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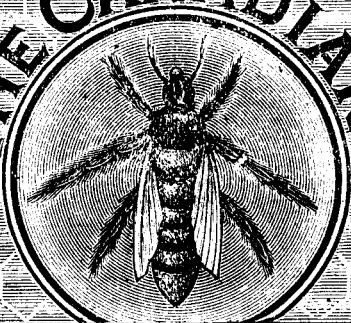
VOL. III, NO. 39

1887

DECEMBER 21

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

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- 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
- FOUL BROOD, ITS MANAGEMENT AND CURE by D. A. Jones. Price, 11c. by mail; 10c. otherwise.
- 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.
- 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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Send us the names of three subscribers with \$3 in cash and receive us a premium one C. B. J. Binder.

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

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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. 30 cents per year extra; and to all countries not in the postal Union, \$1.00

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"American Apiculturist," monthly.....	1.75
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"Bee-keeper's Guide," monthly.....	1.40
"Rays of Light".....	1.20
"The Bee-Hive".....	1.25

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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7 1/2 Cords of Beech have been Sawed by one man in nine hours. Hundreds have sawed 5 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., 308 to 311 S. Canal St., Chicago, Ill.

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

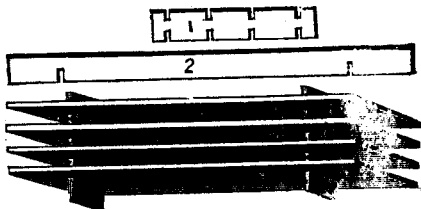
## FEEDERS.



We have quite a number of the ordinary Feeders yet in stock which we will sell at 40c each; per 25, \$8.75. These cannot go by mail, so must be sent by express or freight.

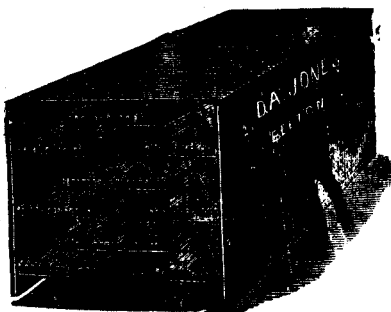
## IMPROVED CANADIAN FEEDER.

This is the Feeder spoken of on page 610 of the current volume of the JOURNAL. It is arranged with the float as shown in the engraving below. Holds 12 to 15 pounds of feed, and



may be divided making two feeders if needed. The price is 50c. each, made up per 25, \$10.00. In flat each 40c.; per \$8.75. All orders can be filled by return freight or express.

## WINTER FEEDERS.



For feeding in winter, or at any time when the weather is too cold to admit of feeding liquids.

Price each, made up.....	\$0 30
Per 10, ".....	2 75
Price each, in flat.....	20
Per 10, ".....	1 75

These are placed above the cluster, filled with candy which is made by taking pulverized or granulated sugar, and stirring it into honey nicely warmed up, until the latter will not hold any more in solution. Allow the mass to stand till both are thoroughly mixed. Then place in Feeders and set over frames, packing around nicely to keep in the heat.

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

# HONEY WANTED!

We will take all the No. 1 EXTRACTED HONEY that is offered us at

**10c. PER POUND**

In exchange for supplies at our Catalogue prices. The honey is to be delivered at our own station, charges paid, but where it is sent to us in our own style of sixty pound tins we will allow 30 cents each for them or we will return them to the shipper at his expense. We cannot undertake to pay for any other style of package, though we will be agreeable to return them when empty.

For No. 2—off color— we will pay 9 cents per pound, same conditions as above.

For No. 3—Buckwheat and unsaleable grades for table consumption—we cannot offer more than 6 cents, as above.

Samples had better be sent us in all cases. They can be sent us safely, in small phials, which must be packed in wool or batting and put in a pasteboard box of suitable size.

For prices where supplies are not wanted, write us.

If you are satisfied that your honey will rank No. 1, you can send it along without sending sample.

Always send us an invoice of the weight and number of packages and put your name on every package.

Where it is not convenient for you to prepay the freight, we can pay it at this end and charge the amount on account.

The D. A. JONES CO., Ltd., Beeton, Ont.

IF

YOU ARE A SUBSCRIBER

—TO THE—

CANADIAN BEE JOURNAL

THIS OFFER WILL INTEREST YOU.

This Special Offer is made to *Subscribers* of the CANADIAN BEE JOURNAL.

To *Every Subscriber* who will forward to us the name of a *new* subscriber, accompanied by \$1.00, before April 1st, we will send FREE a copy of Rev. W. F. Clarke's "Bird's Eye View of Bee-Keeping," price 25 cents, or W. Z. Hutchinson's "Production of Comb Honey," price 25 cts.

To those sending us the names of two *new* subscribers, accompanied by \$2.00, we will send FREE a copy of James Heddon's "Success in Bee Culture," price 50 cents.

To those sending us three *new* names, with \$3.00, we will send Dr. C. C. Miller's "A Year among the Bees," price 75 cents.

To those sending us four *new* names and \$4.00, we will send A. I. Root's "A. B. C. in Bee Culture," paper, price \$1.00.

To those sending us five *new* names and \$5.00, we will send either Prof. Cook's "Bee-keeping Guide," cloth, or Root's "A. B. C. in Bee Culture," cloth; price, each \$1.25

This offer is only to *subscribers*. Should anyone not at present a subscriber, wish to avail themselves of the offer, \$1.00 extra for their own subscription will make them eligible.

To all subscribers who send us ten *new* names and \$10.00, we will send FREE, Jones' No. 1 Wax Extractor, price \$4.00.

We will send sample copies for use in canvassing, on application.

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



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

VOL. III. No. 39

BEETON, ONT. DEC. 21, 1887.

WHOLE No. 143

## EDITORIAL

THE meeting of the Ontario Bee-keepers' Association will be held in the Council room of the Town Hall, Woodstock, on Tuesday and Wednesday, Jan. 10 and 11, 1888, and the Mayor has promised an address of welcome to the bee-keepers. We have not up to the present moment had any further particulars with reference to the program but it is likely we shall have it for next issue.

In our reference to the *Bee-keepers' Magazine* in a late issue we remarked that the price had to be advanced to the old figure namely fifty cents. We had somehow got it into our heads that the subscription price had been dropped at two different periods, the first time from \$1.00 to 50 cents and then to 25 cents, the price for last year. Mr. Aspinwall points out our error and we are glad to make the correction.

We have received from Mr. Geo. E. Hilton, President of the Michigan State Bee-keepers' Association for last year, a little pamphlet on the production of comb honey. The work contains 12 pages and explains his method of taking comb honey from the time that the bees are set out in the spring until the honey is ready for market. The thoughts embodied in the little pamphlet were put into an

essay which was read at the joint State and Fremont progressive Bee-keepers' Association in February of this year. The price is 10c. by mail.

