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VOL. IV, NO. 1

1888

MARCH 28

PUBLISHED EXCLUSIVELY IN THE INTERESTS OF THE HONEY PRODUCER

THE CANADIAN



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.

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The Canadian Bee Journal and.....		
Cook's Manual, cloth.....	\$2 25	\$2 00
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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
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- 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:—

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 - 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, etc. 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 250, \$1.00; per 100, 50c.

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

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

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.

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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".....	1.20
"The Bee-Hive".....	1.25
"Beekeepers' Review".....	1.40
"Beekeepers' Advance".....	1.20

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.

TABLE OF CONTENTS.

	PAGE
Bees, Feeding in spring.....	13
Bee Forage in Muskoka.....	12
Bees in good condition.....	13
Bees, Temperature for.....	6
Bee-keeping as a business.....	15
Heddon's Honey-board.....	9
Medley, A.....	8
Port Elgin, The season round.....	13
Report from Missouri, A.....	14
Reversible Honey-board and Super-Reverser, The..	6
Upper story, Extracting from.....	14

BEES AND HONEY.

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

M. RICHARDSON & SON,

Port Colborne, Ont

100 COLONIES OF BEES FOR SALE OR EXCHANGE.

For Bee Supplies or anything that I can use. Beeswax wanted. Dealer in all kinds of Bee Supplies.

JAMES ARMSTRONG,

CHEAPSIDE, ONT.

READ THIS.

25 PAPERS GARDEN SEEDS AND THE BEE-KEEPERS' ADVANCE.

One year for only \$1. These seeds are just such seeds as everyone having a garden wants and buys, paying 5c. to 10c. per package, the retail price of the seeds is \$1.75. We give away our paper and sell you the seeds at about half price to introduce both to Canadians. Seeds will be sent post paid and we guarantee satisfaction. Address,

J. B. MASON & SONS,

Mechanic Falls, Maine.

Patent Flat-Bottomed 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),

41-3m SPROUT BROOK, Mont Co., N. Y.

5 Per Cent Discount

On sections until May 1st. Send for free price list of everything needed in the apian. Foundation wholesale and retail. Alsike clover seed cheap. Sample section on application.

M. H. HUNT,

Near Detroit.

Bell Branch, Mich.

ITALIAN QUEENS.

Tested, ready in March. Untested, by April 1st. Contracts taken with dealers for the delivery of a certain number of queens per week, at special figures.

FOUR - FRAME NUCLEUS,

with pure Italian queen, containing 3 pounds of bees when secured—in April and May, \$4.00; after, 25 cts. less. Safe arrival and satisfaction guaranteed on all queens and nuclei.

Early Bees from the south shipped to Canada without loss.

For more particulars, send for Tenth Annual Catalogue.

P. L. VIALLO.

BAYOU GOULA, IBERVILLE PARISH, LA.

PRACTICAL BEE-KEEPER.

In time to begin season to go to the North-West in charge of 50 colonies of Bees. Apply to

The D. A. JONES Co., Ltd.

BEBTON, ONT.



7% Cordis of Beech have been sawed by one man in nine hours. Hundreds have sawed 6 and 6 cords daily. "Exactly" what every Farmer and Wood Chopper wants. First order from your vicinity secures the Agency. No Duty to pay, we manufacture in Canada. Write for Illustrated Catalogue sent FREE to all. Address **FOLDING SAWING MACHINE CO., 303 & 311 S. Canal St., Chicago, Ill.**

BEES ITALIAN BEES and Queens, 3 frames nuclei, full colonies at the very lowest rates and safe delivery guaranteed. Send for catalogue to E. T. Flanagan, Belleville, Ill.

BEESWAX WANTED

Will pay 50 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 Campbellville station C.P.R. If by mail to

ABNER PICKET,

Nassagawaya P.O., Ont.

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

THE BEE-KEEPERS'

REVIEW.

For February is now out. (It has been delayed by the serious illness of its Editor.) The special topic of this number is, "Temperature" as applied to Bee Repositories. So much information upon this topic has probably never before been gathered together into so small a space. The treatment is exhaustive, and it would seem that nothing more need be said upon the subject.

Among the contributors to this number are such men as R. S. Taylor James Heddon. H. R. Bowdman, T. F. Bingham, J. H. Martin, J. A. Buchanan, and C. C. Miller.

Several pages are devoted to Editorials upon a variety of live topics. There are also choice extracts from the writings of Prof. Cook, C. W. Dayton, C. C. Miller and others.

A detailed list of contents will not be published, as a copy will be cheerfully sent to all who ask for it.

Price of the REVIEW 50 cents a year.

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,

Flint, Mich.

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PRINTING

Supply Men, Foundation Dealers,
and Bee-Keepers,

SEND FOR ESTIMATES FOR WHATEVER
YOU REQUIRE IN THE WAY OF

CATALOGUES,
PRICE LISTS,
CIRCULARS,
LABELS,
OR GENERAL PRINTING.

A large number of cuts in stock of
which patrons have free use.

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 today. 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, 10 $\frac{1}{2}$ in.; width, 13 $\frac{1}{2}$ in.; depth, 12 $\frac{1}{2}$ in. The frames are 10 $\frac{3}{4}$ x12 $\frac{1}{2}$ 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 \perp rests, and either 3 $\frac{1}{2}$ x4 $\frac{1}{2}$ or 4 $\frac{1}{2}$ x4 $\frac{1}{2}$ 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 \perp 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 40

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, as 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 \perp rests or skeleton crates, in prices of the comb honey hives. We prefer leaving the choice with the customer. If you use \perp rests you will require to buy 3 $\frac{1}{2}$ x4 $\frac{1}{2}$ sections; if skeleton crates, 4 $\frac{1}{2}$ x4 $\frac{1}{2}$.

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

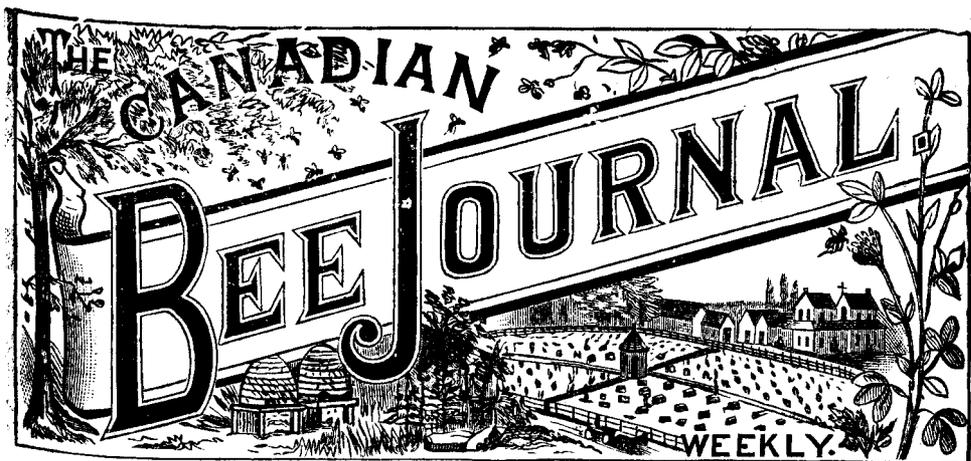
The super arranged as above holds 24 sections 3 $\frac{1}{2}$ x4 $\frac{1}{2}$ x1 $\frac{1}{2}$.

