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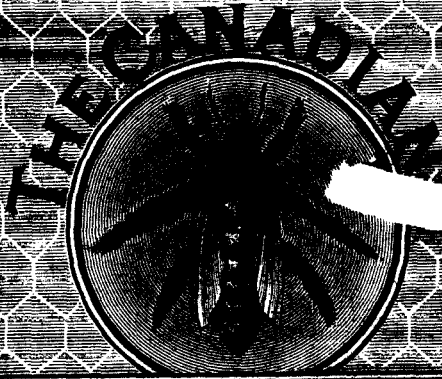
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VOL. IV, NO. 15

1888

JULY 4

PUBLISHED EXCLUSIVELY IN THE INTERESTS OF THE HONEY PRODUCER



JOURNAL

THE FIRST \$ WEEKLY IN THE WORLD

ONE DOLLAR PER YEAR

THE GREATEST POSSIBLE GOOD TO THE GREATEST POSSIBLE NUMBER

PUBLISHED BY
 THE D. A. JONES CO. LTD.
 BEETON ONT.

ADVERTISEMENTS

WE CLUB

The Canadian Bee Journal and.....		
Cook's Manual, cloth.....	\$2 25	\$2 00
A B C in Bee Culture, cloth.....	2 25	2 00
Quinby's New Bee-Keeping (cloth)	2 50	2 25
Alley's Handy Book (cloth).....	2 50	2 25
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A Bird's-eye view of Bee-keeping by Rev. W. F. Clarke.....	1 25	1 15

Books for Bee-Keepers.

We have prepared a series of pamphlets on special subjects relating to bee-culture, containing the best thoughts of our most practical bee-keepers, which we offer at very low rates, as follows:

1. QUEENS, And How to Introduce Them .10
 2. BEE-HOUSES, and how to build them, .15
 3. WINTERING, and preparations therefor .15
 4. BEE-KEEPERS' DICTIONARY, containing the proper definition of the special terms used in Bee-Keeping... .25
 5. FOUL BROOD, its cause and cure..... .10
- Or the whole five books, post paid, for..... .50

THE D. A. JONES Co., LD., Beeton, Ont.

BEE-KEEPERS' LIBRARY.

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

- "A YEAR AMONG THE BEES," by Dr. C. C. Miller Price, 75c.
- 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.
- BEE-KEEPERS' HANDY BOOK, by Henry Alley. Price in cloth, \$1.50.
- PRODUCTION OF COMB HONEY, by W Z Hutchinson. Paper, price, 25c.
- THE HIVE AND HONEY BEE, by Rev. L. L. Langstroth. Price, in cloth, \$2.00.
- A BIRD'S-EYE VIEW OF BEE-KEEPING, by Rev. W. F. Clarke. Price 25c.
- SUCCESS IN BEE CULTURE as practised and advised by James Heddon—price in paper cover, 50 cents.
- BEEKEEPERS' GUIDE OR MANUAL OF THE APIARY, by Prof. A. J. Cook. Price, in cloth, \$1.25.
- FOUL BROOD, ITS MANAGEMENT AND CURE by D. A. Jones. Price, 10c. by mail, 10c. otherwise.
- A. B. C. IN CARP CULTURE, by A. I. Root, in paper 50c.
- 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 \$50, \$1.00; per 100, 50c.

THE D. A. JONES Co., LD., Beeton.

Barnes' Foot Power Machinery!

See advertisement on another page. We have just arranged for the sale of these machines, and we can quote a price F.O.B. cars at Toronto (duty and freight paid thereto). On application we will forward catalogue and pricelist free.

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

PUBLISHERS' NOTES.

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

Send us the names of three subscribers with \$3 in cash and receive as a premium one C. B. J. Binder.

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

The CANADIAN BEE JOURNAL will be continued to each address until otherwise ordered, and all arrears paid.

Subscriptions are always acknowledged on the wrapper label as soon as possible 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.

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 any way. 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. Subscription Price, \$1.00 per Annum Postage free for Canada and the United States; to England, Germany, etc., 10 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.

ADVERTISING RATES.

All advertisements will be inserted at the following rates

TRANSIENT ADVERTISEMENTS.

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

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

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	3 MOS.	6 MOS.	12 MOS.
6 lines and under.....	2.50	4.00	6.00
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STRICTLY CASH IN ADVANCE

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

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THE CANADIAN BEE JOURNAL

AND "Gleanings," semi-monthly.....	\$1.75
"American Bee Journal," weekly.....	1.75
"American Apiculturist," monthly.....	1.75
"Bee-Keepers' Magazine," monthly.....	1.40
"Bee-Keeper's Guide," monthly.....	1.40
"Rays of Light".....	1.80
"The Bee-tive".....	1.45
"Beekeepers' Review".....	1.40
"Beekeepers' Advance".....	1.50

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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Headquarters in the West for Pure Italian

BEES & QUEENS.

Two-frame nucleus, untested queen, in May, \$2.50; June, \$2.25; after, \$2.00; 3-frame, in May, \$3.50; June \$3.00; after, \$2.50. With TESTED queen, add 50c. more. Bees, per lb., in May, 90c.; June, 75c.; after, 60 cts. Untested queens, in May, \$1.00; after, 75c.; six, \$4.00. Tested, in May, \$1.50; after, \$1.25. Write for circular of Bees, Queens, Sections, Foundation, etc. 5-9 mos. Address JNO. NEBEL & Son, High Hill, Mo.

FRUIT PRESERVED WITHOUT HEAT !

TIME, LABOR AND MONEY
SAVED BY USING THE

Perfect Fruit Preservative.

Fermentation absolutely prevented. Simple, Reliable, Harmless. PRICE 25 CENTS per box. Sold by Grocers, or supplied by

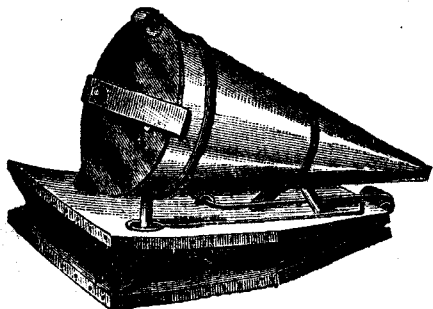
BOOTHE BROS.,

Props., TORONTO.

Or
The D. A. JONES CO. Ld.,
BEETON.

CLARK'S

COLD BLAST SMOKERS.



We are making these, with late improvements, and can forward them by mail or with other goods by return post. The prices are as follows

Each	With goods.	By mail.
6 at one time, each	50c.	70c.
	45c.	

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

COMB FOUNDATION !

At hard pan prices.

WILL. ELLIS,
ST. DAVIDS, ONT.

My 20th Annual Price List of Italian, Cyprian Queens and Nuclei Colonies (a specialty); also Supplies—will be sent to all who send their names and addresses.

H. H. BROWN,
LIGHT STREET, Columbia Co., Pa.



ITALIAN BEES AND QUEENS. Two or three Frame Nuclei or Full Colonies at lowest price. Every Queen bred from Imported stock and guaranteed second to none. Address

E. HEAL,
LINDEN APIARY,
ST. THOMAS, ONT.

COLONIES

Of pure Italian Bees in L. Heddon hives \$	
or shipping boxes.....	3 00
Tested queens.....	1 25
Untested "	75

C. WEEKS,
CLIFTON, TENN.

SEND US \$2.50

And we will send you a good serviceable man or boy

Nickle Keyless Watch,

And FOREST AND FARM for one year.

The livliest and Best Weekly Paper published in the Dominion. Send your address for sample copy and full particulars. Special terms to bona fide canvassers.

FOREST AND FARM,
CHAS. STARK, Publisher, 50 Church St., Toronto.

THE BEE-KEEPERS'

REVIEW.

For June is now out. The special topic is that of "Removing Queen near the Close of the Harvest." It is contributed to by such men as E. France, G. M. Doolittle, Prof. Cook, F. Boomhower, James Nip and Dr. Miller.

It also contains a long editorial in which the editor gives in detail, his experience in "feeding back" 13,000 lbs. of honey to secure the completion of unfinished sections. "Feeding Back" is to be the special topic of the July number, and contributions upon this subject will be gladly received. All such as are used will be paid for.

Price of the **REVIEW** is 50 cents a year. Sample free. Back numbers can be furnished.

THE PRODUCTION OF COMB HONEY.

A neat little book of 45 pages, price 25 cents. The **REVIEW** and this book for 65 cents. Stamps taken either U.S. or Canadian. Address

W. Z. HUTCHINSON,
613 Wood Street, Flint, Mich.

BEE-KEEPERS'

PRINTING.

We make a specialty of Apiarian Printing, and have unequalled facilities for Illustrated

Catalogue and Label Work.

Note these figures, which include printing.

	500	1000
Note Heads, good quality.....	\$1 15	\$1 90
" linen.....	1 25	2 00
Letter Heads, Superfine.....	1 75	2 50
" Linen.....	2 00	3 25
Envelopes, business size, No. 7,		
white.....	1 15	2 00
" Extra quality.....	1 35	2 25
Business Cards.....	1 50	2 50
Shipping Tags, 40c., 45c. and 50c. per 100.		

Our new book of labels contains nearly 100 specimens of elegant honey labels. Write for prices for any printing required.

THE CANADIAN BEE JOURNAL,

7

BEETON.

EXCHANGE AND MART.