Our readers will see on reference to the advertising columns that we are soon to have another bee paper. This time it comes from Michigan, and Mr. W. Z. Hutchinson, who for some time past has been the Secretary of the North American Bee-keepers' Association is to be the editor and proprietor. The title of the paper will be *The Bee-keeper's Review*, and will each month take up something special. We wish it success and we feel quite confident that it will prove such in the hands of W. Z. Hutchinson.

We have just received from Mr. Ivar S. Young, the editor of the *Norwegian Bee Journal*, a communication announcing his safe arrival and expressing thanks to those whom he met in this country, for their courtesy and friendliness toward him. Speaking of this, he says: "You may be convinced, dear sir, that I will never forget the agreeable meeting with you and Canada's most able bee keepers, and never the exceeding courtesy and friendliness shown to the 'old Norseman.'" We were indeed sorry that Mr. Young could not spend some time in Beeton before leaving, and he expresses his regrets that the time would not allow of his return after leaving the Toronto Exhibi-

tion. We have received a couple of photographs of him, and he is represented as holding in his hand the meerschauum pipe which was presented to him by the Ontario Bee-keepers, and we should judge that he was just enjoying a real old-fashioned smoke such as he and friend McKnight were so fond of taking together at the Toronto Exhibition.

From our English Correspondent.

### Something About English Bar Frame Hives.

YOU will remember I told you in my last paper that all our frames hung in the hives by the lugs or ends of the top bar.

You will see how we work a 17-in. top bar in single wall hives by referring to Fig. 1.

how it works. The roof of Fig. 2 is deep enough for one crate of sections, that is a fault, it should be deep enough for two or more, you will observe it has ample eaves to throw off the rain and when in its place the roof also drops down about an inch over the hive sides to prevent wet from soaking through the joint. Our hives have to stand a very numid climate and a large number of wet days. Many countries have heavier rainfall but only about half the number of wet, dull days.

At Fig. 3 I give you a zig-zag entrance to prevent robbing, by far the greater number of hives in use here have this notion fixed at the entrance. They do good probably, but I am going to confess to you I never used any kind of "robber trap" in my life. I have a plain slide so that I can close the entrance as much as I choose, and

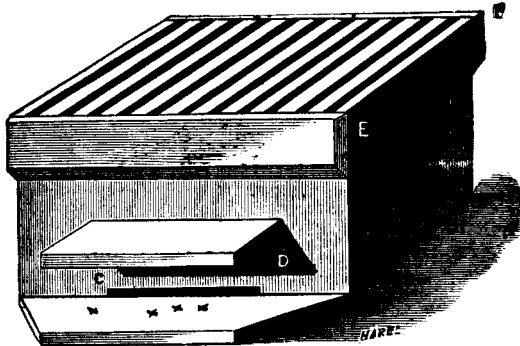


FIG. 1.

This represents the kind of hive in common use amongst cottagers and those bee-keepers who have little money to lay out. The walls being single are 1 inch thick all round. Fillets are nailed on to provide room for the ends of the top bars. There is also a large alighting board and porch. You will observe the frames are at right angles with the entrance, in this it is similar to Mr. Cowan's and a majority of English hives. This hive has no legs and is intended to be placed on a stand of some kind somewhat raised from the ground; we get a little snow sometimes and it is sufficient to drift on and stop the entrance to this hive, I prefer them to slope.

Fig. 2 gives you the same hive with a syrup feeder fixed on it and when the roof is placed over there is no chance for marauding bees to gain access to the feeder. These feeders hold a pint and the quilt has a hole about 4 in. in diameter cut in the centre to give the bees access to the food. If you will refer back to my former article on "Feeders" I think you will understand

I work my bees so as not to induce them to rob and I find prevention is better than cure.\*

The next hive I give you is Messrs. Neighbors' Colonial and Indian prize medal hive Fig. 4.

This hive is so named because it gained the prize at our great show, the Colonial and Indian Exhibition last year. I give it you as a sample of the modern British hive for doubling purposes, and also because it was shown at the great conversazione at South Kensington after the banquet given to your commissioners who had an opportunity of seeing it.

The topmost box will take a row of frames similar to the bottom one, it has movable end slides moving in grooves, they are shown in the sketch partly withdrawn. These slides when down in their places form rests for the frames to hang on, and when this box is so filled and placed on the bottom or brood box, the latter is "doubled." The section crate is inserted to show this hive can be run for comb honey if desired and the top box used as a case to enclose the section crates. This roof is in common with

all our hives made slanting, none of our hive roofs are flat and they all have holes in the gable ends for ventilation. For wintering the slides are taken out of the top box, the porches taken off the body box (it is fixed with thumb screws) and the top box is slid down over the body box thus making the latter a three wall hive. The porch is fixed to the outer case the roof placed on and this hive ought then to be impervious to any weather.

Fig. 5 is another type of hive, it is "Abbott's combination hive." The frames, you will observe are fitted with Abbott's broad shoulders and are across the entrance, the outer walls are carried up to form a deep tray on top of the frames; this

This area was covered with a quilt to prevent them from flying up into the roof, and was claimed to be highly beneficial to the bees. This advice has recently fallen into abeyance and this hive which was once all-victorious has had to give place at all the great prize shows to hives of the storifying type. I need scarce repeat that all the hives of which I have spoken all take the standard frame. We have a shallow frame, divisible brood-chamber, storifying hive, on the Heddon system known as the Carr-Stewarton for an account of which I must refer my readers to the *American Apiculturist*, it has been in use in England for many years but has few advocates now. If you wish to know more] about

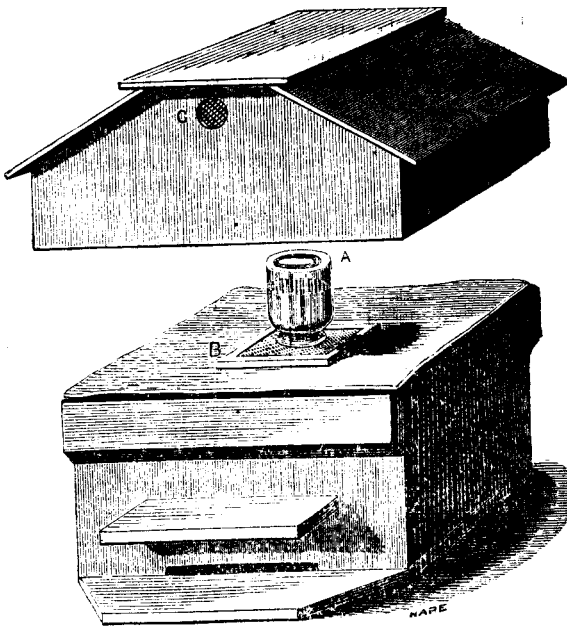


FIG. 2.

is to prevent the quilt from blowing off during manipulations in windy weather and also to make room for top winter packing. These hives are made to take from eighteen to twenty-four standard frames, they will also take frames of sections if preferred behind a queen excluder, as well as crates of sections on top of the frames. It has a good porch and alighting board and a well protected roof which on account of its size is necessarily heavy.