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.



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

VOL. IV. No. 1 BEETON, ONT., MARCH 28, 1888. WHOLE No. 157

EDITORIAL.

THE U.S. Senate Committee on Post offices has ordered a favorable report on the senate bill to reduce the postage on seeds, cuttings, bulbs, etc., to one cent per four ounces. Our readers will remember our reference to this matter a couple of weeks since, when we explained that the present rate is 16c. per pound, as against Canada's four cents. The bill, if it becomes law, as it undoubtedly will, will place U.S. seedsmen on an equality with the Canadian seed growers.

We must thank Mr. Ed. Bertraud, of Nyon, Switzerland, for the copy of his latest work on bees, entitled *Calendriere de L'Apiculteur*. It treats of the work in the apiary month by month, and should be a valuable acquisition to the bee literature of that country. The work is in French, contains 150 pages, is pretty fully illustrated, and is, we should judge, well worth the price asked.

Mr. Ivar S. Young, in the last issue of his journal, the *Tidsskrift for Biskjotsel*, acknowledges, his acceptance of the honorary membership tendered himself and Mr. Cowan at the last meeting of the Ontario Bee-keepers' Association.

The following we take from the *Monetary Times*:

A curiosity in bankruptcy is furnished by the London (Eng.) *Grocers' Gazette*. It is a first

and final dividend of .65 of a penny, which has just been announced by circular to the creditors of Hoge's Honey Company. Final dividends of a fractional amount have been frequently known, but a first and final amount equal to £2, 14s 2d in £1,000 is decidedly wonderful.

The above will be of interest to all those who are acquainted with the name of "Hoge," and almost everybody will recognize the name in connection with the adulteration of honey as put up by him for the London market. Thus endeth all such nefarious and unrighteous practices. A man's sins will generally be visited upon his own head, in some shape or form.

NO. 1--VOL. IV.

WITH this issue the CANADIAN BEE JOURNAL enters on its fourth volume, and, if we may accept the very kind words from the many subscribers who have so promptly renewed their subscriptions, we can believe that the third volume has realized their expectations to the fullest extent. We have endeavored to give value for the money received and we feel that we have done so pretty well. Our object has been to produce a bee-paper second to none, and if we have failed the fault does not rest with ourselves. We have spared no expense to give our readers all the latest and best things that have come before the apicultural world. We have endeavored to fill our columns with practical articles, and articles of

such a nature as to interest the amateur as well as the expert.

We hope during the coming year to do even better than in the past, and we want our subscribers, each and every one, to help us in this direction by furnishing us promptly with all the items of news which comes under their notice of interest to the rest of the readers of the JOURNAL.

TEMPERATURE FOR BEES.

THE February number of the *Review* treats of temperature in bee-repositories, and the conclusion at which the editor arrives after considering the articles from all his correspondents, is that 40° to 45° is about the proper thing—all things considered. If the colonies are strong and well protected the thermometer may drop to 35° without injury. This bears out our teachings of the past eight years pretty well. In our circulars issued as far back as 1881, we had a pamphlet on wintering, in which the temperature was given as from 40° to 46° . We have never had cause or reason to change these teachings, and we feel proud too, as does brother Hutchinson, to think that the question of temperature has been "settled," and that so closely to what we have always claimed and taught.

The Reversible Honey-Board and Super-Reverser.

WE have pleasure in presenting this week something further in reference to the new Reversible Honey-Board and Super Reverser which was illustrated and explained in the last number of the BEE JOURNAL.

The following letters from the gentlemen who tested them, though imperfectly and at a late date in the season, will speak more for them than any words of our own.

We have not patented, nor do we intend to patent any of the principles of this invention. We are going to trust to the honor of our opposition supply dealers, and bee-keepers generally, to give us the benefit of this invention without the protection of Letters Patent. The prices at which they will be offered to the public are scarcely in advance of what the ordinary honey-

board costs, so that we cannot be charged with extortion or with a desire to gain anything exorbitant in a monetary sense. If the principle be pirated by others it will be so patent to all observers, that the pirates will for very shame "give over" making what they have no moral right to, without permission.

WHAT MR. MARTIN EMIGH, THE PRESIDENT OF THE ONTARIO BEE-KEEPERS' ASSOCIATION, THINKS OF IT.

No doubt you remember sending me two of your Combination hives fitted up with your new Reversible Queen-excluding Honey-board and Super Reverser, with three supers for each hive with sections of different widths and different makes. You wished me to give them a trial and report.

I suppose you think the report has been a long time coming. Well, they say a poor excuse is better than none and here it is. The honey flow in this section last year was the poorest I ever had. Then the hives came very late, so that I had not as good a chance to test them as I would liked to have had before reporting. However, as soon as the hives came to hand I got a large swarm in each of them and succeeded in getting five supers fairly well filled.

You know I never was a believer in reversing sections, but everything was so handy on these hives, and having a curiosity to know the result of reversing, I went at it. I am satisfied it did no harm, and in one case where starters were used instead of full sheets of foundation it did good. It being a poor season, and honey coming in slow, the bees did not build comb to the bottom of section, but when it was reversed they filled it out to the wood. This is an important thing in shipping comb honey; as for convenience in putting in sections there can be nothing better. You have simply to pick up the sections and set them in on pieces of tin, as with the \perp rests, to catch the corners of the sections on. I don't know the price of these super reversers (as section rests) so I will not compare them with \perp rests or broad frames as to price, but I do know they are more convenient for putting in sections than either of the others. The ledge on the honey-boards and reversers (or rests) that fits down over the hive and over each super, is sufficient to keep out all wet, no matter how hard the rain may beat against the hives.

The cap or top board is the most simple in construction that I ever saw, yet it answers the purpose better than some of three times the cost. I have not had an opportunity to test it thoroughly yet, but intend to continue through the coming season, taking in wintering and spring

as well as the honey season. The bees in them are wintering splendidly so far.

PREFERS $1\frac{1}{2}$ INCH SECTIONS.

In regard to the sections, I prefer the $1\frac{1}{2}$ inch in width. I like the square groove better than the V groove. I think they keep their position better when put up. Under the circumstances I think you will grant me a longer time to continue the test, and should I find anything in favor of or against the hive, I will report to you.

Holbrook, March 13, 1888.

MR. ALLEN PRINGLE SAYS IT "COMBINES MORE OF THE ESSENTIALS FOR TAKING COMB HONEY WITH FACILITY THAN ANY OTHER ARRANGEMENT."

Last season I received from the D. A. Jones Co., for testing purposes, a new invention of fixtures, not then made public, consisting of a new Queen-excluding Honey-board and Super Reverser, covering a new system of reversing and taking comb honey. I was at once struck with the novelty, simplicity and facility of handling of the new invention, and thought "Eureka" if I did not utter it.

