in normal condition. The conclusion seems irresistible that these bees died from want of pollen.

DO BEES PROMOTE HEAT BY EXERCISE.

QUERY No. 46.—We read that "bees add to the heat-producing method of consumption of oxygenated food that of producing heat by exercise." In what way does exercise contribute to the production of animal heat?

G. M. DOOLITTLE, BORODINO, N. Y.—Am not posted in such matters.

H. COUSE, THE GRANGE, ONT.—By causing the blood to circulate.

JUDGE ANDREWS, MCKINNY, TEX.—Exercise results in waste of tissue—waste of tissue results in oxydation and heat is a result.

DR. DUNCAN, EMBRO.—As all material contains latent heat, it is thrown off or diffused by motion—or by the increased breathing and consumption of oxygen caused by motion.

ALLEN PRINGLE, SELBY, ONT.—Exercise contributes to the production of animal heat primarily by increasing circulation and respiration. The increased breathing brings more oxygen to the lungs and this means more combustion in the blood and the evolution of more heat.

PROF. A. J. COOK, LANSING, MICH.—Every action—whether of motion or functional generates heat. All functional activity causes the breaking down and chemical change of tissues which causes heat. Food nourishes and in so doing affects the bodily temperature. I question the scientific accuracy of the term "Heat producer" as belonging to any kind of food.

DR. J. C. THOM, STRETSVILLE, ONT.—Exercise causing waste of tissue, carbon and other products of waste accumulate in the blood, an increased amount of oxygen is required to unite with these products in the system by combustion in the act of which union heat is evolved. "Animal" heat is not different from heat elsewhere.

J. E. POND, JR., FOXBORO' MASS.—If the querist has ever slapped his hands together on a cold morning, I should suppose he would have found his answer. Exercise produces action of the muscles, causes the heart to expand and contract (or beat as it is called) more forcibly, and thus heat is produced. A test can be made easily, in either extreme hot, or severe cold weather. In the one case quiescence, and in the other the reverse produces the greater comfort.

G. W. DEMAREE, CHRISTIANBURG, KY.—I do not concur with the theory—for it is only theory

—that bees in the winter season resort to "exercise" to raise the temperature in the hive. It would be contrary to sound philosophy for them to do so, because they could not keep up the exertion perpetually without destroying their vital powers, and when they cease their exertions a corresponding depression is the legitimate result—the effect of which is worse than if no such exertion had been made.

P. H. ELWOOD, STARKVILLE, N. Y. — Leibig says "a greater amount of mechanical motion (of mechanical force expended in motion) determines a more rapid change of matter." Dr. Edward Smith found that in a lying posture the amount of air inspired may be represented by one part while in running at six miles per hour, seven times as much air is inspired. Then if seven times as much carbonic acid is expired seven times as much heat is produced. To this may be added the heat produced by the destruction of living tissues which is not much in the honey bee.

SUNDRY SELECTIONS.

SMALL CROP BUT IN GOOD SHAPE FOR WINTER.

W. L. WILSON.—My bees are in good shape at present. I only got a small crop this year—about 90 lbs. per hive, spring count, that is, over and above their winter stores, which are large. I only increased from 41 to 65. Sold and doubled back to 55. Have just finished packing for winter, and feel safe in warranting that they will winter safely.

Elmvale, Nov. 9, 1885.

A SUPERABUNDANCE OF POLLEN.

W. B. TERRY.—I am well pleased with the C. B. J.. I will have them bound at the close of year, they will make a useful book of reference, especially if you have it indexed. I have my bees snugly packed in *dry* sawdust on their summer stands. In handling the combs, I have not found one this year that had any pollen in it worth mentioning. Some other years I have found considerable pollen; one hive in particular I think was about $\frac{3}{4}$ pollen. I have often wondered what caused this strange freak, when other swarms had plenty of honey and a reasonable quantity of pollen.

Keswick, Nov. 17, 1885.

The probabilities are that the colony having the most pollen did the least breeding and the workers in this hive had evidently been gathering from a locality where pollen had been plentiful,

or they may have had a surplus of pollen in the spring and therefore did not consume as much. If the stores are all right we have no doubt but that they will winter successfully. By the way, the binders which we have had ordered for such a long time have at last arrived and we find that we can supply them post paid at 55 cents. With one of these you can file away each week's JOURNAL as it reaches you and thus obviate the risk of its being lost or destroyed.