Advertisements for this Department will be inserted at the uniform rate of **25 CENTS** each insertion—not to exceed five lines—and 5 cents each additional line each insertion. If you desire your advt. in this column, be particular to mention the fact, else they will be inserted in our regular advertising columns. This column is **especially** intended for those who have bees or other goods for exchange for something else, and for the purpose of advertising bees, honey, etc. for sale. Cash must accompany advt.

HONEY.—We can take all that offers in exchange for supplies, at prices found in another advertisement in this issue. **THE D. A. JONES CO.,** Beeton, Ont.

I WILL exchange a pair of **FERRETS**, two years old, for a stock of thoroughbred Italians, or one ferret for a stock of hybrids or blacks. **A. F. WILKINS,** International Bridge, Ont.

\$1 00 Will secure you by mail, post paid, 250 Noteheads and 250 Envelopes with your name, business and address printed on the corner of each. Send in your order now. **THE D. A. JONES CO.,** Beeton, Ont.

UNTESTED Italian Queens, daughters or granddaughters of that choice queen purchased from G. M. Doolittle, which was selected out of 600. The above will be reared chiefly from natural swarming cells. Price \$1 each. **G. A. DEADMAN,** Druggist and Apiarist, Brussels, Ont.

JERSEY COW.—Will sell cow with or without a bull calf from Fuller's "Canada's John." The cow is registered in A J.C.C. and calved May 13th. Was served May 28th by my registered bull "Prince of Maple Lane." A fine cow and calf. Will sell cheap. Address **G. A. DEADMAN,** Druggist and Apiarist, Brussels, Ont.

SECTIONS! SECTIONS!

At low prices, and sample free. Send card for sample. Received first prize for

COMB FOUNDATION!

Toronto Exhibition, 1887. Brood and Section Foundation by return express. All kinds of Bee-keepers' supplies.

S. P. HODGSON & CO.,
Shelburne, P.O., Ont.

**Italian Queens!**

Untested, May, \$1.25; June, \$1.00; July, 90 cts. Send for 16 page ILLUSTRATED PRICE LIST of Bees, Queens, Chaff Hives, Barnes Foot-power Saws, Langdon Miter-Boxes, and Apiarian Supplies. Address

WILLIAM E. GOULD,
Freemont, Newaygo Co.
Michigan.
5-3 mos

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

All kinds of Bee-keepers' Supplies. Sole dealers in Canada of Dadant's Comb Foundation.

CANADIAN HONEY PRODUCER!

Monthly: June, July and August (3 months) for 10c. Send for Price List, free. Queens for Sale.

NEARLY 30 TONS OF

DADANT'S FOUNDATION**SOLD IN 1887.**

IT IS KEPT FOR SALE BY MESSRS.

T. G. NEWMAN, & SON, Chicago, Ill.
C. F. MUTH, Cincinnati, O.
JAMES HEDDON, Dowagiac, Mich.
E. L. DOUGHERTY, Indianapolis, Ind.
CHAS. H. GREEN, Berlin, Wis.
CHAS. HERTEL, Jr., Freeburg, Ill.
E. L. ARMSTRONG, Jerseyville, Ill.
E. KRETCHMER, C'burg, Iowa.
M. J. DICKASON, Hi-watha, Kans.
ED. R. NEWCOMB, Pleasant Valley, N.Y.
J. W. PORTER, Charlottesv'le, Va.
J. B. MASON & SONS, Mechanic Falls, Me.
Dr. G. L. TINKER, New Philad'phia, O.
D. A. FULLER, Cherry Valley, Ills.
JOS. NYSEWANDEK, Des Moines, Iowa.
G. B. LEWIS & CO., Watertown, Wis.
PAUL L. VIALLO, Bayou Goula, La.
B. J. MILLER & CO., Nappanee, Ind.
J. MATTOON and W. J. STRATTON, Atwater, Goodell and Woodworth Mig. Co., Rock Falls, Ills.
J. A. ROBERTS, Edgar, Neb.
OLIVER FORSTER, Mt. Vernon, Iowa.
GEORGE E. HILTON, Freemont, Mich.
J. M. CLARK & CO., 1409 15th St. Denver, Col.
E. L. GOULD & Co., Brantford, Ont.

and numbers of other dealers. Write for SAMPLES FREE and Price List of Bee Supplies. We guarantee every inch of our Foundation equal to sample in every respect. Everyone who buys it is pleased with it.

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

200 POUNDS OF BEES!

At 80c. a pound. Italian queens, 80c. each. Circular free.

S. C. PERRY,
PORTLAND IONIA Co MICH

THE CANADIAN BEE JOURNAL

WEEKLY.

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

VOL. IV. No. 15 BÉETON, ONT., JULY 4, 1888. WHOLE No. 171

EDITORIAL.

LAST *Gleanings* contains an excellent engraving of Dr. A. B. Mason, the President of the N. A. B. K. A., and with it is a biographical sketch from Mrs. Mason.

T. Bonner-Chambers, F. L. S., says in the *British Bee Journal*: "I have seen a remark somewhere that foundation is apt to fall down when placed in a section with a groove on all the four inner faces, unless it is fastened at the top. * * *. I have, during the past month, given this matter a very careful test, and find the groove on all the four inner faces is all-sufficient."

How many of the ladies who read the CANADIAN BEE JOURNAL have been puzzled and troubled when putting up their supply of fruit for the coming winter, to be sure that it was going to keep all right, and not turn sour or ferment? We venture the remark that none of you have escaped the experience of having to throw away fruits which you had fondly hoped were nicely and safely put up, all because they "went bad." There have been lots of recipes given, too, and compounds concocted which if followed and used were said to be preventives, but all have been thrown away after a longer or shorter period. Something has now been brought out which, we believe, will, as the saying is, "fill

the long-felt want." The proprietors of the Preservative have been experimenting with it for years and have put up quite a large variety of fruits, etc., all of which turned out splendidly. The possibility of fermentation is stayed and the original taste and flavor of the fruit is maintained. What a grand thing this will be for the preservation of the pure juice of the grape for sacramental purposes, and the proprietors tell us that their admixture will do all this. We have a quantity of the Preservative on hand and can send packages, by mail, at the price advertised.

From Mr. I. R. Good, Napanee, Ind., we have a postal card, dated the 26th ult., in which he says:—"In last number of the C.B.J. you say, 'We hope to have a favorable report with reference to the receiving of queens by mail from the United States very soon.' I have been sending queens to the different parts of Canada for the last six weeks. I have sent to Ontario, Quebec, New Brunswick, Manitoba and British Columbia, and not a single complaint. Every queen went through with dispatch; what more do you want?" We are glad to hear this from friend Good. As we related a short time since we have had queens sent to ourselves which came through all right. The subject is still before the postal authorities. It may be that they are allowing queens to pass until some definite arrangement has been arrived at.

OUR OWN APIARY.

SHIPPING BEES LONG DISTANCES.

WE promised to report how the fifty colonies of bees which we sent to Manitoba arrived at their destination. From the young man who went in charge of them we have a private letter from which we extract the following:—

"The bees and myself arrived at our destination in good shape on Saturday about 12 o'clock. I rode in the express car the entire trip from Allandale and had every chance of attending the bees. In fact had they not had good care I fear they would have suffered. I found it necessary to move them about, putting the top rows down to the bottom and *vice versa* to keep them cool. At the point of transfer they would have been handled very roughly had I not been present, and armed with authority. I think so far as I have seen of this country yet, that it is going to be a splendid place for bees. The wild rose and wild pea are just starting to bloom, also a shrub called woodbine, while raspberries and strawberries cover the whole country like a perfect sheet. My apiary is situate in a small bluff of poplars, none of which are thicker than your wrist nor more than 10 feet high. I released the bees about 2 o'clock on Saturday and at 6 in the evening they were bringing in pollen from the oak. There was not, I think, more than one quart of dead bees in the whole shipment. We are having very hot weather here, about 96 degrees in the shade.

Stonewall, June 19th, 1888.

N. B. One swarm to-day, June 30.

The bees left here at 8 o'clock on the evening of the 13th of June, and arrived at their destination at 12 o'clock on the 16th, thus being on the road only sixty-four hours. This we consider extremely rapid transit and is indeed creditable to the Dominion Express Company and the Canadian Pacific Railway. It is not very often that colonies will swarm so soon after a long journey and we feel glad to think that we sent colonies which give such results.

QUEEN REARING DIFFICULT.

Our foreman reports considerable difficulty in rearing queens this season. The first portion of the work was hin-

dered by the cold backward weather; now the trouble is not in getting the virgin queens, but in having them mated afterwards. Out of the hundreds of young queens which we have reared not more than 25 or 30 per cent. of them have been successfully mated. Mr. Bray seems to have the idea that the English sparrows with which this country is troubled are to a great extent the cause. Perhaps the great number of trees which are located in and around our home apiary, where the most of this work is done, has something to do with it. However, we are on the lookout for further developments.

The Inventor of the Honey Extractor.

WE do not know that we have ever related to readers of the CANADIAN BEE JOURNAL how the invention of the honey extractor came about, and it will perhaps be interesting to them to read a short account of it. From the June number of *L'Apicoltere* is gleaned the fact that Major von Hruschka, the inventor, died May 11th, and the *American Bee Journal* in relating the circumstances says: "Major Hruschka was a retired Austrian officer, and the invention of the honey extractor occurred in this way: His apiary was in Italy, and one day when the major, who was a most observing and critical bee-keeper, was in his apiary, his little boy came there to him. The boy had a small tin pail tied to a string, which he was swinging, boy-like, around and around in a circle, holding the end of the string in his hand.