Unfortunately, owing to the dearth of honey now in the latter part of the season, I could not give the invention that thorough practical test I wished, but I am already quite satisfied as to its superior excellence. Some of the advantages I notice in the Reversible Queen-excluding Honey-board, the Super Reverser, Spacer, etc., are the following: Cheapness and simplicity of construction, facility of manipulation, the whole is rain proof and wind proof, apparently, on account of the one-eighth inch projection holding all closely and firmly; the bees have no chance to glue the sections together; it is superior to the tin rests because sections can be taken out or put in any place without difficulty, as they adjust themselves.

This invention, in my opinion, combines more of the essentials for taking comb honey with facility than any other arrangement.

Selby Ont., Mar. 10, 1888.

REV. J. CARSWELL SAYS: "ITS MERITS ONLY REQUIRE TO BE KNOWN TO BE APPRECIATED."

You asked me to let you know my opinion of the Reversible Queen-excluding Honey-board and Super Reverser used in the comb honey Combination Hive. I gladly give it, but it is not worth as much as if I was an experienced producer of comb honey, and was very familiar with all the appliances used in connection therewith. I would then be in a better position to compare the one with the other, and speak of the great advantages of the recent improvements you have introduced. Last season was almost the first

that I attempted to do anything worth mentioning at the raising of comb honey. I have heretofore confined myself mainly to the production of extracted honey, believing that it was more remunerative and that I could in this way better control the amount of increase. My experience of last year, however, has led me to take a great fancy to the raising of comb honey. I have hitherto used the Jones' hive exclusively and felt that it was not a success for comb honey. It is too large, and I found great difficulty in getting the bees to work in the sections, but the Combination hive, with the improvements recently added to it, make it in my estimation the very thing required, and I am not surprised that it won such general approval at the exhibition held last fall. One great objection to most of the other hives introduced, is that they are too complicated and require too many fixtures in connection with them. But the Combination is simplicity itself, all that is required in connection with it is the Reversible Honey-board and the Super Reverser, and these occupy but very little space. No section cases, skeleton crates, or tin section rests are required, and so there is a very considerable saving of cost as well as of apparatus to be obtained and stored away when not in use.

One difficulty that I formerly experienced in my attempts at the raising of comb honey was that the bees got the sections so firmly glued together that they had to be pried apart, and it was scarcely possible to take out any of them until the whole were filled. But in the improved Honey-board and Super Reverser the strips which pass over the joints preclude the possibility of the bees gluing the sections together so you can remove them at will.

Another great advantage of these honey-boards and reversers is that they are rain and wind proof. The slope all around the part exposed to the weather throws the rain off, and the ledge which projects down on the hive prevents the possibility of removal by wind however strong it may blow or however recently the supers have been put on.

I therefore predict for the Combination hive and its improvements a very extensive sale. Its merits only require to be known in order to be appreciated. I would heartily recommend those desirous of ascertaining what is the best hive for comb honey, to try the Combination with the new Reversible Queen-excluding Honey-board and Super Reverser, and I feel sure they will not be disappointed. To those who are already wedded to some particular hive and do not wish to change, the improvements I have referred to will also be a great boon for these Honey-boards and Super Reversers can be made to suit any hive.

Bond Head, March 12, 1888.

FOR THE CANADIAN BEE JOURNAL.
A MEDLEY.

THAT SONG — GIVING UP DISCUSSION — DR. MILLER — THE TITLE "REV." — THE STING TROWEL THEORY.

UNDER the heading "Editorial" in the C. B. J., of March 14th, reference is made to a lady having preferred a request in *Gleanings* that I would furnish a bee-keepers' song. The C. B. J. says it was wanted to be "played and sung as our International (bee) Anthem." This is incorrect, Mrs. Axtell, the lady in question, asks for a song suitable for use in our homes, and one that she could play for her company once in a while. She adds, "such a piece would be nice sung if played at our conventions." I do not understand that it was to be of the nature of an "International (bee) Anthem." In response to this request, I have sent to *Gleanings* a song on bee-keeping set to the tune "Come to the sunset-tree;" also a song for the working season, specially adapted to be sung out-of-doors; and, further, a song or hymn for use at conventions. The C. B. J. states that I am asked to do the poetical and Dr. Miller the musical part of the the task. This is not quite correct, either. I and J. P. Israel, of California, are asked to supply "some such poetry," and it is added, "Dr. C. C. Miller with tune also."

The C. B. J. goes on to say in reference to myself and Dr. C. C. Miller:—"Come, now! let these two worthies give up their "hibernation" discussion, and get down to work on this very laudable enterprise." I would respectfully ask why we are to give up our discussion? Is the subject of no importance? Are we showing an improper temper, or in any way violating the rules of gentlemanly courtesy? Discussion, properly carried on, as I believe ours to be, is the very life of bee-journalism. It is the fanning-mill in which truth is separated from the chaff of error. I cannot comprehend at all the dread some apicultural writers manifest of discussion. The bee-journals would be pretty dull and uninteresting if everything of this nature were banished from their columns.

I readily accept Dr. Miller's apology in the article that follows "Editorial,"—so far as it goes. But why does he speak with bated breath in regard to Prof. Cook's paper in the *A. B. J.* of 1875? He says the Professor "uses language which certainly may be understood as favoring the hibernation theory." If he does not use language which distinctly affirms the hibernation theory, then my memory is grievously at fault.

The Dr. is hard to please. He modifies his apology further by adding:—"Still I can't think

his treatment of Prof. Cook such as he (Mr. Clarke) would desire." Let me say, it is precisely such treatment as I would desire. I have obeyed the golden rule in this matter both in letter and spirit. If I had endorsed hibernation thirteen years ago, and some ten years after asserted that "bees do not hibernate," I should expect and wish to be called on for the reasons which had induced the change. I cannot see that there is anything unreasonable, unkind, or improper in this.

The Dr. says:—"Mr. Clarke should remember that additional weight is given and if right ought to be given to what he may say by the title attached to his name." I entirely dissent from this. I expect and ask no consideration because a stupid custom prefixes "Rev." to my name. I write on apicultural subjects as a bee-keeper—"only that and nothing more." I wish my views and arguments to be taken for what they are intrinsically worth—no more, no less. Nothing of weight is added to them or taken from them because of the title conventionally given to ministers. I give and accept the title under protest. I am no more "reverend" than any other man of my age, intellectual calibre and moral character. It is time we quit calling ministers "Rev.," especially when we find men like Dr. Miller calling for reverence for opinions because of that absurd prefix. The whole thing is unmitigated humbug, and when it comes to "Right Reverend," "Very Reverend," and "Most Reverend Father in God," it is enough to make two or three dogs sick. Why not call clergymen, "Preacher" or "Parson," just as we say "Doctor" Miller or "Lawyer" Pond? There would be sense in that. But it would be "letting down the cloth." Well, let it down to the level of ordinary humanity, where it of right belongs. "I myself also am a man,"—not a super-human or semi-angelic being.