This system is what is known as the "hot" wintering system. In autumn the bees were recommended by some to be packed at the back end of the hive, thus allowing a large open area between the front dummy and the entrance.

British hives I refer you with pleasure to Mr. Cowan's *British Bee-Keepers' Guide Book* where you will find them gone into more fully. Our hives are all well made and put out of hand—pardon me for saying so—as a rule I believe better than yours. They stand in our pleasure gardens and we like them to look nice. I will not claim that they answer their purpose any better.

I have said my say about hives my next must be "section crates, queen excluders and dividers."

AMATEUR EXPERT.

England, Nov. 5th, 1887.

A merry Christmas to our readers.



## THE NORTH AMERICAN BEE-KEEPERS' SOCIETY.

### THIRD DAY.

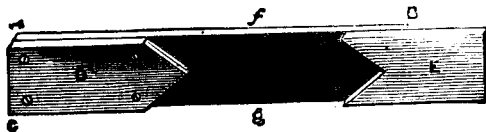
#### MORNING SESSION.

President Miller called the Convention together at 9 a.m., and W. Z. Hutchinson, Flint, Mich., gave a short talk upon :

#### THE PRODUCTION OF COMB HONEY.

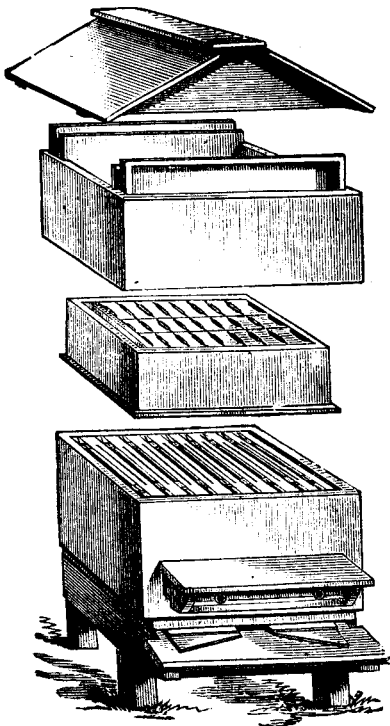
To produce comb honey populous colonies are needed. To secure these breeding must be car-

ried on uninterruptedly during the spring months. We often have delightful spring months and the bees spread out and start breeding freely together slightly, thus forming packing boxes. A shade-board is used for a cover. He would allow the packing to remain until the time for putting on supers. He would use supers only one tier of sections high, filling the sections with foundation. He would not unite bees, if at all, until the opening of the honey harvest. Mr. Betsinger asked if he used separators. He did not. Mr. B. asked if Mr. H. could not secure straighter combs by their use? Mr. H., could in some instances, such as when securing the



SOMETHING ABOUT ENGLISH BAR FRAME HIVES.—FIG. 3.

ried on uninterruptedly during the spring months. We often have delightful spring months and the bees spread out and start breeding freely.



SOMETHING ABOUT ENGLISH BAR FRAME HIVES.  
FIG. 2.

Following this fine weather, often comes a severe freeze, which compels the bees to cluster closely, and much brood is chilled. When the bees are wintered in the cellar Mr. Hutchinson would pack the hives in sawdust as soon as taken from the cellar. He uses shade-boards, tacking them

completion of unfinished sections; but by a little care when putting back the unfinished sections. Mr. H. thought the whole ground of comb honey production had been so well discussed, in the previous session, that it would be well to drop it for something else, which was done, and the convention next listened to an address by James Heddon, of Dowagiac, Mich., upon :

#### BEE HIVES AND FIXTURES.

Mr. Heddon said: As an opening, I believe I will repeat a little lecture that R. C. Otis delivered to me when he called upon me, years ago, and sold me a right to use the Langstroth hive. It is something as follows: "When bees swarm they look for a home, some place to get in out of the weather; a box, nail keg, or even a hollow tree, suits them, and until the nail keg is full it meets every requirement, but then, when it is full, and the bee-keeper wants to get his store of honey, it is very inconvenient, then a wooden bee hive is more convenient." Now, I consider this an excellent speech, just as true now as when uttered; and the great trouble with many of our bee-hive inventors is that they try to invent a hive that is convenient for the bees, instead of the bee-keeper. This is a vast subject, and I scarcely know where to begin, what to say, and where to leave off. I think, on the whole, I will resolve myself into a question box and let you question me.

President Miller said he presumed the majority would prefer to hear Mr. Heddon talk about his new hive and its improvements. (Yes, yes, from several).

A Heddon hive was then brought forward, and Mr. Heddon explained its merits and workings, but this has been so thoroughly done already in his book and in the journals, that it is scarcely advisable to repeat them here.

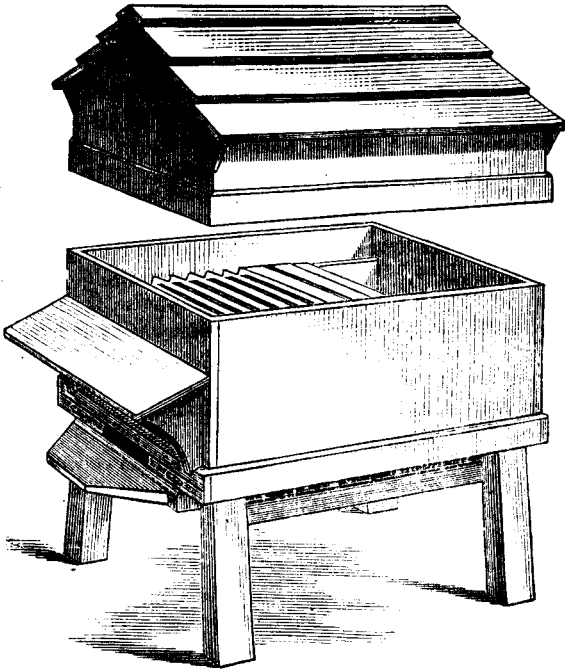
A. I. Root, asked [if it would not be better] to make the thumb-screws of metal ?

Mr. Heddson said no ; they would be so expensive that they would be made too small ; then the threads would not hold in the wood, and it would be slow work turning them in and out. The screws should not be too large for the hole, they should work very easily. Before using the screws they ought to be boiled in talow, then the shrinking and swelling will be so small that no trouble will result.

Mr. Betsinger asked if Mr. Heddson considered his hive the first one with a double brood-chamber ?