The indulgent father gave the youth a small piece of comb filled with honey, putting it into the little pail. The boy, after awhile, began to swing the pail again as before, with the honey in it. A few moments after, he became tired of that amusement and put the pail down to talk to his father, who took it up and, by chance, noticed that the honey had left the comb and settled down into the pail, leaving the comb perfectly clean that had been on the outside of the circle when the boy was swinging it around. The major wondered at the circumstance, and, turning the comb over, bade the boy swing it again; when, to his great astonishment, the

the other side of the comb also became perfectly clean, all the honey being extracted and lying at the bottom of the pail.

During the following night Mayor Von Hruschka, after going to bed, commenced to think the circumstance over; he thought, and thought, and his thoughts troubled him so much that on the morrow he commenced a series of experiments which resulted in his giving to the world the first honey extractor, which by whirling, something like his son whirled that little tin pail, gave him the pure liquid honey, extracted by centrifugal force, leaving the honey-comb entirely free from the liquid sweet, which he gave again to the bees to fill; allowing him the pure honey for making wine, mead and metheglin, or honey cakes, as desired, without employing the troublesome and primitive method in use up to that time, of mashing up the combs containing the honey, pollen, and sometimes brood too, to let the honey drain through the cloth in which it was placed—giving what was formerly known as "strained honey."

ARTIFICIAL HONEY COMB.

FOR some time past we have been in communication with Mr. E. B. Weed, of Detroit, relative to an article of comb which he has about perfected, and is soon to offer to the public. The sample we first received was not perfect, the cell separating very easily from the base, which was flat, but this, Mr. Weed explains to us in a later communication, was because it had only been put together temporarily by hand, and that such a thing would be impossible with the comb when properly made. We objected also to the flat base, and here again Mr. W. sets our objection at rest by saying that we could make it natural if desired. Perhaps to make it more distinct we had better give the last letter received from him in full:

Yours of the 10th inst just received. I should state that the sample sent you came apart because it was only fastened together by hand, and that such a thing would have been impossible with the comb I am turning out at present. It is somewhat easier to manufacture with a flat base, and my theory was that where the cells were very deep the bees would not attempt to

remodel the base, but if it is found that they insist on a natural base, I can very easily supply it.

I am now changing my machines so as to make a wall as light as natural comb, and will send you some samples very shortly.

As my applications for patents in this and other countries are now filled, I am now ready for any publicity you are inclined to give the invention. Several persons to whom I have shown it, have remarked that they should think it would be impossible to ship it. As this objection may occur to you, I may mention that I have a very cheap shipping-box that will transport the comb with absolute security, and at the same time keep it practically air tight until it is used, a great consideration where the walls are so thin, as the natural oil of the wax, of course, evaporates easily.

I feel confident that the new comb will rapidly supplement foundation, especially for the brood chamber of the hive (in combination with a wooden base), not only on account of greater utility—but also on account of cheapness. A sheet of veneer large enough for a Langstroth frame only costs one-half of a cent, and an ounce of wax will raise a wall about three-sixteenths of an inch high on both sides. Of course, wide frames could not compete with this. I shall not be ready to furnish wood base comb, however, until about the middle of June. The section box comb will be ready as soon as the changes I have mentioned are made, probably by the time this reaches you. Yours truly

E. B. WEED.

DETROIT, May 14, 1888.

The samples referred to have not been received. In his first letter to us, Mr. Weed explains that the cells can be made one-three-hundredth part of an inch in thickness, and the entire comb for section honey, when made up will run 15 to 20 feet to the pound. To give our readers a further idea of it, we quote from the last issue of the *American Farmer*, published at Detroit:

It has always been believed, even in these days of imitation, that the comb of the honey bee could not be counterfeited, but it has been done at last. This week Mr. E. B. Weed, of Detroit, laid on our desk some of the new product. In appearance it is a comb which has been taken from a hive and emptied of its honey. Upon holding it up to the light it is seen to be as thin as the genuine article, and we are told it can be made even thinner if desired. The depth of the cell is regulated from a mere line to a cell

of the usual depth or even more if it is wanted. It is the intention of the inventor to make combs the exact size to fill a section box. Only pure wax is used.

For a few years past there has been a story in circulation to the effect that comb was made of paraffine, filled by machinery with an imitation honey, capped over with a hot iron, and sold as a product of the bees. This proved to be a canard, and was traced to its author, Prof. H. W. Wiley, of Washington. On being taxed with the authorship he said he only meant it for a joke. It gained a large circulation and obtained credence with a great many people. The article Mr. Weed produces has not yet been put upon the market, and the inventor is determined that it shall only be used for legitimate purposes.

The advantages claimed for it are that it gives the bee-keeper a section of honey which is fully built out all around and is fastened to all sides of the wood; this insures a better selling price, and it is strong enough to bear shipping. The bees will lose no time nor honey in making comb having only to fill what is given them, and then cap the cells over. It is claimed that by its use comb honey can be produced as cheaply as the extracted.

A well-known bee-man to whom a sample of this comb was sent, refused to believe it was actually made by machinery, but nevertheless deemed the subject worth investigating, and sent a man out to look into the matter. It having been suggested the bees might refuse to accept the comb, some of it was given them and they worked upon it as readily as upon foundation.

The invention is not limited to the surplus department, but extends to the brood chamber as well. Combs are made with cells of natural depth, but having for a base a thin sheet of wood. This is to make a comb of sufficient strength to put a new swarm on in hot weather, for shipping bees in the hive, for extracting, and the various manipulations of the apiary.

DANIEL McFADDEN AGAIN.

MORE NEWS FROM DANIEL, WITH HIS WINTER'S REPORT—THAT BEESWAX COMING TO US.

A DAY or two ago we received another birch-bark letter from Mr. Geo. Watson, Alliston, said to come from Daniel McFadden, of North Pole fame. We give the letter below, and we think our readers will find it interesting. Daniel doesn't want

"white trash" up there at all, and threatens to make it warm for any of them that should happen around. By the way, you will observe that the beeswax which we offered to buy is now on the road to us, and will reach North Bay sometime along about the first of August. We have a friend living at that place, which is only a few hours run from Beeton, up the Northern & Pacific Junction Railway, and we have asked him to be on the lookout for Shawnobby, with instructions to wire us the moment he puts in an appearance, when we will be on hand with the goods they want and cash for the balance.

Evidently Daniel is opposed to opening up the mining industries in his country, and in this respect he is not in accord with our friends of the *Toronto World*, who are bent on booming the mining interests of Ontario, as found up around Sudbury.

The story related about Dan's brother-in-law and the bear sounds very much like a quotation from some of the yellow-covered literature of the present age.

We now reproduce the letter :

Dear Friend Watson :

Spring has come at last. I got your letter last fall and we were all very glad to hear from you, and especially to hear we could sell the wax for all we asked for it. Well, we will bring it out as soon as our ponies are in a good enough condition and the water lowered in the creeks. Spring is very late this year, ice and snow are to be found here yet. The water is quite cold yet in the streams, and it will be about the first of August when we will arrive with the wax. We will bring it as near North Bay or Nipissing as we can and put it in charge of an old Indian friend, Shawnobby, who will be on the lookout for the buyers; they may come the first of August. You ask if we will take part trade. Yes, if the goods suit and please us. We will take about twelve light axes, some good knives strong for hunters, and six or seven guns, some shot and rifles, all with cap locks, some spears and some nice beads and ribbons to please our women and children.

I am glad you did not allow anyone to get our starting point; we change often, taking a circuitous route when nearly out. The wax is all good and clean and of good color. It was all rendered by the sun so there is no scalding or scorching about any of it.

Our bees all came out safe and are doing well so far. The extra long winter does not seem to make any difference with them. It was on the 14th of May we dug them out. We are going to supply another tribe, who are west of us, with bees. They are going to begin on a large scale.

Yes, moose and deer are quite plentiful. We could, if we wished, on snow shoes, have killed more moose and deer than would provide a tribe for a year, if there was only one pound of meat on each beast. We could not take care of the skins, but we do not do that kind of greedy work; enough is all we want, then they are always easily got. Beaver Tail will leave here on the 10th of June and will take two good deer skins tanned with the fur on, his gun, a small axe and a good pony fed up for the purpose.

You can tell that person who wrote to me through you from New Haven, who would like to go to our country a while to kill moose and so on, that we don't want him nor won't allow him to cross the headland if we know it, and if he crosses it, it would be well for him our people did not know it. Yes, he would like to come to kill and destroy, and would be quite happy to leave destruction behind him. We don't want him or any of his breed here, nor will not allow it either. You can tell that man who wrote from Orange county, Texas, that we like the way he talks to us, and don't doubt but that he is skilled in working silver and copper and so on, and that he is an honest, industrious man, but that it would be wisdom for him not to come here. If he worked the mines he would want others here and he would want to trade with them, and if that was not allowed he would get tired and homesick and want to leave us, so he had better not come. To be plain he must not come at all.