That "sting-trowel" still worries the worthy Doctor. And now he quotes from my "Bird's Eye View of Bee-keeping" to show that I am altogether too positive. Well, perhaps that couplet is open to criticism, but "license of poetry" may be pleaded in mitigation of sentence. I assure my hyper-critical friend that I only put forth my view as theory or opinion. I cannot demonstrate it. I think it is not susceptible of ocular proof. He would have optics of a peculiar kind who could see what function the business end of a bee performs when it is in active motion on the surface of the cell-work. I infer from the movements made that the bee smoothes off the capping with sting and tarsus. The implements are adapted to the business. There is the smoothest of polishing tools, very

like what a shoemaker uses in polishing off the welts of a fine boot, and there are two of the most delicate of brushes. The outfit is complete for the function, and the movements of the bee suggest it to my mind. If I have spoken positively, I have simply affirmed an opinion, which I have reached as the result of observation and reflection. Now let the Dr. disprove, if he can. Simply to say "I don't believe that the statement's just quoted are true," furnishes no evidence of falsity. That is only the Dr.'s opinion. He is entitled to hold it, and I am not disposed to read him a lecture for propogating mischievous error, because he is not convinced by what convinces me. It may be "never harmless to propogate error for truth," but I do not believe that the heavens are going to fall, or all the Sabbath Schools in the land are going to be demoralised, or any other great calamity will befall mankind, because my theory about the "sting-trowel" has got into print. Some errors are certainly *comparatively* harmless, and I don't think any great mischief will be done by mine, if it be one. Let it go as the innocent hallucination of a "reverend" blunderer. I have no doubt the Dr. can join me in singing with all the pathos of deep and sincere conviction:—

"The mistakes of my life have been many.
And the sins of my heart have been more."

WM. F. CLARKE.

St. Thomas, Ont., March 19th, 1888.

For the Canadian Bee Journal.

"HEDDON'S HONEY-BOARD."

I MUST say that for claiming what belongs to another, Dr. Tinker is well nigh to the front. On page 1013 I find a copy of his article which was printed in the *Apiculturist*, objecting to "Heddon's Honey-board" and putting in place of it, one of his own. I was not aware that he had any, and I still think he has not. Eight or ten years ago I invented a honey-board to take the place of the old Langstroth honey-board, and made that board one-quarter inch thick, in its general surface, rather than seven-eighths as all I had ever seen, had been. To give it solidity and strength, and to give it a bee-space on one side, I made a rim around it, and I also arranged the slots of which the general surface was composed in such manner that the slots or openings between them came over the centre of the top-bars of the frames below, and any honey-board now in use which contains either of these features is a "Heddon Honey-board," and when this question was raised at the last joint convention at Chicago, there was not one dissenting voice to the facts as above stated. Now I still hold, after using thousands

of them, and hearing from customers who have most successfully used tens of thousands, that this break-joint principle is most valuable.

I feel sure that the Dr. will find it out after a while and be loud in its praise, and I do hope that he will as much as mention the name of the known inventor when he does. The whole thing is described and illustrated in a back number of this JOURNAL, Vol. 3, page 196, and also in my patent, where it is patented in combination with reversible brood-chamber, etc. If the Dr. has a honey-board, that does not contain either the bee-space in either of its surfaces, or divided between them, nor use the break-joint principle, whether it is or is not a combined wood and metal honey-board, it is no infringement on my invention; but if this (?) honey-board has either, it is simply a Heddon honey-board tinkered, and as is apt to be the case, tinkered half to death. But now about the combined wood and metal? D. A. Jones has the honor of the successful use of queen excluding metal. "Oh! Rats," says one, "Why I can find it described in an old book." "Why I know a man that saw a man who heard a man say he used it very successfully (?) years and years ago." When? Why did he abandon such success? Why did he not bequeath this great success to posterity? But who cares for common sense, that and "patent law" declares that the fact of abandonment and subsequent adoption of things claimed to be alike, is evidence sufficient to negative that claim.

But to return. So far as I know, Mr. Jones or A. I. Root was the first to make honey-boards out of this queen-excluding metal, and I was first to attach my rim to it, so as to cause that honey-board, like my old one, to contain a bee-space, and then I cut strips of zinc containing one row of holes and tacked onto either side of my slat honey-board, and then about at the same time, and wholly unknown to each other W. Z. Hutchinson, C. E. Boyer, Dr. Tinker and myself thought of the device (not an invention) of placing these strips in saw-cut grooves, in the centre of the edges of the slats, instead of tacking them onto the sides of the slats, as we had heretofore done. They are no better placed in this way, and serve no purpose nor produce no new function, not so served and produced when tacked on, but it is the cheapest and quickest way to attach the zinc strips, and is a good and worthy device, and as Dr. Tinker was the first to publicly describe it, it is morally his, and was quite appropriately given to the public by him in Feb. 1886, (see *Gleanings in Bee-Culture* for that year, page 203) while at the same time he gave away, cheerfully, and even hilariously,

some of my most important inventions, but many who well knew that Mr. A. couldn't successfully give away Mr. B's. cow, refused to accept them and from the others I rescued them, with the kind aid of the Dr. It will not be forgotten that up to the last minute before my book published my new hive to the world, our friend Dr. Tinker was rigorously pleading for a hive the basic new principle of which was "continuous-passage-ways," "No bee-spaces," "Set the boxes right down on the frames," "Away with honey-boards with bee-spaces in them." (It is pretty difficult to construct a honey-board without a bee-space in it, that has a thin general body, and yet is solid and strong.

The Dr. tells us that eight rows of queen-excluding passage-ways in a honey-board, do not give room enough for the workers to do their best surplus storing during the honey harvest. Well I have 400 of them in my apiaries, and have made most careful experiments several times, and with as many as 100 colonies on each side, and I am now ready to go on record as saying that even half that passage space will show no lessening of surplus. That room is more than ample. The Dr's. "foot-hold" theory won't wash, as every practical honey producer and careful observer must know, but if it would, this valuable discovery is just as applicable to one row of holes, as to two.

In order to, determine what space was best for the slats when one row of holes was used, we used several different ones, and again you may place us on record as saying that the Dr's. "foot-hold" theory will never show in practice. Not a bit of it.

With best wishes for the bee-keepers of the world, I subscribe,

JAMES HEDDON.

Dowagiac, Mich., March 10, '88.

Our object in copying the article, to which Mr. Heddon refers, was to exhibit to bee-keepers the value of honey-boards generally. We did not, until our attention was called to it by the receipt of the above letter, observe the last paragraph, at least it did not strike us as intended to raise the question of priority of invention. We did not care who invented it, so long as it showed the general utility of the honey-board. In so far as we know, to Mr. Heddon *does* belong the honor of the invention of the use of perforated metal in strips for queen-excluding honey-boards, at least we first got the idea from him through Mr. J. B. Hall, of Woodstock, with whom we think he had some correspon-

dence, in the winter of 1886. What was said of the matter at the time can be found by reference to pages 245 and 286, Vol. II. In the article by Mr. Heddon on the latter page, he gives Dr. Tinker, C. E. Boyer, W. Z. Hutchinson, as well as himself, credit for this invention, which he claims was thought of spontaneously by all, each without the knowledge of the other. It strikes us, however, that there is rather too much inclination to touchiness in this whole matter, all round. If a little more charity were exercised it would be better. Suppose someone does lay claim to an invention that we believe belongs to us. Those whose opinions we value and care for will understand our claims and will place a proper estimate on the statements of the other claimant, and that is all we care for. Let us give an instance of this. There is no one whose opinion we value that will not give us credit for inventing the wax extractor which we brought out and patented some years ago. Yet there were some who claimed it as *their* invention, and they made extractors somewhat similar the next year, and offered them to the public as their own. Instead of raising any disturbance, we allowed the matter to rest quietly, and *to-day* we think no one is making the extractor except ourselves, and we enjoy the good-will of everybody with respect to it. We do not uphold piracy, but we do think that a great deal of it is done "on paper" only, and generally with a desire, chiefly, to tantalise and annoy. If less attention were paid to it there would soon be no desire to tantalise or any object in doing it.