Mr. Heddson said it was the first one with a

term: makes the leading one, whether most important or not, this : Will it command sufficient returns in dollars and cents to afford a comfortable support for self and family ? Another is : Is it congenial ? In a country where every one may choose his occupation, free from the degrading curse of caste, no one should follow a pursuit that is not in harmony with his inborn predilections. Another question is, or ought to be, will it properly cultivate the intellectual and moral nature, so that the worker will develop and grow in all his faculties, while striving to earn a comfortable subsistence. "It is not all of life to live," according to the common acceptation of the



SOMETHING ABOUT ENGLISH BAR FRAME HIVES.—FIG. 4.

horizontally divisible brood-chamber.

Mr. Betsinger said he had used a hive having the same principle years ago ; he did not write about it because the bee-papers would not pay him enough. So far as the shaking out function was concerned, he (Betsinger) could shake the bees out of a Langstroth hive as quickly as from a Heddson hive.

Next came an essay from Mr. Eugene Secor, of Forest City, Iowa, entitled :

BEE-KEEPING ALONE, OR WITH OTHER PURSUITS.

In the choice of a vocation there are certain questions which rightfully claim the consideration of every man or woman. The instinct of self-preservation implanted within us, naturally

Now, unless these questions can all be answered in the affirmative, there is something lacking in the employment, or in the make-up of the person.

As to bee-keeping, there can hardly be a question as to its intellectual and moral tendency. For proof, I have only to cite the shining examples, both living and dead, who are, or have been engaged in the pursuit. Whoever heard of a bee-master being charged with a crime ?

It will be congenial to those fitted by nature to follow it, just as a natural mechanic feels at home with the tools with which he cheerfully earns a living. There is no use saying that every man will make a successful bee-keeper, any more than it is to say every man is by nature an

artist and every woman, a musician. Unless a person possesses certain natural qualifications, or can acquire them by cultivation, he would very likely make a failure, of bee-keeping. Among the necessary qualifications are perseverance, industry, continuity of purpose, love of home more than of riches, a talent for looking after details, promptness, and at least tolerable health. If he possesses all these, coupled with a love for natural history and botany, and is as enthusiastic and untiring as most one-idea men are, he may conclude to make bee-keeping a life business—provided always, he has, or can obtain a favorable location. It would be folly for a person to expect the fullest success as a honey producer on a bleak Dakota prairie, under the present state of the art. Talk as we please of the desirability or practicability of raising artificial pasture for bees, it has not yet been successfully and economically done. Therefore, in my judgment, unless in addition to all the required qualifications, there is the natural honey flora in abundance, it will be wise to couple bee-keeping with some other pursuit. If the locality is favorable, and the establishment of out-apiaries is practicable, the business may be made fairly remunerative.

As a rule, however, I believe that bees should form a part of the surroundings of every ideal rural home; not only because it adds to the beauty of the landscape picture, but because in the economy of nature, bees are necessary to the perfect fertilisation and fructification of the vegetable kingdom, and that object can best be attained by the proper distribution of the means to accomplish the end sought. If bee-keeping were in the hands of specialists only, it is quite reasonable to suppose that some localities would be over-stocked, while others would be destitute of bees.

Why does every cottager persist in keeping his pig, instead of leaving the matter of pork-raising to the specialist? Because the pig is a scavenger, utilising many scraps that would otherwise go to waste. Bees are gleaners, also, bringing many a golden drop from the waste places of our imperfect agriculture.

I believe in specialists to this extent: Every person ought to know how to do some one thing thoroughly, and if his capacity is limited to the acquisition of the knowledge necessary to master that, he ought to stick to it. But the man who only knows one thing is a one-idea man. His capacity for enjoyment in this world is also limited. His horizon is the narrow bound of a single thought, when just beyond lie the limitless fields of culture awaiting the polished plowshares of investigation and progress. It broadens

and develops a man to know more than one thing, and it seems to me to be reflecting on the intelligence of our race to think man is not capable of mastering more than one branch of learning. I see no better reason why bee-keeping should be confined to specialists than hog-raising. All who have given the subject thought, know the latter industry can only be enlarged to certain limits. The massing together of large numbers of either animals or men, soon develops disease and death—nature's remedy for restoring the proper equilibrium of life.

Who shall say that foul brood is not nature's punishment for over-stocking, and a gentle hint to more widely distribute the bees which she intended to act as marriage priests to all the plants in her flowery kingdom? In my judgment too colonies in one yard comes very near the limit of profitable increase. If then, it is not desirable to confine the production of honey to specialists; and if, when one's immediate locality is sufficiently stocked, and he does not care to establish out-apiaries enough to occupy his whole time, or to afford him an ample income, what occupation will best fit bee-keeping? If only a few colonies are kept it makes very little difference, if the person is at home morning or evening. It need not consume more than five minutes per colony each day to properly look after them. If a large number are kept the employment should be such as would give work when not required in the apiary.

I see no reason why dairying, or stock-raising, or both combined, will not be in perfect harmony with bee-keeping. This branch of farming employs one at home, keeps him busy in winter occupies his time chiefly morning and evening, and gives ample scope to his ability and capital. The increase of bee-pasturage will also increase his available food for stock, and *vice versa*.

If near a good town, the raising of fruits, (if we except strawberries, which ripen at the wrong time in the North, and yield no nectar) is well adapted to go with bee-keeping. Raspberries, blackberries and gooseberries are especially good honey plants and neither ripen with us till the swarming is about over. Apples, plums and such other tree-fruits as can be successfully grown are excellent honey producers. Our season's success in the apiary often hinges on the impetus given to the bees by the abundance of bloom on these fruits. The keeping of poultry in connection with bees has already been mentioned and can no doubt be successfully managed. It appears to me that with any of the professions if we except physicians in active practice, bee-keeping could be carried on. Ministers, lawyers and teachers need some recreation in the open

air, to counteract the bad effects arising from sedentary habits, and where these are located in rural districts, what reason is there why they may not combine pleasure with profit in a well managed apiary? Croquet, lawn-tennis and baseball might be neglected by the ardent student of bee culture, but perhaps the country would survive. The habits of study of professional men are a guarantee that they would master the science of bee-keeping and therefore likely to succeed. We note with pleasure that some of the brightest lights in apiculture have been clergymen. They have done as much to advance the art as any other class of men, not excepting the specialists. Some of the best bee-keepers of to-day are ministers, lawyers, doctors and teachers. But why multiply examples to prove the harmony existing between the various rural pursuits? After all it depends upon the man whether he shall devote himself to this or that, whether he shall combine two or more, or whether he shall, in sleepful inactivity, allow all the grand opportunities for culture and profit to pass by unobserved or unheeded.

EUGENE SECOR.

James Heddon said Mr. Secor was correct in regard to the breadth of culture that came from diversity of pursuits, but it is unnecessary that he makes money in all the pursuits he follows.