Well, I think I have said all I have to say this time. I will write you again the 1st of August, or at least it will arrive about that time along with the wax party and I will expect a letter from you at the same time, telling me how your bees came out and if you are all well. We are all quite well. The old man's eyesight is failing much, otherwise he is quite well. I must tell you about some hard luck one of my brothers-in-law had early last winter. In the first snow in November. He went off north on Crooked creek to go on a hunt, to stay away about a month, then come back to get others to go on snow shoes to bring home the skins and fat with some of the choice meat. Well, he got a long way down and had killed four bears; he met the fifth one, a very large, fat bear in a rocky place, beside some cliffs and pools. Just as he came out of his den Spruce Top shot and wounded

the bear, which then closed on him, and they had a rough and tumble. He fell over a rock with the bear on him, but killed the bear just as he fell, with his long knife, but at the same time broke his leg over the rock. He managed to skin the bear and splint up his own leg, and crawl into the cave with part of the bear at a time, live there till his leg healed, and come home the middle of January on snow shoes. He says he was awfully homesick and suffered a great deal of pain. We were very uneasy about him, but without tracks it was impossible to hunt him up. His leg is quite strong again. Will expect a letter the 1st of August. The wax will be close to North Bay on that date; old Shawnobby will be at the Bay.

Now, make no mistake. The wax will be close to North Bay on the 1st of August; old man Shawnobby will be at the Bay on the lookout for ten or twelve days for the party inquiring for him and beeswax.

DANIEL MCFADDEN.

Raven's Peak, North Nipissing Territory.

P.S.—As those two men who wrote me got their information through the bee journal it might be as well to send this letter to that paper if they will print it; they will get their answer without you writing to them. However, do as you like or think best.—D. McF.

OPEN SIDED SECTIONS.

IN the last issue of *Gleanings* there appears a short letter, which we reproduce, regarding sections open on all sides, or "four-way" sections as Cheshire puts it. The testimony in this case is clear and conclusive, and bears out what we have said on the subject.

Mr. Root.—You may put me down as decidedly in favor of the open side sections. Nearly all the honey I got last year was in that style of section, and it was certainly as nice as anything I ever saw in sections. I believe the passage way at the sides secures a better filled and more firmly fastened comb than we shall ever have in the old style of section. My sections were filled full at the side; and to break a comb out you would have to break it all to pieces. This would certainly be a great advantage in shipping—enough advantage to far outweigh the fancied difficulties to be met in using such sections. The Mr. Robertson mentioned in the *Review* must have used a thin section without separators. If the slots in such sections are cut deep enough to make a half-inch opening at the sides, I can readily understand the difficulty. A 1½ inch section with side slots ½ inch deep, used

with separators, has given me the most beautiful comb honey I have ever seen, and not a single section was built over at the sides. But I do not think this is the section for your T super. There will be too much propolis crowded into the crack between the sides of the sections, made by the folded T tin between. If the fold in the tin is made perfectly flat it may do reasonably well, but there will be more propolis than is desirable, even then. The wide frames holding one tier of sections, with a wood separator as wide at the ends as the outside depth of the frames, and $4\frac{1}{2}$ inches wide the remainder of its length, with vertical slots as you recently illustrated in *Gleanings*, page 267, is a perfect arrangement for the open-side section. Clamp these together in any manner you like best, and the new style of section is no more trouble than any other style. The one idea I wish to keep to the front is, that this section is more apt to be filled full and fastened all around. Perhaps the season favored me last year; but I shall know more about it next September.

Z. T. HAWK.

Auduton, Iowa, May 21, 1888.

For the Canadian Bee Journal.

SUPERS AND REVERSERS.

FULL EXPLANATION AS TO THEIR USE.

HAVE one of your Combination hives (for comb honey) furnished with 2 supers, 2 reversers and wood and metal queen excluding honey board. But as the supers furnish no rest for the sections, I am at a loss to tell whether the sections contained in the super next to the brood chamber are intended to rest on the honey board or whether it is necessary to use one of the reversers for the purpose—if the latter I find there is at least $1\frac{1}{2}$ inches between the top bar of the brood frames and the sections and if 2 supers are used a third reverser will be required for the purpose of reversal. If on the other hand the sections rest directly on the honey board they would be made fast by propolis and reversing could only be effected by using the honey board for the purpose and an extra honey board would be necessary. Please answer either by letter or in the CANADIAN BEE JOURNAL.

GEO. BUNDY.

Houghton, June 22, 1888.

The great beauty of the Combination hive as it is now arranged is that there is no expense for rests for the sections as they are made right in the honey board. If you notice the honey board you will find that the upper side of it has two of the centre slats raised up even with the edge; place this on your

hive first, then put one of the supers right on top of it, fill your super with sections and you will find that the sections just fill it and come even with the top. If you only wish the one super filled with sections on at one time, put your cover on directly over the top of sections, but if you wish a second super filled with sections instead of the cover place one of the reversers on directly over the top. You will then observe that the centre slats rest directly over the joints between the three rows of sections in the upper super and that there will be just one bee space between the first and second super, just the same as in the first, and you will also observe that they come even with the top of the super. If you wish to reverse the upper story take the extra reverser which you have and turn it upside down directly over the top of the second story, then with the thumb and second finger of each hand on either side of the super grasp the top case of section and the two reversers turning them completely over, when the reverser last put on and turned upside down will then become right side up and be in the centre between the two supers. You then take off the top reverser and put on your cover. If you desire to reverse the first super you can do so without an extra honey board, though it would be better to have one. Lift off the second super with the reverser which is below it and place them to one side. Just here it would be well to remember that you must never try to lift the super and sections only, always include in your grasp the honey board or reverser which you wish to handle. To go back to where we told you to lift off the second super with the reverser below it. Then take your extra reverser and place it on top of the first super. It is immaterial whether it be placed upside down or not as in the case for reversing. Then lift the honey board, super filled with sections, and the reverser, off entirely and turn the whole over on end; ease off the honey board and reverser and you will then have standing clear and by itself the super filled with sections. Now, take your honey board and bring it around to the other side of the same placing it so that when the super is put on it will be in proper position on the hive and you have the reversal made.

The sections will rest directly on the honey board or rather on the raised slats in it. We think you will find when you have had actual experience that there will be very little trouble with propolis, at least such has been our experience. We trust that this explanation will enable you to handle the hive and supers properly. It will also give others information on the points which perhaps they may not understand.

From the American Agriculturist.

MANAGEMENT OF FRAME HIVES.

THE first and most important step in bee-keeping is to choose some good moveable comb hive. To insure success some knowledge must be had of the manner of manipulating such a hive. No frame hive is made that is capable of taking care of itself. Inexperienced persons will purchase a frame hive that is highly recommended and put their bees in it, thinking that the work is all done and nothing remains but to await success. But success will never come without proper management. Doubtless some of the so-called moveable frame hives on the market to-day are worthless, but we are happy to state that they are becoming increasingly scarce. The improved Quinby hive, as described in *Quinby's New Bee-Keeping*, is an excellent one, the new Quinby swinging frame which is $11\frac{1}{2} \times 16\frac{1}{2}$ inches, being our choice of all frames. To secure perfect combs, foundation combs are necessary, using full sheets. We thus not only get perfectly straight combs, but those made up of worker or drone cells, as may be preferred. In this way we can manage the supply of drones. The saving of labor, time and honey makes foundation a very desirable article in the apiary. Straight combs can be secured without foundation, but it requires close attention and careful adjusting of the inside furniture of the bee-hive. The frames should be placed $1\frac{1}{2}$ inches from centre to centre. All wood frames should be $\frac{7}{8}$ of an inch wide; that is, they are cut from a board planed down to that thickness. They will give a space between each frame sufficient to let the points of the fingers down between them, so they can readily be drawn out. It is necessary in making frames to cut the stuff accurately, so when they are put together they will hang straight and plumb. The hive or body should also be cut and put together correctly. It is of great importance in locating the hive ready for the swarm to occupy to place it exactly level, so that the frame will hang perfectly straight. Bees always build their combs exactly

vertical, and if the frames are not plumb the comb will not strike them at the bottom. If foundation is not used in the frames they should be supplied with comb guides. These are thin strips of wood tacked in the centre of the under side of the top bar of frame. After the frames are all spaced, a cloth should be spread over them before any lid or top covering is put on the hive. Bees are not so likely to build comb to cloth as to wood. These spaces of cloth also serve as a guide. The frames should be examined daily, and if any combs are found crooked during the process of construction they should be straightened and put into place, until all is completed. When once completed in good shape, such combs are ready for handling twenty years or more, if properly cared for. When combs are built crosswise in a frame hive all we can do with them is to transfer them as from bee-hives. The comb must all be cut out and placed straight in the frames before we can receive any advantage from a moveable frame system.

A. H. DUFF.

Ohio.

From the British Bee Journal.

The Medicinal Properties of Honey.

WE should like to enquire into the reasons why or in what respect honey is a medicine, supposing we take it as admitted that such is the case, an assumption many medical men might object to, seeing that the position of honey in the British Pharmacopœia is such a very modest one, its use being chiefly that of a vehicle for other medicines and as an adjunct to gargles. I should say that children in the stages requiring *mel boracis* receive the greatest share of the officinal preparations of honey. True, oxymel (a mixture of honey, acetic acid and water) is used as a demulcent, softening mucus lodging in the air-passages and facilitating its expectoration. In my own household, however, I prefer the use of citric acid to acetic. In bronchitis, honey pure and simple is always at hand, and more relief is obtained by frequently tasting it than from anything else. Nearly twenty years ago I found the greatest benefit in an attack of quinsy by using a gargle of red sage, acidulated with vinegar, and well sweetened with honey. Honey *ad libitum* as a laxative, and mixed with borax for thrush, is, of course, a common household medicine for children. We will leave out of our view the value of honey as a food, as a heat-producer, consisting, as it does principally, of carbon and water, the two sugars, dextrose and levulose, invert-sugar. We know it is readily assimilated in the stom-

ach, and should be eaten with some attenuating substance such as bread.

