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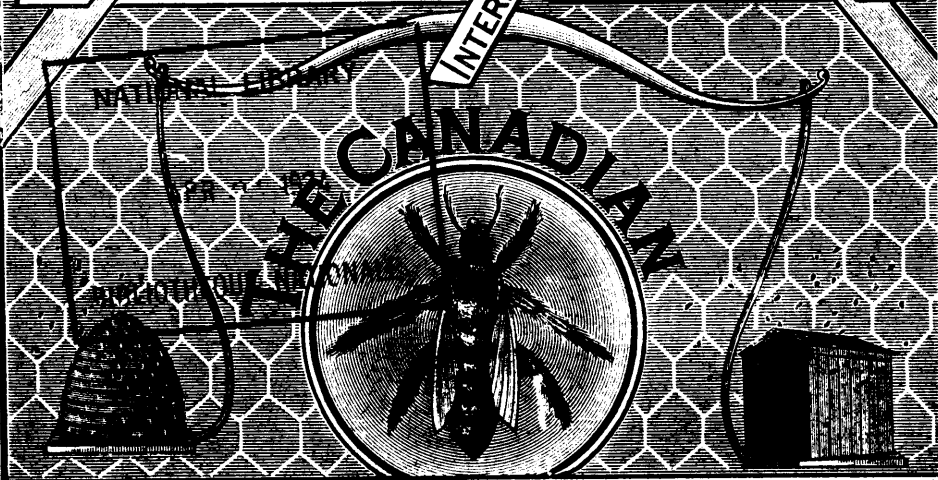
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VOL. II, No. 5.

1886

APRIL 28.

PUBLISHED EXCLUSIVELY IN THE INTERESTS OF THE HONEY PRODUCER



JOURNAL

THE FIRST \$

WEEKLY

IN THE WORLD

ONE DOLLAR PER YEAR

THE GREATEST POSSIBLE GOOD TO THE GREATEST POSSIBLE NUMBER

PUBLISHED BY

JONES, MACPHERSON & CO
BEETON ONT.

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TO CONTRIBUTORS

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

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

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

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

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WE CLUB

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THE CANADIAN BEE JOURNAL and.....		
Cook's Manual (cloth).....	\$2.25	\$2.00
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BY D. A. JONES. NOW READY.

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

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

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REARED IN FULL COLONIES.

Untested, \$1.25 to June 1st, after that \$1.00. Tested, double above prices. A few black and hybrid at twenty to fifty cents each. Also bees by the lb., nuclei and full colonies. Will guarantee safe delivery and satisfaction in every case.

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

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

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

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

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

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

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

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W. Z. HUTCHINSON,

In order to more fully supply the wants of his customers, has entered into partnership with his neighbor, R. L. Taylor, and will offer for sale bees (full colonies, or by the pound), queens, Given foundation, white poplar sections, hives, cases, feeders, empty combs, etc., etc. Also hens' eggs, for hatching, of three varieties. For circular and price list, address

W. Z. HUTCHINSON,
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IN THE SOUTH FOR EARLY NUCLEI & QUEENS.

Four frame nucleus, with pure Italian Queen, in April \$3.50. Three frame nucleus, with pure Italian Queen, in April \$3.50. Two frame nucleus, with pure Italian Queen in April, \$3.00. After 15th May, 50c less. I would advise the four frame nucleus as giving the best result.

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

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BAYOU GOULA, Louisiana

Queen City Oil Works!

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PEERLESS OIL,

Manufactured only by

SAMUEL ROGERS & CO.
Toronto, Ont.

BARNES' FOOT-POWER MACHINERY.



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

BARNES, No 472 Ruby St., Rockford, Ill.

ITALIAN BEES IN IOWA.

60 cents to \$1 per lb. Queens 30 cents to \$2.50. Nuclei and full colonies. Order from my new circular.

OLIVER FOSTER,
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EASTERN BEE HIVE FACTORY,

Especially adapted for manufacturing all kinds of

APIARIAN SUPPLIES.

Having fitted up with new machinery, designed and built expressly for this work, my facilities are unsurpassed for doing fine and accurate workmanship. For full particulars and low prices, send for my Illustrated Catalogue of

SUPPLIES, BEES, QUEENS,

And a sample of the Celebrated Poplar Sections free on application. Mention this Journal.