EXTRACTED HONEY, AND HOW TO PROCURE THE BEST RESULTS.

E. LUNAN. — Please answer me in C. B. J. which is the best method to get the largest quantity of extracted honey, the horizontal or the tiering up plan.

Buttonville, Ont., Nov. 17, 1885.

The question you ask is a disputed one. Some bee-keepers claim that the tiering up system is the best plan, while others equally successful give preference to the horizontal plan. Probably becoming accustomed to each particular system is as much the reason of the preference as anything else. Some years ago a Mr. Harvey, of Salmonville, 16 miles from Beeton, extracted 615 lbs. honey and increased to four colonies from one, spring count, during one season on the horizontal plan and with deep frames. Mr. Chas. Mitchell, of Molesworth, took 612 lbs. from one colony. We have not heard that the above results have been equalled by the tiering up plan.

QUEENLESS COLONIES—CLOVER—ROBBING ETC.

L. MARSH—I was pleased with the sample copies of your CANADIAN BEE JOURNAL which you so kindly sent me. Last winter my bees all died, having shared the fate in common with nearly all bees in this locality. Last June I purchased six colonies in fair condition, being in quality about equal to the so called Italians. While bringing them home I had the misfortune to lose a queen, which I afterwards found to be a very serious one. However, I took a few frames of hatching brood from the other hives which greatly assisted

in keeping up the strength of the colony, which in due time, replaced their loss. I also lost one queen during her bridal tour. I did not, until some considerable time after, discover the loss. I then supplied them with a frame of eggs and one of hatching brood, ten days after. I destroyed all queen cells but two, a further examination, fifteen days after, found them still queenless and fearfully cross. The season being far advanced I doubled this unfortunate colony with the next weakest. I met with poor success in getting my bees to work in the sections. I therefore, confined myself to the extractor and took 420 pounds of extracted honey while clover bloomed as usual. I did not, however, see one bee at work on white clover this year, the raspberry having seemingly won their preference. I increased partly by natural and partly by artificial swarming to fifteen colonies. I am now going into winter quarters with fourteen colonies—1 on 4, 3 on 5, 5 on 6, 5 on 7 frames 9x17 and 10x13½ inches using division boards and filling up space. Four colonies suffered considerably from robbers notwithstanding my many attempts to guard against this unprincipled method of stealing. I now find them short of stores. I am of the opinion the best way to guard against this rascality is to keep only strong colonies. I used coal oil, closed entrance for three or four days at a time—used wet grass in front of entrance but seemed to obtain only temporary relief from these sources. (1.) Are the mammoth mignonette, the bokhara and the mammoth sweet clovers one and the same plant? if not please say the difference between them. (2.) About how many square inches ought the brood chamber of a two storey hive to contain in Canada? Does a hive made with bevel edge to receive brood chamber, cap, etc., contain any advantage over the common method employed in making the ordinary two-storey hive? Please say the meaning of "R. J. Candy" and how made? How shall I make candy for my four colonies and when and how ought it to be given? bees to be wintered in cellar. What per cent of loss did you suffer in wintering your bees last winter. I purpose giving in a future number of your JOURNAL a few remarks on the *Santfon* as a honey plant, also my experience in testing this plant as regards its adaptability to our Canadian climate.

Halloway, Ont., Oct. 19, '85.

If the colonies are strong there is little danger of robbing or difficulty in its prevention. When a colony has been once entered by robbers it seems to become disheartened and does not appear to make the same effort to repel

second and following attacks, even though the entrances be kept closed sufficiently that but one bee at a time can pass in or out. We think that what many call "the mammoth sweet clover" is Bokhara; there is however a difference between the latter and sweet clover.

Size to be used depends on the system of manipulation. When the second storey is used eight frames should give good results but six properly prepared for winter quarters will answer as well. In our two-storey hives which hold 8 frames, the frames are just the right distances apart for brooding purposes. The second story being of equal size with the brood chamber, would be all right with six frames if used for extracting purposes. We suppose that you have reference to the I. R. Good candy, which was first made by Mr. Good, hence its name. In this issue of the JOURNAL you will find recipe for the same.

We can hardly say what percentage of our bees we did lose, as we did not keep a sufficiently accurate account of the number put in and taken out of winter quarters, however it was not more than two or three per cent, and that was occasioned principally through colonies becoming queenless, and loss of nuclei which were doubled up too late in the fall to admit of proper clustering.