Mr. Root said that, in poor seasons, it seemed to him as though it was foolish to have "all the eggs in one basket."

H. R. Boardman had found that bee-keeping was the best thing to go with bee-keeping.

Prof. Cook said that some of our best bee-keepers had other business aside from bee-keeping. He thought it wrong to discourage small bee-keepers.

James Heddon, was a specialist; the most of his money came from bees. He had lost nothing by having "the eggs all in one basket." The present poor year had helped him; he had on hand 20,000 lbs. of honey, and the high prices of the present year had enabled him to "unload," and at a great price. If we should lose money poor seasons by having "the eggs all in one basket," how about the greater profits in good seasons? Taking one year with another the advantages are all with specialty.

Prof. Cook urged that we so manage our bees that the work will be as little as possible during the busiest time of the farm work and *vice versa*.

Mr. Heddon said that is the very point himself and students had worked over and given the most thought of all apicultural problems, viz.: How to secure the most honey for the least labor, how to "cut corners" and reduce the labor to the minimum.

President Miller asked how many present were specialists. In response, 25 members rose to their feet.

Mr. R. L. Taylor, of Lapeer, Mich., read an essay upon:

#### WINTERING BEES IN THE NORTHERN STATES.

The only thing necessary to bees in order to secure their perfect wintering can be expressed in one word—comfort. In a climate warmer than that which reigns during winter in our Northern States much dependence can be placed on frequent flights to secure that happy condition, but in this latitude such flights can no longer be safely relied upon to furnish immunity from the causes of uneasiness and disease.

The catalogue of things liable to produce discomfort among the bees might be almost indefinitely extended but after eliminating everything that seems to me of little importance I find it is contracted to six items, viz., 1st untimely manipulation; 2nd moisture; 3rd improper ventilation; 4th improper temperature; 5th scattered and scant stores; 6th improper food. I shall touch upon these in the order of their arrangement and not in the order of their importance.

1st. It is evident that any manipulation after the season when the bees begin to assume the semi-torpid state tends to dissipate that disposition; and is also liable to leave crevices between the hive and its cover, which made earlier in the season would be closed by the bees, but being left open will often cause an injurious circulation of air through the hive.

2nd. When moisture invades the cluster in such amounts that the bees are unable to expel it by their natural warmth they are compelled to arouse themselves from their slumbers and to attempt to rid themselves of the moisture by gathering it into their stomachs. Besides other evident evils resulting, the bees will gather with the water more or less of impurities which will go to help load their intestines. And, no doubt, the excessive amount of moisture taken up will have a greater or less tendency to impair digestion.

3rd. As to ventilation I fear too much rather than too little *i.e.*, I fear a draught much more than the want of any change of air at all. A cold draught causes discomfort to most kinds of animate nature, but I have seen no indication that for breathing purposes the bees get too little change of air by any of the ordinary methods of wintering. Out of doors I give a full entrance, indoors I remove the bottom board entirely not for ventilation proper but that the bees may the more readily expel moisture.

4th. On account of the facts I shall mention below I do not attach great importance to a nice

adjustment of temperature. An improper temperature is to be dreaded chiefly on account of the increased consumption of stores thereby induced and the consequent increased accumulation of fecal matter in case the stores are impure. For these reasons, viz., the saving in stores and the lessened risk of disease I hold that it pays in this climate to winter in the cellar. I cannot find any ground for choice between a temperature of 35° F. and any of the intervening points up to 50°. I do not find a high temperature an antidote to poor stores.

5th. Scant stores cause the bees anxiety and scattered stores activity, and the two together make place for all the other untoward consequences I have mentioned. But we all agree here.

All the above mentioned conditions cause discomfort in the way and for the reasons intimated and I mention them not because I think them ordinarily fatal or even in themselves greatly injurious, but because they cause undue exertion and consumption of food with a result more or less detrimental owing to the quality of the food. If successful wintering turned on any or all of these the problem would have been solved long ago. There is no such uncertainty attached to the securing the conditions desired in these things as to make their operations long a matter of doubt.

No, brethren, the thing that causes uncertainty in the results is the uncertainty existing as to the quality of the winter stores which bring me to the sixth and last item to be considered.

From my experience of ten years with an apiary ranging in numbers from two colonies at the beginning to 500 colonies now, I am forced to the conclusion that the great cause of our wintering troubles is a poor quality of stores. Some apiaries are no doubt placed where the natural stores obtained are always of a quality to be relied on, but mine I have no doubt are not thus fortunate. The reasons for my conclusion that improper food is the prime cause of our winter losses I draw from the following facts which are within my own experience and knowledge.

In the autumn of '79 I had fifteen colonies and as that was a year of great scarcity I fed each colony largely of sugar syrup and wintered on the summer stands. In the spring a pint cup would have held all the dead bees from all the colonies. Having purchased a few colonies in the spring of '80 I went into the disastrous winter of '81 with sixty colonies to thirty of these I fed a limited amount of sugar syrup, of these sixteen survived, of the thirty not fed three survived. For the present I pass over the next three winters to the still more disastrous

winter of '84-'85 only saying that during the fall of '83 as an experiment I supplied a few colonies with sugar stores and those thus prepared wintered so very much better than those having honey stores that in the autumn of '84 I gave all my 200 colonies empty combs and fed them syrup. The result was that while all other bees with but few exceptions in that part of Michigan perished there was not a colony of mine in normal condition but so far as I could judge wintered perfectly. These bees were wintered in a cellar. During the following winter my loss was about 12 per cent of bees managed every way precisely the same except that their stores were partly honey and partly syrup, and this though the winter was much more favorable for the successful wintering of bees.

During the next winter that of '86-'87 I had in two cellars at home nearly 400 colonies. Of these about two-thirds had honey stores exclusively, but the other third being in single sections of Heddon's new hive were almost destitute of honey and consequently were supplied with stores of sugar syrup. Each kind was divided between the two cellars. The temperature of one cellar was kept at 50° F. almost without variation, while that of the other varied from 35° to 40°, but this difference in the temperature seemed to have little effect on the condition of the bees—if there was any difference it was in favor of the lower temperature. But what a marked difference was there in each cellar between the colonies with sugar stores and those with natural stores! Of the former the bees were the picture of comfort and contentment, quiet, closely-clustered and not easily disturbed, not a diarrhetic sign and only now and then a bee dropping from the cluster dead. Of the latter the bees were uneasy, not closely-clustered, easily disturbed, dying by the thousand and many of the hives bearing the unmistakable signs of disease and as I have said if there was any difference those in the cellar with the rather high even temperature suffered the more.

One fact more: During the three winters from '81 to '84, which I passed over above, I wintered my bees in the same cellar on natural stores under precisely the same external conditions so far as it was possible for me to judge, yet the first winter they wintered perfectly while the other two winters they wintered ill and with considerable loss. I cannot account for this unless there was a difference in the quality of the stores.