Mr. Cheshire, in "Honey as Food," tells us:—"Why honey has a curative effect it is difficult to say for certain, but one may theorize and ascribe this fact to the readiness with which it combines with mucous tissue. Honey is variable, and therefore its value as a medicine cannot always be the same."

In "Honey, as Food and Medicine," we have a list of prescriptions which are almost incredulously efficacious, a few of which may be named as starters:—Inflammation and congestion of the lungs followed by unconsciousness were cured by eating honey at all times of the day and night until 10 lbs. were consumed. Herr Karl Gatter was at the verge of the grave, and was restored to perfect health by the use of honey. Consumption is cured by it, and in ancient times it was used as a means of securing long life, and it is said to be an excellent remedy in diseases of the bladders and kidneys. The recipes are:—For asthma, honey of squills, honey cough syrup, eye-wash, balsam of honey, for croup, for bronchitis, honey salve, for coughs, colds, whooping cough, etc., honey-wash for the eyes, gargle for sore throat, cancer plaster, honey cough medicine, honey and tar cough candy, honey for sore eyes, honey and walnut cough candy, remedy for whooping cough, colds, etc.

Granting that all these prescriptions are good and effectual, what is there about honey that is absent in sugar which brings about such apparently wonderful results? It is in this direction we will turn our gaze. We know the effect produced upon the nerves at the roots of our teeth by bringing them into contact with honey, strong in acid, and it may be that the excess of formic acid secreted by the bee is used by it in giving its honey this strong acid reaction. Indeed, it is not beyond the bounds of reason to suppose that the supply of this acid to the bee is not intended for use so much as sting poison as for purely domestic purposes. There is not much doubt that the acid contained in honey is beneficial to both stomach and liver. What else is there in honey? Well, myriads of pollen grains, and these contain chemical principles of undoubted medical potency. Putting aside the husks (the extine and intine of the pollen-grain), the outermost skin is found to be reticulated with ridges, the seat of a secretion of sticky oil. The contents are a sticky fluid rich in protoplasm, sometimes opaque, by reason of floating granules (fovilla), which granules are declared by Herapath to contain as much as 46 per cent. of a peculiar inflammable azotized (?) principle

insoluble in nearly every liquid. I imagine it is soluble by gastric juice. These granules were found to be invisible in many fresh pollens, since the fluid in which they swim has the same refractive powers as the granules; some of them are drops of oil, whilst others consist of proline compounds. Many pollen tubes will develop in nectar, by osmose of water, and produce in their own tubes other chemical combinations, and as the growth of these tubes often exceeds the diameter of the pollen grain by a hundred diameters, their chemical position in the honey must be somewhat considerable. We have, then (leaving the sugar of honey on one side), to deal with formic acid and the protoplasmic contents of pollen cells, when we think of honey as a medicine. The most important factor, in my opinion, remains yet to be considered. I allude to its flavor. Mr. Otto Hehner tells us he has "not been able by chemical means to distinguish between honey from one kind of flower and any others." We must all admit that such a difference exists. We know that honey collected from poisonous plants is materially affected by the active, deleterious, or objectionable or medicinal principle, secreted by such plant, the rhododendron family, azaleas and kalmias being an instance of this. Does it not follow, as nectar is a secretion and an exudation of the plant cell, that it is charged and pervaded by the active principle, beneficial or otherwise, of the plant? Many instances of the identity of the nectar flavor, and the distinguishing principle of the plant which secretes it, can be given:

Citric acid is found in fruits and flowers of the orange tribe;

Tartaric acid is found in grape juice.

Malic " " " " apple and gooseberry.

Tannic " " " " the oak.

Hydrocyanic (prussic) " the cherry laurel.

Oxalic acid is found in sorrel and rhubarb.

Gallic acid is found in all kinds of galls.

Of poisonous principles we find alkaloids of:

Quinine in cinchona.

Morphine in opium.

Solanine in plants of the potato tribe.

Veratrine in sebadilla.

Aconitine in monkshood and aconites.

Strychnine in nux vomica.

Atropine in belladonna.

Piperine in pepper.

Theine or caffeine in tea and coffee.

Some of the most poisonous plants bear the gaudiest flowers, and such we know are peculiarly attractive to bees, whilst many plants unwholesome as food are invaluable as medicine. Most of the umbelliferæ are poisonous, the same may be said of the ranunculacæ, e. g., anemone, pulsatilla, delphinium, monkshood, aconitum vulgare. The poppy family, papaveracæ, are notorious (*P. Somniferum*). The gray

ifers are, however, non-poisonous. When we come to the violet family we find one of our most valuable medicines (ipecacuanha) obtained from the root of a violet grown in Peru. The buckthorn (*rhamnus*) gives us a valuable fruit; from the spindle tree family we get the valuable active principle euonymine. The seeds of the laburnum are poisonous. The cherry tribe (containing the almond, peach, nectarine, etc.) yields prussic acid; this acid is also secreted by plants of the plum tribe. A common plant (fool's parsley), common in gardens, is poisonous, as are generally the umbelliferæ, wet places being their home as a rule, when this principle is developed. Wild lettuce and wild celery are poisonous, whilst most members of the composite are medicinal. It is curious also to note that the ling or heather (the source of so much fine honey) has in its family the azaleas, kalmias, etc. The periwinkle (*vinca*) family have amongst them the nux vomica, from which we extract strychnine, a deadly poison, but at the same time the most valuable tonic in the Pharmacopeia.

Entire plants are wild lettuce (*Lactucin*, similar to manna).

The following are the parts of plants used in medical preparations:

FROM	IS OBTAINED.
Twigs and tops—	
Broom tops	Scoparin.
Savin,	Savin oil.
Woody nightshade	Solanin, an alkaloid.
Flowers—	
The Lavender,	Oil of lavender.
The Hop,	Lupulin and humulin.
Peppermint,	A volatile oil.
Camomile,	A volatile oil (<i>Oleum Anthemidis</i>).
Orange Flowers	A volatile oil.
Crocus	Saffron.
Rosemary,	A volatile oil.
The Poppy,	A volatile oil.
The Elder,	A volatile oil.
Buds—	
Santonica	(Worm santonin, and a volatile oil, seed.)
Barks—	
Larch,	Resin, Tannic acid and Larixinic acid, crystal and volatile.
Mezereon,	A volatile oil.
Oak,	Tannic acid.
Elm,	Tannic acid.
Leaves—	
Monkshood,	Aconitia (A)
Deadly nightshade,	Atropia (A).
Hemlock,	Conia (A) and a volatile oil.
Foxglove,	Digitalin (A).
Hembane,	Hyoscyamia (A).
Cherry Laurel,	Prussic acid and a volatile oil.
Stramony leaves,	Daturia (A)
Bearberry,	Tannic, gallic acids, and volatile oil.

Roots—

Monkshood,	Aconitia (see Leaves).
Deadly nightshade,	Atropia (see Leaves.)
Colchicum,	Colchicia (A).
Gentians,	Gentianite, a bitter principle.
Dandelion,	A bitter crystalline substance Taraxacin.

Fruits—

Dill,	Volatile oil.
Anise,	" "
Caraway,	" "
Coriander,	" "
Fennel,	" "
Hemlock	Conia (A), see Leaves.
Poppy.	Opium, from which Morphia.

Seeds—

Colchicum,	Colchicia (A), see Roots.
Mustard,	Myronic acid, and a volatile oil.
Stramony,	Daturia (A), see Leaves.

When we come to examine these products of the plant, from its very summit to its roots, taking leaves, bark, flowers, fruit, seeds, on the way, we find what we may call the characteristic or active principle of the plant pervading its whole system, but appearing in a stronger form in some particular place. We must try to think of the plant as a simple aggregation of units, a mass of single cells, each of which is a laboratory in itself, forming of itself simple and complex compounds which it passes forward to its neighbors in order that they may be thereby further perfected, and finally stored away for future use by the plant or utilized by it as protective, resisting the attacks of birds, insects, and other animals, or else rendering the plant attractive to that particular animal whose services are desired. Now the aroma of the plant is generally characteristic of its active principle, and this aroma appears in the nectar. The nectar owes its saccharine matter to the starch secreted by the single plant-cell from the carbonic acid of the atmosphere, which it transforms into sugar and flavors with its active principle. The sweet-scented sap exudes or transudes through the outermost cells and appears as a degradation product in a similar fashion to resins and gums.