THE CANADIAN BEE JOURNAL.

D. A. JONES.

F. H. MACPHERSON

D A. JONES & CO.,

EDITORS AND PUBLISHERS,

BEETON, ONTARIO.

WEEKLY, \$1.00 per Year, Postpaid

BEETON, ONTARIO, DECEMBER 2ND, 1885

BINDERS—C. B. J.

The binders are here at last, and are very nice, though we regret that a little mistake has been made in the name on the back—The words are

"Canada Bee Journal" instead of "Canadian Bee Journal." However, we suppose we will have to make the best of that part of it, as it will cause a good deal of bother and trouble to correct the error. The price will be to subscribers 55 cents, postage paid. We have had these made to size to hold just one year's issues. Now, then, will all those who have intimated a desire for a binder drop us a card; we have them ready to go by return mail. Full directions accompany each binder.

BEE NOTES FOR DECEMBER.

In winter, when not occupied in manipulating our bees, we should take advantage of the leisure to inform ourselves upon all that relates to the advancement of our pursuit. Those who can do so, should attend the various conventions to be held, and take part in a free interchange of views, which constitutes the value of such gatherings. Those who can not attend, should study the practical works of the day, and compare the teachings of these with their own experiences. I expect to begin in the January number, a series of illustrated articles, which I hope may be of special value to our readers. Bees should require very little attention at this season. Set traps for rats and mice, if the wintering rooms are not proof against them. See that the eave-troughs and conductors are so arranged that water will not settle about the walls, and make the wintering rooms damp and musty. Beginners should decide upon the kind of hives, and boxes, and other appliances to be used during the ensuing season. It is all important that everything needed in the busy season, be prepared in advance, so that there will be no delay during the honey flow. The inexperienced are apt to neglect the necessary preparations until the articles are needed, and then to set to work in great haste to prepare them.—L. C. Root in *American Agriculturalist*.

THE COLONIAL AND INDIAN EXHIBITION.

When we made application for space for an exhibit before, it was with the understanding that if we shipped our exhibit immediately the honey harvest was over it would be in time. We have however just received from the Canadian agents notice that "all exhibits must be ready for shipment at the end of February, 1886, so as to be ready to place on board a steamship in the first week in March." As you are all aware there is no possibility of Canadian bee-keepers making anything like a creditable display with this year's honey, in fact the great bulk of the crop will have been disposed of ere

that. We have again written the agents explaining to them our position, and we expect a reply very shortly, anything in the way of a show in supplies could be arranged and sent forward by the time specified, but other than that, nothing could be done to uphold the magnificence and grandeur of Canada's honey display. As fast as we receive information regarding the exhibit we will give it to the public.

THE BEEKEEPERS' 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.

HONEY MARKET.

CINCINNATI.

There is a very slow demand from manufacturers for extracted honey, with a large supply in the market, while the demand is very good for clover honey in square glass jars. Prices for all qualities are low and range from 4 to 8 cents a pound on arrival. Supply and demand is fair for choice comb honey in small sections, which bring from 12 to 15 cents per pound on arrival. Good yellow beeswax is in good demand and arrivals are fair. It brings 20 to 22 cents on arrival.

CHAS. F. MUTH.

Cincinnati, O. Nov. 10, 1885.

BOSTON.

Honey is selling very well but prices are very low, and we are often obliged to shade our prices in order to make rates, We quote 1 lb. comb, 14 to 16 cents. 2 lb. comb, 12 to 14 cents, Extracted, 6 to 8 cents.

BLAKE & RIPLEY.

Oct. 21, 1885.

ADVERTISEMENTS.

In purchasing articles advertised in the "Canadian Bee Journal" please mention in what paper you saw the advertisement. Advertisers always wish to know which advertisements are most effective.

J. P. CONNELL, Hillsboro, Hill Co., Texas, can fill orders for **Pure Italian Queens** by return mail. Greatest Queens, \$1.00. Tested Queens, \$2.00. Send me your order and send for my circular of Queens, Nuclei and bees by the pound.

EVERY
Farmer, Fancier, and Poultry-Keeper

SHOULD SUBSCRIBE FOR

"The Poultry Monthly,"

The Best Magazine of its Kind.