For the Canadian Bee Journal.

Prof. Cook Speaks on Hibernation.

SINCE my "medley" article was mailed to the C.B.J. office, *Gleanings* for March 15th has come to hand, which contains in the course of an article by Prof. Cook on the "Food of Larval Bees," a couple of paragraphs on hibernation. The subject appears to have no direct connection with the topic set forth in the heading, and is introduced as a sort of episode or digression. The Prof. begins by remarking, "I had thought I would say no more on hibernation," but why or wherefore, he does not see fit to explain. The reason he speaks now is because "our young bee-keepers are likely to

be misled, and so a word ought to be spoken." The Prof. must be aware that there are a great many old bee-keepers who believe in the hibernation of bees. Are they not worthy of some thought as well as the young ones? I do not like that word "misled," but will charitably hope it is not meant to convey the idea that any body is trying to mislead the inexperienced in regard to this matter. The following is what the Prof. deems it necessary to say for the benefit of juvenile bee-keepers:—

"This winter I was at Dr. Miller's. His cellars were at the regulation temperature, 45° F. We carefully examined hive after hive, and the bees in every case, if we watched patiently, could be seen to move. I examined several colonies in my own cellar, with temperature at 38° F., and again, at 30°. In every case a little patience would detect the bees crowding into the cluster. I have several winters kept nuclei in observatory hives. By careful attention, I found the bees were never stationery for any considerable time. I say then that if bees sleep in winter, their slumbers are, in every one of the numerous cases that I have examined, under very varied conditions, very frequently disturbed.

"Bertie, in splitting wood the other day, came across some black ants. They seemed utterly dead. Pinching or rough treatment of any kind would not arouse them at all. They were brought into a warm room, and soon were wide awake and lively. These ants take no food the winter through. The same is true of wild bees. The bees move, and must eat, or die. If we say the bees hibernate, what do the wild bees, wasps, and ants do?" [Ans.—Hibernate in a more profound degree. W.F.C.] "I think the word hibernate had better be used to designate the ant's winter state, and quiescence or inactivity that of the bees. If bees truly hibernate they would not consume more honey in a cellar whose temperature was 32° F., than in one with a temperature at 45° F., but I am sure they do. Now, Mr. Editor, I would suggest that writers for our bee-papers do not write from mere closet meditation, or simply from the outpourings of their inner consciousness, but that they go to the bees and question them, and give us facts, then we shall have less chaff."

I have but little criticism to offer on the foregoing paragraphs. They assume that hibernation has only one degree; that it must be absolute, and perfect, or else it is some other condition. We had that black ant illustration from Mr. Doolittle long ago. Now, Prof. Cook is well aware that the scientific books clearly declare hibernation to be partial in some cases, and

complete in others. It is not necessary that an animal or insect should sleep all winter long, never awaking or partaking of food, to constitute it a hibernating animal or insect. The squirrel wakes and eats often, yet it is a true hibernator. If wild bees, wasps, and ants,—relatives of the domestic bees,—hibernate in the fullest sense, it would seem highly probable that our tame bees have the same habit, though in a less degree. If bees do hibernate, it is in a favorable temperature. At 32° F., they cannot settle down into that state of "quiescence" which the Prof. describes as their "winter state." I should say they cannot hibernate in so cold an atmosphere. They are obliged to take exercise to keep them warm enough, and exercise creates a demand for more food.

I do not know to whom the Prof. alludes in his closing fling; perhaps to myself. If so, he is barking up the wrong tree. I do not write from "mere closet meditation." My apiary is about the same size as his, and I very much doubt if he spends any more time in watching his bees and questioning them than I do mine.

WM. F. CLARKE.

St. Thomas, March 21st, 1888.

For the Canadian Bee Journal
Interesting Report from Rev. Mr. Carswell.

THOUGH you were kind enough to give me a place on the list of contributors to your JOURNAL, I have not for a considerable time availed myself of the privileges of this position. I do not suppose that anyone would have noticed this had I not mentioned it, nor do I think that any of your readers have lost much by my reticence. I have always felt that the field was so fully occupied, and the topics upon which I would have written been so much better handled by others, that the best thing I could do in the interests of bee-keeping was to maintain a judicious silence and "tarry at Jericho until my beard was grown." I have however been a very interested reader and have tried to put into practice the information communicated as far as it commended itself to me, and hope some day to attain to manly proportions among the bee-keeping fraternity.

I have recently filled up the schedule received from the Bureau of Industries as follows:—

No. of colonies commencement of season 1887	30
Increase	14
Put into winter quarters	44
Lbs. extracted honey received	2830
" Comb " "	100
" Wax " "	25

Had the season been of the ordinary duration and the honey flow continued as good as it was during the short time it lasted, my yield would have been very large; still, compared

with the reports received from other parts I have no reason to complain. The large amount of alsike clover grown in the vicinity largely accounts for the productiveness of this locality over many others from which we have heard.

During the past season I made my first attempt at the production of comb honey. Near the end of June I put first swarms into two of the Combination comb honey hives with foundation in the brood chamber and supers, and the the reversible honey board and reversers between the supers, and received fifty pounds of the loveliest oomb honey from each. So attractive is it that my better half has had to keep it concealed in order to retain it for home use.

I have thirty-one colonies packed in chaff outside and thirteen in the cellar. The former got a cleansing flight last week and seemed to be in good condition. The latter were doing well when examined about two weeks ago. I never anticipate losses, but having complied with the conditions of success I confidently expect my bees to winter well and so far have not been disappointed.

J. CARSWELL.

Bond Head, Feb. 26th, 1888.

For the Canadian Bee Journal.

BEE-FORAGE IN MUSKOKA.

AS Muskoka is beginning to attract some attention as a bee country and to get its share in your discussions I venture to make a few remarks on its natural bee forage. During a seventeen-years' residence here, and in many wanderings through the bush, going to school, picking berries, visiting and even cow-hunting, the flora has amazed and delighted me. In different stages of clearing, different plants on different soils spring up, causing discussion as to their origin—for me the old germ theory is enough, and "whose seed is in itself" answers all questions.

As the soil is varied and the surface is uneven the bees have abundance of bloom to choose from if the weather is favorable. The river and lake margins abound with willow and alder, the bush yields maple, hard and soft, elm, basswood, and cherry, and the burnt pineries raspberry and blackberry. Strawberry and dandelion abound in the clearings. The roadsides and bush paths are covered with clover. The swamps give swamp maple and rowan. On top of the rocks we have huckleberry. Around the creeks and ditches are asters of every color, while fireweed, thistles and golden rod fill up the vacancies. These plants are here, belong to the soil and climate and hold their own. Strange plants do not.