We find most active principles medicinal when taken in small doses, but distinctly poisonous in larger quantities; and again many of them are antidotal when taken together. Herein is a beautiful provision of nature exemplified in the minute quantities of medicinal matter gathered by the bee, and so mixed in its store house that strong doses are rendered almost impossible and innocuous. The human system, however, when out of order (and it rarely, if ever, is in perfect health), has the faculty of sympathetically seizing hold of what it requires from the food to restore it to its normal state. Honey thus supplies us

with numerous powerful agents in restoring to health disordered vital functions. I hold that the mixed honey, for these very reasons, is the healthiest and best for general use; that which bears distinct and pronounced flavor, at once betraying its origin, only so betrays it because it holds an undue proportion of the active principle of the plant wherever gathered, be this beneficial or otherwise; and when honey is found to disagree with any one, it will probably be found to be honey of a distinct flavor.

We also lose sight of the fact when eating comb honey that we swallow the waxen cell-wall which we are told is varnished over with a preparation (a sort of furniture polish) of the acid saliva of the bee and propolis—propolis consisting of powerfully medicinal exudations varying with the sources from which it is gathered. Much that I have said is ideal and theoretical, but I think my conclusions are rational and practical, viz., that in dealing with honey we are dealing with a medium—nectar—flavored with powerful medical compounds whose harmlessness is ensured by the wonderful antidotal mixing of the bee, but the properties are still present, ready to be seized upon by diseased or disordered organs, or if there be anything in the science of homœopathic medicine, the curing of disease by minute infinitesimal doses of such powerful drugs as produce symptoms of the disease in larger doses, then a new line of thought is opened up and considerable support given to my hypothesis.

R. A. H. GRIMSHAW.

Horsforth, Leeds, Eng.

QUERIES AND REPLIES.

UNDER THIS HEAD will appear Questions which have been asked, 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.

The Cost of Comb and Extracted Honey.

QUERY No. 198.—Which costs the most to put on the market in the most saleable shape, extracted or comb honey?

DR. C. C. MILLER—Comb.

G. M. DOOLITTLE—Comb honey in my opinion.

PROF. COOK—Comb about one-half more. Yes, double, with the average bee-keeper.

DR. DUNCAN—There is not much difference if the extracted is put up in small parcels.

H. D. CUTTING—It will depend on conditions. In some markets extracted will cost as much as comb.

O. G. RUSSELL.—This depends on where it is marketed. Our honey is nearly all marketed in country towns and villages and it costs us about the same to market comb that it does extracted.

J. F. DUNN—Comb honey costs me most to put on the market. It all depends on how you sell your honey. If extracted honey is put up in small packages there would be little difference.

ALLEN PRINGLE—As the question is a little ambiguous I may answer both constructions to make sure. It is much more expensive to produce comb honey than extracted, and a little less expensive to put it on the market in saleable shape—that is the local market.

A Puzzling Question.

QUERY No. 199.—What is the difference in the weight of honey by the gallon, all ripened to the same thickness?

DR. DUNCAN—I don't know.

J. F. DUNN—Too much for me.

H. D. CUTTING—About half to the gallon.

G. M. DOOLITTLE—According as the question is put, I should say not any.

DR. C. C. MILLER—If it is all ripened to the same density there is no difference.

ALLEN PRINGLE—All ripened to the same thickness there would be but little difference.

PROF. COOK—I can not tell. It is an uninteresting question. I do not think there would be much variation.

Keeping Qualities of Various Honeys.

QUERY No. 200.—Is there any difference in the keeping qualities of the various kinds of honey, extracted and comb?

DR. C. C. MILLER—Yes.

H. D. CUTTING—Yes.

J. F. DUNN—Not according to my experience.

DR. DUNCAN—I think clover honey will keep better than basswood.

G. M. DOOLITTLE—Only so far as granulation is concerned, in this locality. Linden honey will granulate much quicker than clover.

ALLEN PRINGLE—So far as my experience goes different kinds of honey (either extracted or comb) equally well ripened keep equally well.

O. G. RUSSELLS—I don't think there is much difference. If well ripened and well cared for honey will keep any length of time.

PROF. COOK—I think not, if all are equally ripened. I have kept for years now many kinds of honey, all I can get. All are thick; all keep perfectly.

SUNDRY SELECTIONS.

EASTERN TOWNSHIPS REPORT.

J. RAYMOND BALL—Bees in the Eastern Townships came out of winter quarters in poor condition, a good many dead and a good many short of stores, consequently there has been lots of spring dwindling. The weather too has had a good deal to do with it. It has been the most backward spring I have known for over five years, until about ten days ago since which time I have never seen colonies bring in honey so fast. The apple trees are just in bloom now and are loaded with blossoms. My bees came out in first class condition and have built up wonderfully considering the chance they have had. In one colony June 2nd eggs were layed in queen cells and the hive boiling over with bees. This I can say of all my colonies. Have sold four to bee-keepers who have lost nearly all their bees. I think I have as hardy and as good a lot of Italians as can be found anywhere. I have purchased from no less than six queen breeders of this continent within the last few years. I have bred a number myself and have had very fine ones from your apiary that have produced bees second to none.
Knowlton, Quebec, June 4, 1888.

A USE FOR HONEY-DEW.

D. BALFOUR.—As an item of interest probably to some readers of the C. B. J. I send the following as a means of converting a very unpalatable article to one of very fine flavor. Last fall we had a great flow of aphid honey—the only flow of any kind to amount to much for five years. The strong disagreeable leafy taste was so it could not be eaten. But having a good many tomatoes, these were cooked in the honey to a thin preserve and the tomato flavor overcame the rankness of honey entirely and made a most delicious preserve. In a week we will have tomatoes but not the honey. Somewhat earlier than you for tomatoes.
Dayton, Texas.

Well, now, this is one use to put honey dew to, but we must confess that we could hardly feel comfortable partaking of such, if we knew it, though perhaps if we had no knowledge of what we were eating, it would be all right. Likely we should never want to eat a tenth part of what is set before us if we only knew the process through which it passes, and the materials used, before coming to us. You do have tomatoes

early down there for a fact. Up here (excepting in hot houses where they are somewhat further advanced) they are only about the size of marbles. Today (June 28) we are being treated to a nice healthy rain, which will do very much good.

KIND WORDS.

THE C.B.J. GIVES PLEASURE.

R. ROBINSON.—I find great pleasure in the perusal of the CANADIAN BEE JOURNAL. Although I have only one colony of bees, I am living in hopes. I put four colonies in winter quarters last fall, packed in chaff, but had only one left this spring

THE CANADIAN BEE JOURNAL.

THE D. A. JONES Co., Ltd.,
PUBLISHERS.

D. A. JONES,
Editor
and President.

F. H. MACPHERSON,
Asst. Editor
and Business Manager.

BEETON, ONTARIO, JULY 4, 1888.

BUSINESS DEPARTMENT.

We constantly have applications from customers for supers filled with crates and fitted up with foundation ready to be given the bees on arrival. We have repeatedly answered that we cannot do this with safety. We may put the foundation in the sections and ship them, but the chances are that one section in ten would have the foundation in it on arrival. It is a simple matter to place the foundation in the section, and it is much better that it should go properly wrapped up and safe from breakage, than to reach the customer in a poor state and unfit for use.

PRICES CURRENT

BEE SWAX

Beeton, July 4, 1888.

We pay 35c in trade for good pure Beeswax, delivered at Beeton, at this date, sediment, (if any), deducted. American customers must remember that there is a duty of 25 per cent. on Wax coming into Canada.

FOUNDATION

Brood Foundation, cut to any size per pound.....50c
" " over 50 lbs. "48c
Section " in sheets per pound.....55c
Section Foundation cut to fit 3x4 and 4x4, per lb.60c
Brood Foundation, starters, being wide enough for
Frames but only three to ten inches deep.....48c

1-LB. GLASS JARS. SCREW TOP.



We are just advised of shipment from the factory of the first instalment of 50 gross of the above. They are put up in barrels and hogsheads, (the latter for our own local use), and to save breaking bulk when shipping, we append below a table, of the qualities of which the shipment consists, together with the prices per

barrel. In estimating the price, we have calculated the same as for full gross lots, an allowance of 20 cents being made for each barrel and packing (they cost us 35 cents).

No. of Barrels.	No. of Doz.	Prices.
1	8½	\$ 6 25
1	8½	6 45
4	9½	6 75
5	9½	6 95
4	9½	7 15
3	10	7 35
3	10½	7 55
2	10½	7 75
1	11½	8 45

The D. A. Jones Co., Ltd.
BEETON, ONT.

ADVANCE IN NAILS.

Owing to a rise in the prices of nails, we are forced to advance our prices somewhat, as will be seen by the following list. All orders will be filled only at these prices.

Length of Nails.	PRICES OF WIRE NAILS.			
	No. in Pound	Size Wire	Price of 1 Pound	Price of 10 lbs.
¾ & ½ inch	7200	21	22	2 00
¾ inch....	5000	20	17	1 60
¾ inch....	3880	10	17	1 60
1 inch....	2069	18	12	1 05
1½ inch....	1247	17	11	1 00
1½ inch....	761	16	10	90
2 inch....	350	14	9	80
2½ inch....	214	13	9	75
3 inch....	137	12	8	70

PRICES OF BOX OR HIVE NAILS.

	Per lb.	Per 10 lbs.	Per 100 lbs.
1½ inch.....	7	65	6 00
2 inch.....	6½	60	5 50
2½ inch.....	6	55	5 25
3 inch.....	6	55	5 25

THE D. A. JONES CO., Ltd.

PURE— —ITALIAN BEES FOR— —SALE!