Outside of my own experience there is one thing I do not fail to remember and that is that there is little agreement and apparently little prospect of agreement among bee-keepers as to

the necessity or the methods of securing ventilation, a high temperature, a dry atmosphere, late brood rearing, or even as to the necessity of cellar wintering, but they are in practical accord in affirming the necessity of supplying bees for winter with stores of a good quality. This is a significant fact. Stick a pin here and bend a hook on the point of it.

And again why is it that bees in the cellar suffer most severely during winters when they suffer most severely out of doors?

Without stating my deductions at length let me only say in conclusion that I have found among my own bees that colonies with plenty of good stores, known to be such, always winter well, while those with stores of a doubtful character winter more or less disastrously.

I am satisfied I cannot winter a colony well on stores that are decidedly poor in quality by any method with which I am acquainted. Who can inform me how to do it? I am confident I can winter any fair colony well on stores which are certainly good by any of the approved methods. Who doubts his ability to do the same?

Of course it is not to be denied that a low temperature, moisture, etc., seriously aggravate the ill effects of poor stores, but I seriously question whether, unless present in an extraordinary degree they would seriously affect the welfare of a colony well supplied with pure stores.

R. L. TAYLOR.

Lapeer, Mich., Nov., 1887.

After the reading of the foregoing essay it was discussed as follows:

Mr. Betsinger asked, if sugar is better for bees, why is it not better for human beings?

Mr. Heddon explained that honey contained nitrogenous matter and for this reason it is better for brood-rearing, and for supplying the waste of muscular tissue, but, for this very reason, it is not so good for a winter food for bees, there being more likelihood of the bee's intestines becoming loaded.

Mr. Betsinger agreed with Mr. Heddon, but thought the public ought not to be told of this, as many inferences might be drawn.

Mr. McLain, thought we ought not to pay much attention to what the public think, but more to what is best for the bees. He then gave an account of his work at the U. S. experimental station during the past year.

On motion of Dr. Mason it was voted that the thanks of this society are due, and are hereby tendered to the Commissioner of Agriculture for his efforts in behalf of the bee-keeping industry, and for establishing an apicultural station near Chicago for experimental work.

The convention then adjourned to meet at Toledo, O., at the call of the executive committee next year.

W. Z. HUTCHINSON, Sec.

Flint, Mich.

### MICHIGAN BEE-KEEPERS.

**F**OLLOWING is the address delivered by President Hilton, at the Michigan State Bee-keeper's Convention which opened on the 6th. inst.

#### PRESIDENT HILTON'S ANNUAL ADDRESS.

Brother and Sister Bee-keepers of the State of Michigan: We have assembled here together with our friends the Horticulturists, at our 21st annual convention, to consider that which pertains to the best interests of our pursuit. I shall not occupy your time with an exhaustive address, for the program is full and very complete, and our time is short at best to consider the important subjects which will be presented.

I am here as a member of this society to assist as best I may in throwing light upon the topics brought before us. I take it as an expression of good will and great generosity in those who have arranged the preliminaries of these meetings that everything for the comfort of us all has been so amply provided and that all arrangements are so thorough and complete, let us see to it that we endeavor to perform our part in as faithful a manner as our committee have done.

It is with pleasure and pride that I congratulate this society on attaining its majority, and while the last year of our second decade has been discouraging from one point of view, from another, we start on our third with most flattering prospects. The dearth of honey has not only established paying prices, but has sounded the death knell of the "Wiley lie," and all advocates of "manufactured honey," and to me the prospects were never brighter.

Yes, we have reached a crisis in the history of bee-keeping which must be acknowledged to be of national importance. The question no longer remains, "Shall we commence at all?" or "Shall those of us who are all ready engaged in it continue?" I now say, without fear of successful contradiction, that the possibilities in bee-keeping have not yet been reached.

Need I say less of Horticulture? In the words of Eugene Secor, "The true horticulturist, like the successful bee-keeper, is an enthusiast." I need not remind anyone who plants tree and grow fruits, of the genuine pleasure that thrills the soul when nature responds to his intelligence, thought and careful direction? He lives in a

world of his own. He needs no other intoxicant to complete his happiness. Horticulture is one of the fine arts; it requires the skill of a master. It is just as impossible for the thoughtless, brainless clohopper to reach the highest round in the ladder in propagating fruit as it is for him to appreciate after it is grown. But after all man's skill in planting, after ransacking the earth for improved varieties, after propagating, grafting and hybridizing, he must rely mainly on Nature's methods of fructification. The favoring winds and industrious bees are needed to fertilize the bloom to insure a harvest of fruit. As a means of accomplishing this end, there is no question but that the bee is of great service to the grower of fruits; no other insect is multiplied in such vast numbers so early in the spring when their agency is so much needed to fertilize the orchards and small fruits. If the wind were the only means of carrying the pollen from flower to flower, how often would perfect fertilization fail from too much or too little wind during the brief opportune when the bursting buds are sighing for the life-giving dust from the neighboring flowers.

Not only is honey provided in the delicate chalices to entice them, but the pollen so essential to the plant (and just as essential to the bee in furnishing the proper food for its young) is placed in close proximity to the nectar, so that in getting either, the bee is unwittingly carrying the dust from flower to flower, working out the wise plans of Providence as relates to plants, and catering to man's pleasurable taste at the same time. The drop of honey is placed then in the flower not because it is needed to perfect the flower or fruit, but to tempt the bee to brush his hairy legs against anthers and distribute the golden dust. So the bee introduces itself to the horticulturist at once as his friend. The latter ought to meet it half way and acknowledge its two-fold service. It does him a service while on its daily rounds in search of food for itself and young, and again by storing up for his benefit the liquid sweets which it does not need itself, and which ungathered vanish like the morning dew, like the manna which the Israelites ate of. The ungathered portions melted "when the sun waxed hot."

What, then, is there to hinder those two vocations from going hand in hand, since each is helpful to the other? They ought at least to be on friendly terms. Each furnishes inducements for the other to exist.

But, aside from these considerations of the healthful diversions and pleasing variety of mind, and returning again to the utilitarian side of the question, the horticulturist will find it

profitable to pursue the study and practice of this delightful branch of Entomology. The habits and instincts of this "pattern of industry" are ever interesting and the business quite as remunerative as raising tender fruits in an "iron-clad climate." This pursuit, once entered upon possesses charms of its own. No other stimulus is needed to follow it than the fascination of its own creations. A great deal has been said about bees injuring fruit—some fruit-growers having charged that they puncture the ripe grapes, suck the juice and destroy the crop. But from the physical structure of the bee this is said to be impossible by scientific entomologists. It has no jaws like the hornet; it is made to suck not to bite, and after close observation, and after repeated experiments, it has been found that where bees are discovered helping themselves to ripe fruit that the skins had been ruptured by the weather or from over-ripeness, or that hornets or wasps or birds, had first been the depredators. After the skin has been broken from any cause, if there is a scarcity of honey, the bees, always anxious to be doing something, will endeavor to get a share of the plunder. Therefore as to bees injuring fruit, I, as their attorney, shall claim to the jury that the charge is not proven.