Vipers Bugloss we tried and found wanting. The first plants we got were well cared for and as far as growing was concerned they did well. They grew large and strong and multiplied ex-

ceedingly, were visited by bees of every size and shade, except our own. Neither black nor Italian deigned to touch them and any plant that shows its head gets cut down. The spider plant was a failure, the drops of honey were there but the bees were not. Bokhara clover grows well in places and the bees work on it, but unless fenced in the cattle destroy it. Catnip and hoarhound grow but do not seem to yield honey.

The Chapman honey plant will be the next on trial. It may be better.

If burnt or waste lands are to be sown, why not sow them with clover—alsike or white. They grow wherever seed has been dropped and afford pasture for cattle, sheep and bees. Here at least clover has always yielded honey. On clay land it may be different.

With all this wealth of bloom Muskoka might be supposed to be a bee-keepers' paradise, but it has many drawbacks. The worst of these are short seasons, summer frosts and severe winters. Some winters the thermometer has gone down to 45° below zero.

Could the editor or someone tell me if there is a work on Canadian botany, if so, its price and where to be had? Would they also give a few hints on mounting pressed plants, and whether best in sheets or book form?

The C.B.J. helps us very much, and when the able correspondents it now has get tired, we will send some of our experiences, but think you will head them, "Blunders in bee-keeping."

ISABELLA SMITH.

Bracebridge, Ont.

We note you do not mention boneset which produces large amounts of honey in many localities in Muskoka. The willow herb, or fire weed, as some term it, grows in great profusion where the land has been burnt over. It generally yields for six weeks, sometimes two months. The sowing of Alsike clover should be practised on all burnt lands and waste places. Alsike clover seed was sold at about \$5. hundreds of bushels being marketed here. We shall ask one of our friends who is well up in botany to give us some hints on preserving and mounting flowers.

Remember that we are now able to furnish you with Barnes' Foot Power Machines, at the very lowest figures obtainable, and we shall be glad to have your orders. One customer, who has had one of the combined machines for about three months, says that if another could not be obtained, he would not part with his machine for \$200. The complete machine cost him \$60.

For the Canadian Bee Journal.

Have It All Capped.

I HAVE just read Mr. Edwin France's article on page 1033, where he says: "If two-thirds is capped over, the honey is all right, don't wait any longer." Now I think he ought to wait until the other third is capped; at all events we should preach three-thirds capped, and then there will be plenty of two-thirds capped honey for sale. If we preach two-thirds capped, there will be lots of one-third capped produced; if we preach one-third capped, (the same as we did years ago) there will be any quantity of honey on the market that never saw a cap at all. Have it all capped and then you are sure that you are not extracting cells that were filled the day before. If this man's location is the same as mine, and if he will leave his clover and basswood honey in the hive until it is all capped, he won't need to bunch his barrels together in bunches "according to thickness," as it will all be first class.

Bees seem to be wintering good in this locality. My 210 colonies seem to be in fine condition so far. The thermometer ranges from 52° to 56°, midway between ceiling and floor bottom.

JACOB ALPAUGH.

St. Thomas, Ont.

American Agriculturist.

FEEDING BEES IN SPRING.

IT is an old saying and a true one, that it takes more honey to spring bees than to winter them. The only opportunity for putting things to rights for spring, is during those fine days in March, when the bees are flying freely, as it is very damaging to handle them at any time during cold weather. It is always very troublesome to furnish feed to bees in mid-winter. Yet, if we have neglected the matter in autumn, we can still provide for them, but in a different manner. It will not do to feed liquids of any kind during winter. The feed must be supplied in the form of good, well-sealed combs of honey, or candy made from the best quality of sugar. This candy is as good in every respect as honey, and many think it better. It is made by boiling granulated sugar to which water has been added, and molding it into cakes or slabs of any desired form. This is placed on top of the frames of comb, where the bees have access to it at all times. A heavy packing must be applied outside the entire hive to economise the heat, so that the bees may cluster about the candy. If this matter is properly attended to at this important period, the bees will need but little attention until warm weather, when we can

safely feed syrups of any kind. From early spring until the honey flow, it pays well to feed every colony a little daily, even if they have abundance of honey in the hive. It stimulates brood rearing, and it is only by such judicious feeding that we can bring a colony up to the highest condition. It is from such that we reap the richest reward during the honey season. Such colonies are usually ready to swarm two weeks earlier than others, and powerful swarms result, instead of "hatfalls." Whether bees are wintered in cellars or in chaff hives, they should remain in their winter quarters until settled warm weather comes in, which may be from the middle to the last of April, and sometimes even later.

SUNDRY SELECTIONS.

BEES IN GOOD CONDITION.

WM. J. ROBINSON.—As I have been looking at my bees I will just say that they are in good shape, the cellar registering 42° this last month. I believe that I have an A 1 cellar for wintering. The CANADIAN BEE JOURNAL is improving every number. I think no bee-keeper should be without it.

Orangeville, March 20, '88.

L. W.—Bees seem to be wintering well so far. I have forty colonies in the cellar and they have shown no uneasiness yet. I am wintering thirty colonies outside in shells packed with sawdust. I never wintered any outside before. I lost one by the cover getting off by some means or other, long before I saw it. Those outside have been flying for two days. I had three swarms snowed under by snow drifts. I let them stay so until it began to thaw, then for fear of ice forming at the entrance, I dug them out. They were all right and one had the snow thawed a foot from the front of the hive underneath the snow.

THE SEASON AROUND PORT ELGIN.

A. BECHTEL.—The season in Port Elgin for 1887 for those that keep a few colonies of bees was a very poor one for honey, and some even got no increase of swarms. I myself live three miles out of the village and right beside a large tract of waste land that has been burnt over by fire, where all sorts of wild blossoms grow. I commenced last spring with fifteen colonies, increased to thirty-six, sold three swarms, doubled up a few in the fall and put twenty-eight colonies in winter quarters which seem to be all right as yet. I tried to keep them at one swarm a-piece, but a few did cast out two swarms and I extracted 1540 lbs. of honey and I got thirty pounds of comb honey. I have got a number of full combs ready for spring use if they should be needed. My bees gathered honey in September and October, so that they increased in weight. The basswood was of short duration only lasting one week, and the honey is very strong, being

such dry weather. I think on the whole I did fairly well for such a dry summer.

Port Elgin, Feb. 10th, '88.

A REPORT FROM MISSOURI.

A. JESSIMAN.—I received your notice this morning all right. Business is business and must be attended to, so I promptly reply. And gentlemen, I may first say by way of encouragement that I am much interested in the C.B.J., and am glad to see it coming up shoulder to shoulder with our best American bee journals, but I am not surprised at this for I know something of Canadian enterprise and energy, having lived in the city of Toronto eight years, and although I am not an American (but a canny Scot raised to manhood among the heather) yet I must acknowledge that I find the American people second to none in all that makes a people or a nation great. (And they are masters in bee keeping.) Missouri is a good state for bee-keepers, but last year was a failure, no surplus honey being secured. I set my bees out from my cellar on the 15th of March, having wintered them without loss, some on summer stands, some in the cellar, all in good condition. But I think those that were out-doors are in a little the better condition and seem a little more energetic. They gathered honey and pollen on the 15th inst. one day earlier than last year and two days earlier than 1886. I may add that in wintering bees I don't know that I have any preference in either way of wintering, that is, outside or in cellar, with pollen or without, disturbed or left in perfect quiet. But I do know that I can winter my bees either way successfully. I am not a specialist nor am I a bee-keeper of great experience, but I believe I know a thing or two about bees, and when bee-keepers know a little more about bees and their wants, they will be better able to keep bees successfully.