Full colony in A. I. Root's Simp. hive \$6.00. Two-frame nuclei \$3.00. Three-frame \$3.50. Each nucleus and full colony to contain a tested queen and plenty of bees and brood, all on wired L. frames, combs drawn from fdn. Hives new, everything first-class. To be shipped in June. Safe arrival guaranteed. I shall do by all as I would be done by. Address

N. A. KNAPP,
ROCHESTER, LORAIN Co., O

'Practical Hints to Bee-Keepers'

Sent free. Address _____

American Apiculturist.
Wenham, Mass., U.S.

-Comb Foundation-

Having purchased one of the best machines I am ready to receive wax to manufacture or buy. Pure Italian bees, queens and comb foundation for sale. Agent for the D. A. Jones Co. supplies. Can ship by C.P. Ry or H. & N.W.R., (now G.T.) and by Dominion or American Express.

H. COUSE.

Cheltenham, Ont., April 5th, 1888:

—THE—

-POULTRY MONTHLY-

is the best journal of its kind

INTERESTING & INSTRUCTING.

ITS PAGES ARE GRANDLY ILLUSTRATED

each month with cuts of the various birds and is also full of good reading matter and is

FREE FROM PERSONALITIES.

Send 10c. for Sample Copy or \$1.00 for a year's subscription. Address

CHAS. BONNICK.

TORONTO.

TESTED ITALIAN QUEENS.

Before June 15th, \$1.50 each, after, \$1.00 each; untested, 75 cents each. Six for \$4.00. Bees for sale by the pound. Nuclei or full colonies.

For prices, write for what you want.

I. R. GOOD.

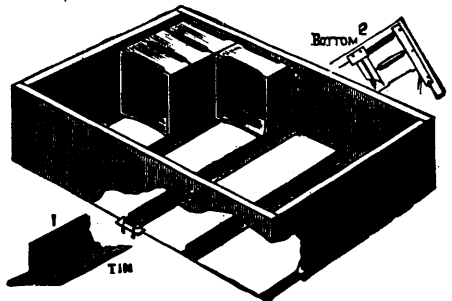
NAPPANEE IND.

ELLISON'S EARLY ITALIAN QUEENS!

	April.	May.
1 Untested Queen.....	\$ 1 15	\$1 00
3 " Queens.....	3 00	2 50
1 Tested Queen.....	2 50	2 00
3 " Queens.....	6 00	4 50

Many of the above will be reared in the height of the swarming season and all will be nearly, if not quite as good as the best swarming queens. In every case safe arrival and satisfaction guaranteed.

W. J. ELLISON.
Stateburg, Sumter Co., Sth. Carolina.



For this I super or any other bee-keepers' supplies send to

J. & R. H. MYERS,

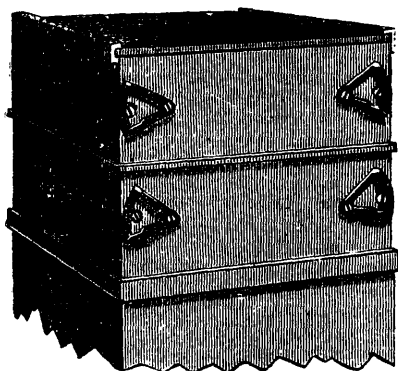
Illustrated catalogue free. Box 94 STRATFORD

OUR NEW Reversible Honey - Board

—AND—

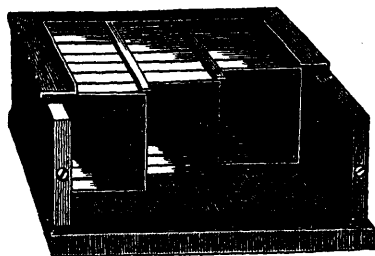
SUPER REVERSER.

This is the invention about which so much has been said in the bee journals during the past winter, and we are satisfied it will meet



THIS CUT SHOWS THE GENERAL APPEARANCE OF THE SUPERS.

with the approbation it merits. We have tested it thoroughly in our own apiaries, and have had it in operations in the apiaries of three other able, practical and successful bee-keepers.

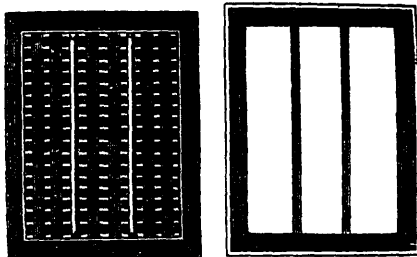


IN THIS ENGRAVING THE SECTIONS ARE SHOWN AS RESTING ON THE HONEY-BOARD WITH THE REVERSER COVERING THE JOINTS OF THE SECTIONS.

We claim for it:

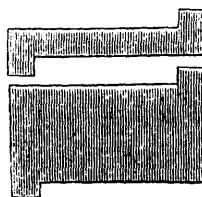
1. That section honey can be produced with less expense and with less handling than with other hives.
2. The great simplicity of the whole arrangement which adapts itself to the requirements of the merest novice as well as to the skilled apiarist.
3. It can be adapted to any hive in present use at very small cost.
4. The cost of wide frames, section cases, skeleton crates, rests, etc., is done away with.

5. The hive and supers are rain proof and wind proof.
6. The trouble of having the sections proposed together is done away with entirely.



SHOWING REVERSIBLE HONEY-BOARD AND REVERSER.

7. A most perfect and exactly correct beespace is maintained at all times.
8. There is no shrinking and swelling of wide frames or section arrangements, there being none.
9. The sections may be reversed or interchanged, either by the whole crate or individually, with the utmost simplicity.
10. Separators can be used with this style of super just as readily as with any other.



CROSS SECTIONS OF SIDES OF REVERSIBLE HONEY-BOARD AND REVERSER.

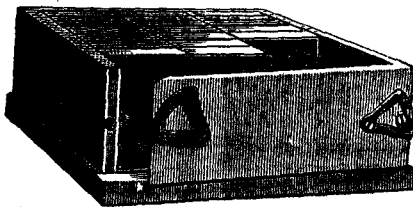
11. The sections are brought just as close to the brood chamber as it is possible to get them in the tiering up system, and a quarter more sections can be put in every super.
12. There being less weight and bulk the shipping charges will be much less than ordinary.

The prices of these honey-boards and reversers, for the different styles of hives, are given under their proper headings. We keep on hand a stock suitable for the "Jones," "Combination" and "Langstroth" hives. In ordering for any other style of hive, be particular to give the exact inside and outside measurement of the hive, so the honey-boards may be made to fit properly.

SPECIAL PORTABLE SUPERS.

Almost any super will suit this new arrangement, and we give in the price list the prices of the honey boards and reversers separately. We make a special "portable" super which is put together with a very light hive clamp, which answers its purpose capably. When the sections are ready to take off, all that you need to do is to unfasten one corner (see cut following), and lift off the whole super. We make

them for the Combination Hive only, except to order.



SHOWING PORTABLE SUPER WITH SIDE THROWN OPEN SO SECTIONS MAY BE REMOVED.

The price in flat includes the clamps and screws necessary to put them together.

Portable Supers each.....	made up in flat	\$ 25	\$ 22
" " 10 and under, each		22	20
" " over 10 and up to 25		20	18
" " 25.....		19	17

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

THE COMBINATION HIVE

We believe that for all general purposes this hive is the best and cheapest in the market to-day. It combines all the good qualities of the most expensive hives offered, and the simplicity wanted by the novice or beginner in bee-keeping; its cheapness alone being one great characteristic.

The inside dimensions of the hive are: Length, 10½ in.; width, 13½ in.; depth, 12½ in. The frames are 10½x12½ in. In other words, the frames are of the same dimensions as in the "Jones single-walled hive" but are turned over on the side. There are those who object to using a hive with so deep a frame as the ordinary Jones hive for comb honey, while the frame turned on its side meets their views; the supers are worked by the use of skeleton crates or **L** rests, and either 3½x4½ or 4½x4½ sections may be used, unless, of course, you desire the new reversible honey-board and reverser, prices of which are given farther on, when neither skeleton crates or **L** rests are needed.

COMPLETE HIVE FOR EXTRACTED HONEY

Will consist as follows: 1 Brood Chamber, (including cover, bottom and frames) 75c.; 1 Second Story, (including frames) 65c. Total (ready for use) say.....\$1 35
 3 and up to 5..... 1 20
 Over 5 and up to 10..... 1 10
 Over 10 and up to 25..... 1 00
 Add 15 per cent. to these prices for one coat paint; and 25 per cent. for two coats.

The prices of the above complete hives in the flat, will be:—

Over 3 and up to 5.....	\$1 00
" 5 " " 10.....	90
" 10 " " 25.....	85
" 25 " " 50.....	82
" 50 " " 100.....	78
" 100.....	75
Brood chambers alone, in flat, each....	55
Second stories, alone, in flat.....	45

COMPLETE HIVE FOR COMB HONEY

Consists as follows: Brood chamber (including cover, bottom-board and frames 70c. two supers made up, each 15c. (30c) say.....\$1 00
 Over 3 and up to 5 each..... 95
 " 5 " 10 each..... 90
 " 10 " 25 each..... 87
 " 25 " 50 each..... 85

Add for one coat paint 15 per cent; two coats 25 per cent.

Prices in the flat—include brood chamber, above, and two supers—and are as follows:

Over 3 and up to 5 each.....	\$ 75
" 5 " 10 each.....	70
" 10 " 25 each.....	65
" 25 " 50 each.....	63
" 50 " 100 each.....	60
" 100.....	58
Supers, in flat, each.....	12
" " per 10, each.....	10

Strips of sheet iron for bottoms of supers or section cases are included.