In dismissing this subject, which to the lover of fruit, flowers and bees is always a source of infinite delight, I cannot refrain from quoting a few lines from "The planting of the Apple Tree," by that venerable sylvan poet, our own Byrant, who saw so much of future hope and promise as he sifted the soft mould about its tiny rootlets:

"What plant we in this apple tree?  
Sweets for a hundred flowery springs  
To load the May-winds' restless wings,  
When from the orchard row he pours  
Its fragrance at our open doors  
A world of blossom for the bee."

## 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.

### Uniform or Variable Temperature for Wintering.

QUERY No. 168.—What temperature is most suitable for bees to pass the winter in? Should it be changeable or steady?

M. EMIGH.—48; steady.

G. M. DOOLITTLE.—45°; steady.

DR. DUNCAN.—From 45° to 50°, and kept steady if possible.

HENRY COUSE.—I think from 42° to 45° with steady temperature.

PROF. A. J. COOK.—See 169. It should be uniform, especially if the bees are confined.

O. O. POPPLETON—I do not know. For outdoor wintering I prefer a changeable winter to a steady severe one. I suppose the reverse is true for cellar wintering.

S. CORNEIL.—Don't know any more about it than most other bee-keepers. I am satisfied it depends to some extent on the humidity of the surrounding air. It should be steady.

MISS H. F. BULLER.—As nearly 42° as possible. My bees are always more quiet at a temperature a little under 45° than over it. The temperature should be steady not changeable.

C. W. POST.—My bees winter best from 42° to 45°. It should be steady. If it goes much above 45 the queens are apt to lay. My best colonies are the ones in which the queens don't lay before they are placed on summer stands.

DR. C. C. MILLER.—About 45° is generally considered best. It is best, however, I think to determine each case for itself, by watching at what temperature bees are quietest. I presume a steady temperature is best.

JAS. HEDDON.—That temperature in which the bees keep most quiet. It should not be changeable unless during the latter part of winter the bees suggest a change by becoming uneasy. That temperature ranges from 35° to 50° according to other conditions.

J. F. DUNN.—In special repository I should want a steady temperature of 45°. Out of doors, pack properly, place a "Hill device" or its equivalent (pieces of old wooden barrel hoops answer nicely) over the brood nest for them to "huddle" under during a cold snap and they will fix the temperature all right.

J. E. POND.—As nearly steady and equitable as possible. In cellar wintering, about 45°. F. Out of doors the best that can be done is to give ample ventilation of a kind that will allow excess of moisture to pass off, and heat to be retained. Break-winds or shelter of some kind are necessary also.

A. PRINGLE.—The temperature most suitable for bees to pass the winter in is the temperature which best conduces to quiet in the fore part of the winter and to moderate brooding in the after part. This would be, as a rule, about 45° to 50° up to about the end of January, and something over 50° after that.

H. D. CUTTING.—In my cellar last winter, (1886-7) the thermometer registered 34° to 38° for nearly three months, seldom going above 38°, and when I left the window open a little too long at times it would fall to 32°, when I

would light a large lamp and keep it lighted until the temperature was raised again to 34°. I was doing this to see how low a temperature I could use. The cellar is *very dry and light*. Every colony came out in splendid condition.

## KIND WORDS.

F. W. FULFORD.—I have received the note heads and envelopes which I ordered from you and I must say that they are the best that I ever received for the same amount of money. I am more than well pleased, and I will recommend them to all who may desire the same.

Brockville, Nov. 29th, 1887.

## PRICE LISTS RECEIVED.

E. H. Cook, Andover, Bee-Keepers' Club list.

GEORGE E. HILTON, Fremont, Michigan, six pages and cover, aparian supplies, bees and honey.

C. M. GOODSPEED, Thornhill, Onondaga county, N.Y., manager, new American Club list. Gives wholesale rates on leading papers and magazines of the United States and Canada, also prices of Italian bees, queens and small fruit.

## CONVENTION NOTICES.

The Ontario Bee-Keepers' Convention will meet at Woodstock, Ont., on Tuesday and Wednesday 10th and 11th January 1888. This will afford an opportunity of continuing the meeting another day if those present desire to do so. S. T. Pettit, President. N.B.—Program will be published later.

## THE CANADIAN BEE JOURNAL.

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

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BETON, ONTARIO, DECEMBER 21, 1887.

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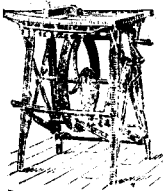
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## CANADIANS

Want to supply their wants at home as much as possible, but heretofore they have not been able to do so, at least for bees by the pound, frames of brood, and nuclei. We have decided to furnish them at the prices as found in the following table :

### BEEES BY THE POUND.

	May	June	July	Aug <sup>st</sup>	Sept.
Bees, per 1/2 pound	1.75	1.50	1.00	1.00	.90
" " pound	3.00	2.50	1.85	1.75	1.70
Frame of Brood	1.75	1.50	1.00	1.00	.90
2-frame nucleus..	4.00	3.50	3.00	2.75	2.50
3 " "	6.00	5.50	4.75	4.50	4.50

Frames of brood cannot be sent alone. Queens are not included in above prices. Choose the kind you want and add enough to price found here to cover cost of queen.

Two frame nucleus consists of 1/2 pound bees, two frames partly filled with brood and honey, and a nucleus hive. If wanted in either "Jones" or "Combination" hive, add price made up, and deduct 40c. for nucleus hive.

Three frame nucleus, same as two-frame, with the addition of another half pound of bees, and another frame of brood, etc.

All prices here quoted are for frames that will fit the "Jones" or "Combination" hive.. You may have whichever style you desire. Be sure to specify when ordering.

The above must go by express.

### QUEENS.

	Homebred	Untested	Tested	Selected	Virgins
May	2 00		2 50	3 00	
June	1 50	1 00	2 00	3 00	0 60
July	1 00	90	2 00	2 50	50
August	1 00	1 00	2 00	2 50	50
September	1 50	1 50	2 50	2 75	
October	2 00		2 50	3 00	

### FULL COLONIES.

	Italian	Holy Land Crosses	Carrollian Crosses	Hybrids
May	\$9.00	\$10.00	\$11.00	\$8.50
June	8.00	9.00	10.00	7.50
July	7.50	8.00	9.00	7.00
August	6.50	8.00	9.00	6.50
September	6.50	7.00	8.00	6.00
October	7.00	8.00	9.00	6.50
November	8.00	8.00	9.00	8.00

The above prices are for up to four colonies; five colonies up to nine, take off 3 per cent.; ten colonies and over, 5 per cent. Colonies as above will each have six to eight frames of brood bees and honey, and good laying queen

The D. A. JONES Co., Ld., Beeton.