Independence, Mo., March 19, 1888.

EXTRACTING FROM UPPER STORY.

JOHN NEIL.—As you ask for a report I shall endeavor to give you a short account. In the fall of 1882 I bought one skep in box hive for \$5. Packed in chaff for winter; in the spring of 1883 increased three, gave one away in the fall and packed three, lost one that winter and started spring of 1884 with two in box hives. Increased four and sold two for \$10 but got very little honey. Packed four in chaff that fall which came out all right in 1885, increased to eight and got one hundred and seventy pounds of honey. In the spring of 1886 the eight all came out. Had seven of them in rack hives. I ordered six Jones hives in the spring and increased to fifteen taking 670 pounds of extracted honey. In the winter of 1887 I lost four and started with eleven some very weak. Increased to seventeen and got sixty pounds per colony spring count. This was a poor season here. I would like to have your opinion in regard to upper story for supers for extracting from. Would you advise me to give the queen full size Jones hive for brood nest and put Jones hive on top for extracting from? or do you think it too deep? I was thinking of giving plenty of room to both queen and bees to prevent swarming. I have them packed in clamp in chaff. I like the CANADIAN BEE JOURNAL very much and feel disappointed when it does not

come regularly, because there is so much information in it.

Lieury, Mar. 5 1888.

Your idea of putting on a second story is a good one, when you don't want increase. Before the bees go into the second story they will fill the first with brood and honey. They will leave their stores for winter, and you can extract from the second story and after the honey season is over, in cool autumn weather, remove the top story. You should use the perforated wood and metal queen excluder between the stories to keep the queen down. We tried the above plan and had some very powerful colonies last year.

SUGAR CANDY FOR FOOD.

W. J. SMITH.—Kindly give your opinion of feed for bees prepared in the following manner: Take granulated sugar, say 10 lbs., with sufficient water to dissolve it. Boil sufficiently so that when cooled it would become hard. Cut into strips four or five inches wide, by ten or twelve inches long and place on the frames over the cluster. Would you consider the above mixture a good preparation for bees that are short of stores now? Do you consider it in any way injurious? Would not sugar prepared in this way be too hard for them to receive the desired benefit? I put into winter quarters thirteen swarms packed in chaff seven inches from outside at entrance, eight and one-half between, eleven inches at back and fourteen inches of chaff on top. February 21st being a fine day I opened one swarm and found that they were starving, but not dead, being in full possession of their stinging facilities. Not having any feed suitable for winter I was at a loss to know what to do, when I remembered hearing a practical bee-keeper say for winter feed there was nothing better than honey and granulated sugar mixed. I took about a cupful of honey and mixed it stiff with sugar. I then took a cover of a pasteboard box, cutting a hole in each corner, filled it with the mixture, placed it upon the frames and covered them up gently. Today, 14th March, upon opening them to my surprise I found them all dead. The honey was all gone—they even carried some of it down into the combs and the sugar was all at the bottom of the hive, which seems somewhat strange. Since the 21st of Feb. two more swarms have died, leaving ten. I expect that most of them will die before spring, as we have not had a day fine enough for them to fly. Cold honey and sugar mixed is in my estimation a poor food for winter. If the honey was warmed enough to partially dissolve the sugar, it might work all right. Awaiting reply.

Monticello, Ont., Mar. 15, 1888.

If it was cooled very quickly, so it retained more moisture and became waxy, not giving the sugar time to granulate it would answer the purpose very well, but we would prefer to have the liquid part

of it honey instead of water. We have just made a large quantity for our customers, it is about one-third honey, and was heated until sufficient moisture escaped that when a portion was dropped on ice and allowed to cool it would just break, but if not thoroughly cooled would bend instead. It is not in any way injurious. Yours would be too hard. To have the honey incorporated with the sugar by heating we consider a decided improvement. By mixing the honey and sugar cold, the bees would separate the honey, and the sugar would drop to the bottom. We advocate the heating of the honey and sugar until they are thoroughly mixed. We know of no reason why you should lose any more colonies, as you could put granulated honey on top of cluster until you had time to prepare the candy for them. We once found a colony out of stores and a little lump of granulated honey seemed to give them all a feed until something better could be prepared. If the honey is not well granulated you might put on the top of the frames two pieces of comb, one each side the cluster, one or two inches apart, putting the feed in the combs, placing a stick on the outside of each, putting another comb over it. The empty comb on top retains the heat, the sticks below support it half or one inch above the other combs, and No. 2 would prevent any dripping or loss of honey or syrup. This arrangement would keep them from starving. They might be fed continuously in this way until they could fly. We trust you will adopt some means at least to keep them from starving.

BEE-KEEPING AS A BUSINESS.

MRS. H. SWITZER.—I have sent you no report since I was in blasted hopes. In 1882-3 we lost nearly all our bees. Husband felt very much discouraged in bee-keeping, and said he would give it up, that there was no profit in it. By this time I had become more acquainted with the sweet pets and believed that if they could be successfully wintered and cared for, there was both pleasure and profit in them. I persuaded him to buy more in '83, since then we have been successful; in '86 we increased from 52 to 78 and extracted 1,900 lbs. of honey. In '87 we had more bees than we could care for, owing to the farm and three acres of strawberries and we were obliged to have an auction sale, which we did May 30. The bees went higher than we expected as it rained nearly all that day; colonies with seven combs of brood and four empty frames went at \$10.85, the weaker ones went at