We do not include the **L** rests or skeleton crates, in prices of the comb honey hives. We prefer leaving the choice with the customer. If you use **L** rests you will require to buy 3½x4½ sections; if skeleton crates, 4½x4½.

We make up sample surplus cases complete with sections in any of the above ways at 45c. each.

The prices of ordinary queen-excluding honey-boards of metal and wood to fit this hive are as follows:—

	MADE UP.	IN FLAT.
Price, each.....	\$ 25	
" per 10.....	2 35	\$ 2 10
" " 25.....	5 50	4 75
" " 100.....	20 00	17 00

Prices for New Reversible Honey-board to suit the Combination Hive

	WITHOUT PERFORATED METAL.	Made up.	In flat.
Honey-boards, each.....		25	22
" 10 and under.....		22	20
" over 10 and up to 25.....		20	18
" over 25.....		19	17

	QUEEN-EXCLUDING BOARD WITH METAL.	Made up.	In flat.
Honey-boards, each.....		30	25
" 10 and under.....		28	23
" over 10 and up to 25.....		27	22
" over 25.....		25	20

	REVERSERS.	Made up.	In flat.
Reversers, each.....		15	13
" 10 and under.....		14	12
" over 10 and up to 25.....		13	11
" over 25.....		12	10

The super arranged as above holds 24 sections; 3½x4½x1½.

Where separators are wanted add 10 cents to the price per super.

PORTABLE SUPERS.

For the prices of these see page 5. We only stock these to fit the Combination Hive.

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

D. A. JONES, Pres.

F. H. MACPHERSON, Sec.-Treas.

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

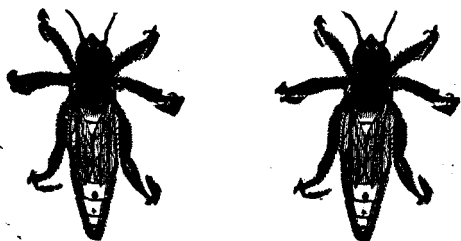
Manufacturers of and Dealers in Apiarian Supplies

OUR CIRCULAR SENT FREE ON APPLICATION.

Publishers Canadian Bee Journal.

Fine Book and Job Printers.

QUEENS.



Our trade in queens grows greater each succeeding year, and we seem to be giving better satisfaction as well. We endeavor to raise queens which will produce good honey-gatherers irrespective of breed or race.

We pay much attention to the class of drones with which our queens come in contact.

The annexed table shows the prices at different seasons, of different varieties. These are, of course, subject to change depending upon the supply and demand. All changes will be noted in the CANADIAN BEE JOURNAL :

MONTH.	Untested	Tested	Selected	Virgin
May	1 50	2 50	3 00	
June	1 00	2 00	3 00	0 60
July	1 00	2 00	2 50	50
August	1 00	2 00	2 50	50
September	1 50	2 00	2 75	
October		2 50	3 00	

Three at one time, deduct 10 per cent ; six at one time, deduct 20 per cent.

EXPLANATIONS.

We are not, owing to our high latitude, able to sell queens before May, nor later than October.

Untested queens will be ready for sale as soon as mated, and before they have had a chance to prove themselves.

Tested queens are those which have been proven as to race and honey-gathering qualities. Selected queens are chosen because of color, size and honey-gathering qualities.

Queens cannot be shipped unless the weather is warm enough, except at risk of purchaser otherwise safe delivery is guaranteed.

We replace all queens lost in transit, but not those lost in introducing.

BEEES.

Bees should always go by express, unless they are personally cared for *en route*.

We do not hold ourselves responsible for breakage or delay in transit of colonies of bees they always leave our hands in good shape. We will send out only such colonies as we are sure will give satisfaction. Our bees will be such as the queens we offer will produce.

MONTH.	Italian	Italian Crosses	Carniolan Crosses
May	\$8.00	\$ 8.00	\$ 9.00
June	7.00	7.00	8.00
July	7.00	7.00	8.00
August	6.50	6.50	7.00
September	6.00	6.00	6.50
October	6.50	6.50	7.00

The above prices are for up to four colonies ; five colonies up to nine, take off 3 per cent ; ten colonies up to twenty-four, 5 per cent ; twenty-five colonies and over, 10 per cent—*always cash*. Bees at these prices will always be sent out in the Combination Hive, and each colony will contain a good queen, some honey, and brood according to the season.

BEEES BY THE POUND.

Just as soon as we can raise them in the spring, we will have for sale, bees by the pound at the following prices :—Up to July 1st, \$1.25 per pound ; after that date, 90c. per pound. Orders must be accompanied by the cash, and they will be entered and filled in rotation as received. We are booking orders now. Do not delay in ordering if you want prompt shipment.

NUCLEI.

A two-frame nucleus will consist of one-pound of bees, two frames partly filled with brood and honey, and an extra good queen, price \$4. Two at one time, \$3.75 each—up to July 1st.

After that date the prices will be \$3 singly ; two at one time, \$2.75 each.

We can send frames that will suit either the Jones or Combination hive. Please specify which you wish. Should you prefer the nucleus in either Jones or Combination hive, add price of the hive, made up, to the cost of nucleus.

Bees by the pound and nuclei must always be sent by express. Orders for nuclei filled in rotation the same as bees by the pound.

APIARIAN SUPPLIES

MANUFACTURED BY

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

Are unsurpassed for **Quality** and fine **Workmanship**. A specialty made of all sizes of the **Simplicity Hive**. The **Falcon Chaff Hive**, with movable upper story continues to receive the highest recommendations as regards its superior advantages for **wintering** and **branding** bees at all seasons. Also manufacturer of **FALCON BRAND FOUNDATION**. Dealer in a full line of **Bee-Keepers' supplies**.

Send for Illustrated Catalogue for 1888. Free.

W. T. FALCONER.

Bee-Keepers Guide

—OR—

MANUAL OF THE APIARY.

The fourteenth thousand just out. 10th thousand sold in just four months. More than 50 pages and more than 40 costly illustrations were added to the 8th edition. It has been thoroughly revised and contains the very latest in respect to Bee Keeping.

1/2 lb. by mail, \$1.25. Liberal discount made to dealers and Clubs.

J. COOK, Author & Publisher,
ST. JAMES AGRICULTURAL COLLEGE,
LANSING, MICH.

BEE SWAX WANTED

Will pay 30 cents in cash or 33 cents in trade for any quantity of pure Beeswax.

Comb Foundation for sale, to suit any size frame or section. Wax worked on shares or for cash. All freight to Cambridgeville station C.P.R. If by mail to

ABNER PICKET,
Nassagawaya P.O., Ont.

Agent for D. A. Jones Co.'s supplies.

250 ENVELOPES

—AND—

250 NOTE HEADS

FOR \$1.

On good paper, printed with name and address, post paid.

CANADIAN BEE JOURNAL OFFICE,
BEE TON ONT.

Muth's Honey Extractor.

Perfection Cold Blast Smokers, Square Glass Honey Jars, etc. Send ten cents for "Practical Hints to Bee-keepers." For circulars apply

CHAS. F. MUTH & SON.

Cor., Freeman & Central Avenues, Cincinnati

COMB FOUNDATION.

I manufacture the best, or as good as the best foundation in Canada. Comb foundation for sale to suit almost any sized frame or section. Pure bees wax worked on shares or for cash. Samples with prices on application. No circulars. All freight to Ridgeway station, if by mail to **Henry S. Parker,** MORPETH, ONT.

BEEES FOR SALE CHEAP.

30 COLONIES OF ITALIAN BEEES FOR SALE. In lots of 3 or more \$6.00 each. Now is the time to send in orders for spring delivery. Bees second on none.

Address

LEWIS JONES,

DEXTER P.O. ONT.

THE CANADIAN

POULTRY REVIEW

IS THE ONLY PAPER PUBLISHED IN CANADA IN

THE INTERESTS OF THE

Poultry, Pigeon and Pet Stock Fraternity.

Circulation always on the increase. Subscription only \$1.00 a year. Address,

H. B. DONOVAN,
20 Front St. East, Toronto.

FRIENDS. IF YOU ARE IN ANY WAY INTERESTED IN

BEEES AND HONEY

We will with pleasure send you a sample copy of our **SEMI-MONTHLY GLEANINGS 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.

BEEES AND HONEY.

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

M. RICHARDSON & SON,

Port Colborne, Ont

BARNES' FOOT-POWER MACHINERY



JOHN BARNES 544 Ruby St., Rockford, Ill. 21

Read what J. J. 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 brood frames, 2,000 honey boxes and a great deal of other work. This winter we have double the number of beehives, etc. to make, and we expect to do it all with this saw. It will do all you say it will." Catalogue and Price List free. Address W. F. &

SECTIONS FOR THE MILLION.

We are turning out sections at the rate of 10,000 per day right along, in addition to our regular hive and supply trade, and we are prepared to furnish them in any regular size and style in large quantities at very low rates. 2317

Our prices are as follows:—

1000	\$ 4 50
3000	13 00
5000	20 00
10,000	37 50

All orders entered as received, and shipped with promptness. Order early to avoid the rush. These prices are spot cash.

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

BEE TON, ONT