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up, and of the various parts made up, so that should there be any portions of the hive you do not wish you can easily ascertain what deductions to make.

Sample hive, made up..... \$2 90  
Add ten per cent if you wish the hive painted.

PRICES OF PARTS.

	made up	flat
Bottom stand.....	12	09
Bottom-boards.....	15	11
Entrance blocks (two).....	03	03
Brood case, invertible, including set screws and frames wired when made up or punched for wiring in flat.....	60	45
Honey Board (wooden) slotted, invertible.....	10	07
Honey board, metal and wood, invertible	30	25
Surplus case, invertible, including wide frames and separators.....	60	50
Cover, half bee-space.....	15	12
Sections, full set of 28 in flat.....	15	15
Tin Separators, seven to each.....	10	10

The cost of one hive such as you would receive, in the flat, would therefore be (without honey boards of either description) \$2.15. Add the cost of whichever style of honey-board you prefer, and you get it exactly. If you do not designate either we shall always include the wooden-slotted one.

DISCOUNTS IN QUANTITIES.

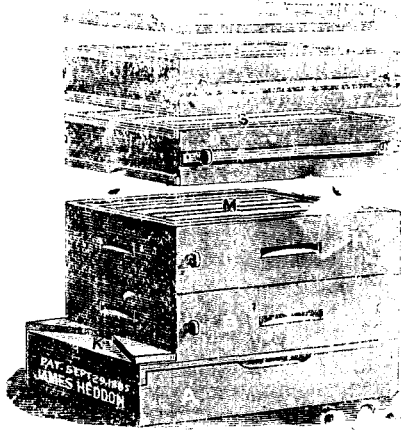
For 5 hives or more, 5 per cent. ; 10 or more, 7½ per cent. ; 25 or more, 10 per cent. ; 50 or more, 15 per cent. These discounts are off the prices quoted above, either nailed or in flat.

INDIVIDUAL RIGHTS.

We will sell individual rights to make for one's own use, and to use the new hive or any of the special features of Mr. Heddon's invention at \$5. We do not press the sale of these rights, believing that the hives cannot be made to good advantage by anyone not having the proper appliances. We will sell however to those who wish to buy, and for the convenience of such we append a list of prices of what we would likely be called upon to furnish in any event:—

Woodscrews per 100, boiled in tallow.....	\$1 25
Tap bits for cutting threads.....	1 50
Tin Separators, per 100 proper width.....	1 50
Brood Frames per 100.....	1 25
Wide " " ".....	1 50

## HEDDON HIVES !



We are the owners of the patent on this hive in Canada, and we are in a position to make and sell the hive gotten up in any shape to suit the purchaser—either in flat or nailed up.

A complete working hive consists of bottom-stand, bottom-board, entrance-blocks, two brood-cases, one honey-board, two surplus cases (in good seasons we often use three surplus cases on the hive at one time) and cover. So that if you order these hives in the flat this is just what will be sent you.

Sample hives we make with the brood-frames wired and the surplus cases supplied with fifty-six 4½ x 4½ 7 to the foot sections. These are designed for testing the complete working hive.

In quoting prices of brood-cases and surplus cases, the set-screws, brood-frames and wide frames with their tin separators are always included, both in flat and made up. We quote the prices of sample hives made

## Heddon's 1887 Circular.

NOW READY.

### ALL ABOUT THE NEW HIVE.

Canadians who wish my circular to know about the new Hive, ONLY, should send to the D. A. JONES CO., for theirs, as I have sold the patent for all the American British possessions to them, and have no more right to sell the hive in their territory than have they to sell them in the United States.

Address,

**JAMES HEDDON,**  
DOWAGIAC, MICH

# TOOLS For BEE-KEEPERS

## HAMMERS.

We shall hereafter keep in stock a full line of tools suitable for bee-keepers. For ordinary use, where a person has only a few hives, etc., to nail, we have an iron hammer (with adze eye) which we can send you at 15 cents.

Then in steel hammers we have three styles all with adze eyes, which we sell at 40c., 50c., and 60c each.

Small hammers—steel face with adze eyes, just what are needed for frame nailing, etc., No. 65, 35c.; No. 52, 50c.

## SCREW DRIVERS.

With good hardwood handles and of the best steel—nicely finished, round bits, in two kinds, No. 1, 5 inch bit, 18c.; No. 2, 6 inch bit, 20c.

## TWO-FOOT SQUARES.

In iron squares we have two kinds—the first of these is marked down to one-eighth of an inch, and is marked on one side only, the price is, each, 20c.

The other style is marked on both sides down to one-sixteenth of an inch—price, each, 35c.

We have a splendid line in steel squares which we can furnish you at \$1.35. They are well finished and are usually sold in hardware stores at \$1.75.

## TWO FOOT RULES.

A splendid line in rules we offer at, each, 18c. Then we have a nice box-wood rule at, each 25c.

## HAND SAWS

Just at the present we have but one line in these—26 inch long—A. & S. Perry's make—usually sold at 75 cents we offer them for 55c.

## PANEL SAWS.

These are what are often called small hand saws, and for the finer classes of the bee-keepers work are indispensable. We have started out with two lines in these. The 18 inch are of good steel (Shirley and Dietrich) and can be sold by us at 50c.

The 20-inch are finer steel—same make—that money.

## PLANES.

Iron block planes, just the thing for dressing off hives, each, 75c.

Wooden smoothing planes—the best of the kind, 85c.

All the above goods are sold at prices 20 to 25 per cent. below the ordinary retail price, so that when ordering other goods you may just as well have a try you want as the cost of transportation will not be any greater. These will be included in the next revision of our price list.

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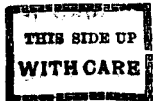
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PRICE LIST OF 4 1/2 x 4 1/2 x 2 OR THINNER.

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Advance Printed.....	\$4 50	\$ 7 75	\$32 50
Same with Mica Front.....	5 50	9 25	40 00
Same with Tape Handle.....	5 25	9 00	38 75
Same with M F and T H.....	6 50	10 50	46 25

14 oz **Glass Jars** \$5.25 per gross, including corks and labels. 1 1/2 and 2 gross in a case. Catalogue of Honey labels free.

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## OUR 60 LB. TINS.

We have already sold enough of these to hold a crop of over 100,000 lbs of honey. They are better made than ever, and are encased in our new style of wooden case. Have a large screw top, as well as a small one, and are thus excellent for granulated as well as liquid honey. The prices are:

Each.....	\$ 0 50
Per 10.....	4 80
Per 25.....	12 25
Per 100.....	42 00

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