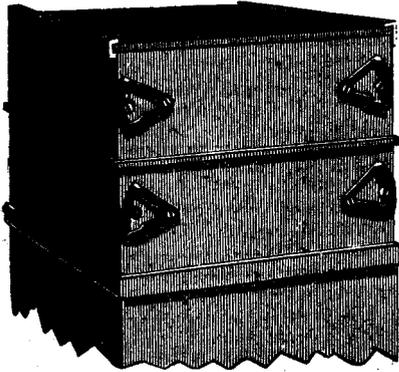
\$6, \$7 and \$8 each. We had the number of each colony and its strength entered in a book, so there was no need of examination on the day of sale. We sold down to 27 colonies and from these increased to 52 and extracted 1,400 lbs. of honey, besides they had nearly enough to winter on. I think it is labor lost and money out of pocket to extract closely and feed sugar, as the majority of bee-keepers are tardy in feeding and do not give enough at that. The returns from our bees last season were \$370. I think a bee-keeper cannot be successful without reading bee literature. Some of the men that bought at the sale knew as much about bees as the bees knew about them. We advised them to subscribe for the CANADIAN BEE JOURNAL, but they thought they could get along without it. As far as I can hear they will be back in spring to buy more. Perhaps then we shall have more influence. We always find very ready sale for honey, and no expense for canning as customers bring their own jars. We cannot fill all the orders that come in. We take good care to inform customers that honey will candy when cold weather comes, and to keep it in a dry place. I know a bee-keeper that has lost a lot of his customers by not doing so; the grocers say they cannot sell granulated honey. I have read in newspapers and leaflets about why honey should be eaten, but never yet saw an article on the granulation of honey, if published there would be a greater demand for it. Our experience for the five years has been confined exclusively to wintering on summer stands, packed with dry saw-dust. The first fine days in March we go over all the apiary and remove the dust from the top, cut a hole in the quilt and place a jar of warm, thin syrup over the cluster. A piece of new cheese-cloth is the best to tie over the jar. We quickly put back the dust again so the syrup will retain the heat. This is a very successful way of feeding colonies short of stores, as it does not disturb them. Thus far our bees appear to be very strong; some of them had a flight in February. Last season we had four colonies of fertile workers, we lost more queens and queen cells than would start a small apiary. I am pleased to say that we found an easy way to conquer them. We took all the combs and adhering bees and gave them three combs of brood with queen cell. We then took all the workers off their combs and gave them to strong colonies. In two weeks they all had laying queens. H.S. makes all his bee fixings in winter although he has been a great sufferer from asthma. I am glad to say that in September last he was completely cured under the treatment of a skillful physician in Toronto. The treatment was burning the nose internally and cutting a piece off the uvula.

Fergus, March 7, 1888.

We think all had better make a sale and have it come off on a rainy day if the best colonies will bring \$10.85 and weak ones \$6, \$7 and \$8. You certainly got a very fair price for them. Such a sale of bees paid better than any farming you have done for many years. Three hundred and seventy dollars were much more easily made than any similar amount from a farm, considering the

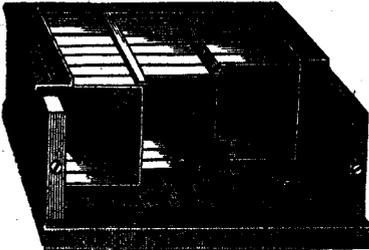
OUR NEW Reversible Honey - Board —AND— SUPER REVERSER.

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.

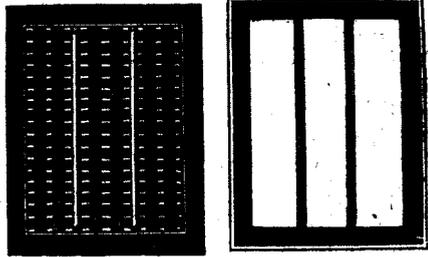


IN THIS ENGRAVING THE SECTIONS ARE SHOWN AS RESTING ON THE HONEY-BOARD WITH THE REVERSER COVERING THE JOINTS OF THE SECTIONS.

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, skep-cases, L rests, etc., is done away with.
5. The hive and supers are rain proof and wind proof.

6. The trouble of having the sections propolised together is done away with entirely.



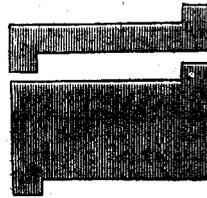
SHOWING REVERSIBLE HONEY-BOARD AND REVERSER.

7. A most perfect and exactly correct bee-space 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.

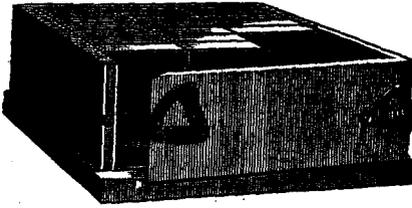
12. There being less weight and bulk the shipping charges will be much less than ordinary.

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 capitally. When the sec-

tions 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.

	made up	in flat
Portable Supers each.....	\$ 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.

EXCHANGE AND MART.

SECTIONS.—We have a large lot of V groove sections put up in 500 boxes in the following sizes, viz., 3 1/4 x 4 1/2, 3 1/4 x 4 1/8, double slotted, which we will sell at \$2 per package, and will take as pay either honey or cash. THE D. A. JONES CO., Beeton, Ont.

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.

\$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.

'Practical Hints to Bee-Keepers'

Sent free. Address
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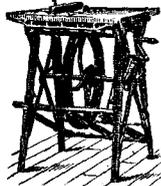
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Only 25 cents per year, sample copy free. Address
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Read what J. J. PARENT, of Charlton, N. Y., says—"We cut with one of your Combined Machines last winter 50 chaff hives with 7 inch cap, 100 honey racks, 500 broad frames, 2,000 honey boxes and a great deal of other work. This winter we have double the number of bee-hives, 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. & JOHN BARNES 544 Ruby St., Rockford, Ill. 21

SPECIAL NOTICE.

I have moved to Shelburne, and have purchased a very large factory. It is the largest factory in which bee supplies are manufactured in Canada. Our dry-kiln cannot be surpassed. We are ready for a rush; Sections away down. The best manufactured Foundation in Canada will soon be ready to ship. Send for Price List before purchasing elsewhere.

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

BEEES FOR SALE!

I will sell about 50 colonies of bees at the following rates:

24 and under.....	\$7 50
25 and over.....	7 00

They are in Jones' S.W. and Combination hives. FOR DELIVERY IN MAY at Beeton or Alliston R.R. station.

SAMUEL BRAY, Beeton, P.O.

NEARLY 30 TONS

Dadant's Foundation

SOLD IN 1887.

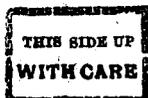
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 - CHAS. HERTEL, Jr., Freeburg, Ill.
 - E. L. ARMSTRONG, Jerseyville, Ill.
 - ARTHUR TODD, 1910 Germantown Ave., Philadelphia.
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- and numbers of other dealers. Write for SAMPLES FREE and Price List 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.

SHIPPING LABELS.

These are for pasting on the tops of cases.
Price, per 10, 5c. by mail, 6c.
" 100, 25, by mail, 27
" 1000, 1.50 by mail, 1.60



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

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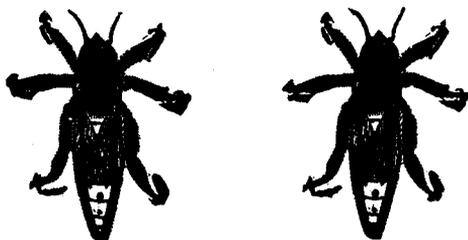
Manufacturers of and Dealers in Apiarian Supplies

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.

BEES.

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.

BEES 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 speciality 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 handling 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.

15,000 SOLD SINCE 1876.

The fourteenth thousand just out. Tenth 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.

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

A. J. COOK, Author & Publisher,
STATE AGRICULTURAL COLLEGE,
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250 ENVELOPES

—AND—

250 NOTE HEADS

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

CANADIAN BEE JOURNAL OFFICE,
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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.

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BEES FOR SALE CHEAP.

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

Address

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BEES AND HONEY

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

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furnished at a great reduction in price. A full line of supplies always on hand. I also have on hand for sale at all times, Pure Italian Queens, Bees by the pound, Nuclei and Full colonies at very low prices.

Send for Catalogue.

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Sterling, Ill.

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.
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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.

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.

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