Subscription, \$1.25 per annum. Sample copies, 12c.

SPECIAL OFFER.—We will send the "Monthly" for a full year for \$1 to all who mention the "Canadian Bee Journal." Send for price lists of Poultry Supplies.

BONNICK & HORRICKS,

P. O. Box 215,

Toronto, Ont

Five Per Cent. Discount.

Off all goods which may be ordered now for use next season we will give the above discount. This is to induce early orders and in case you need anything for this season, you could save freight charges and the discount by ordering ALL TOGETHER. Will be given till further notice.

D. A. JONES, Beeton, Ont.

COMB HONEY PACKAGES.

THAT HOLD SECTIONS OF HONEY 4 1/4 x 4 1/4 IN.



We call these in our price list "Honey Boxes for Sections." Each box has a nice tape handle, and when adorned with labels "A" or "B," which are made to fit this package, they look exceedingly attractive. The price for boxes is: per 1000, \$20.00; per 500, \$12.50. The price of labels will be, extra, per 1000, \$3.50; per 500, \$2.00; per 100, 45c.

In the blank space at the bottom of label (see cut) is room for name and address of producer, and these may be printed in at the following extra charge. Per 100, 30c.; each subsequent 100 to 1000, 12c.; per 1000, \$1.25. Sample boxes, labelled, sent on receipt of a 3c. stamp.

D. A. JONES,
 Beeton, Ont

FEEDERS!

Those who require to do feeding will find it to their advantage to have some of our

CANADIAN BEE FEEDERS

You can feed 15 to 20 pounds of syrup in one night, and there is no danger of robbing. The price is low, and the sale is very active. Our factory is running on them at the present time.

Made up, each 60
 " " per 100 45 00
 In flat, each 40
 " " per 100 30 00

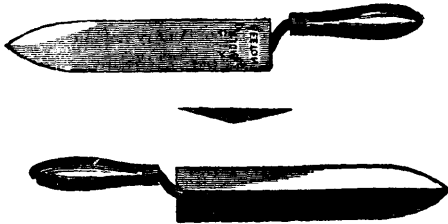
We can guarantee that they will give satisfaction.
 D. A. JONES, Beeton, Ont.

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

J. VAN DEUSEN & SONS,
SOLE MANUFACTURERS,
SPROUT BROOK, MONT. CO., N. Y.

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 made 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 50
 - Ebony Polished Handle, glazed polish..... 1 25
 - Wood Polished Handle, glazed polish..... 1 00
- If by mail, add 10c extra for each knife.

D. A. JONES, Beeton, Ont.



Electrotypes

We have them in stock, same as engraving, at 40c., postage 6c. They are good ones too.

D. A. JONES & CO.

Beeton, Ont.

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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

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

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Are unsurpassed for **Quality** and fine **Workmanship**. A specialty made of all styles of the **Simplicity Hive**, including the **Van Deusen-Nellis**. The "**FALCON**", **Chaff 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-DEKERT FOUNDATION**. Dealer in a full line of **Bee-Keepers' Supplies**. Send for Illustrated Catalogue for **1885**, Free. **Prices always reasonable**. Mention this paper.

Red Clover Queens by Return Mail.

I am now up with my orders, and can send queens by return mail. My queens are almost without an exception purely mated, and my bees worked just thick on red clover from the time it bloomed until the present.

J. T. WILSON,
Nicholasville, Ky

— TRY THE —

BELLINZONA ITALIANS,

And see for yourself that they are the best. Warranted Queens, bred from mothers imported direct from the mountains of Italy, \$1.00 each; six for \$5.00. Satisfaction guaranteed. Orders filled promptly.

CHAS. D. DUVALL,
Spencerville, Mont. Co., Md.

MUTH'S HONEY EXTRACTOR

Is second to none in the market. **Square Gear 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

CHARLES F. MUTH,
976 and 978 Central Avenue, Cincinnati, O.

BEE-KEEPER'S GUIDE, OR MANUAL OF THE APIARY.

11,000 SOLD SINCE 1876,

The twelfth thousand just out. 10th thousand sold in just four months. 2,000 sold the past year. 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 Lansing, Mich

FRIENDS If you are in any way interested in BEES AND HONEY.

We will with pleasure send you a sample copy of our **SEMI-MONTHLY GLEANINGS IN BEE CULTURE**, with 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