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Bee-Hives, Honey-Boxes, Sections.

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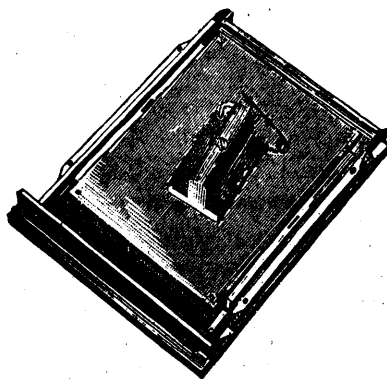
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THE MITCHELL FRAME NAILER.

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



PRICES.

For Jones' Frame.....\$1.25
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Ready to go by express or freight.

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

BEEES AND HONEY

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

M. RICHARDSON & SON,

Port Colborne, Ont

THE NEW HEDDON HIVE,

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



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

A SAMPLE HIVE

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

HIVES READY TO NAIL.

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

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

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

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

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

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

DISCOUNTS IN QUANTITIES.

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

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

BEETON ONT.

—BOOK FREE.—

Great Reduction

Good as the best! Our one-piece V-GROOVE SECTIONS, Smooth on both sides, at \$3.50 per 1,000. For larger lots, write for prices.

A. M. MURRAY & CO.,
Goshen, Elkhart Co., Ind.

MUTH'S HONEY EXTRACTOR

Is second to none in the market. **Square Gears. Honey Jars, Tin Buckets, Langstroth Bee Hives, one-piece Sections, etc., etc.** Circulars mailed on application. Send ten cents for 'Practical Hints to Bee-Keepers.' Address

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

EARLY ITALIAN QUEENS

Nuclei and Full Colonies.

Fine stocks of Imported Queens on hand. Send for Illustrated Catalogue of Bees and Supplies. Address,

J. P. H. BROWN,
Augusta, Georgia, U.S.

FOUR REASONS WHY YOU SHOULD PATRONIZE

C. M. Goodspeed

CIRCULARS FREE.

LOW PRICES.—Everything is guaranteed first quality—**PROMPTNESS**—and last but not least **RELIABILITY.**

If you want Bees, Queens, Hives in flat, Sections (1 lb.) Bee Books or Papers (any two American Bee Papers to one address for \$1.70), B. Leghorn fowls, (eggs for hatching, 50 cts. for 13), Alsike Clover, seed clean \$7.00 per bushel raspberry and strawberry plants, basswood sprouts, etc. Drop me postal stating what you want.

Remember I am agent for all the Leading Newspapers of the country; price list of 550 on application. You can save money by ordering of us. Ample reference given.

C. M. GOODSPEED,
Thorn Hill, Onon. Co., N.Y.



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

Vol. II. No. 5. BEETON, ONTARIO, APRIL 28, 1886. WHOLE No. 57

OUR OWN APIARY.

BEEES IN GOOD CONDITION.

On the 19th of April, the weather being propitious we set the bees out of two of our bee-houses. At the Wallwin yard (which is situated about three miles and a half from our home apiary) we had 165 colonies and every one came out alive; in looking them over we found one queenless, which was doubled up with another light one. The colonies throughout are in very fine condition, the hives being dry, with no signs of mould on any of the combs. The temperature in the house was kept from 45° to 50° , seldom over 45° except when the weather became quite warm. There were no signs of dysentery; the bees when set on their summer stands, seemed to mark the location unusually quick, and at once set to work bringing in the pollen.

At the Richardson yard (which is two miles from our home apiary) we had 132 colonies, three of which were found to be dead, having evidently been placed in the bee-house queenless, to this fact at any rate we attribute their loss as the bees had scattered all through the hive, not clustering properly. The temperature here ran up very high just before the bees were set out,—causing them to cluster out on the fronts of the hives and in fact in several cases the bees abandoned their hives and moved into adjoining ones, thus making some colonies so strong that they had to be divided

right away after being set out. This is the first instance we have ever known of bees leaving their hives during their confinement in a bee-house and moving into the neighboring ones. We suppose it was caused by the buzz of the stronger colonies which attracted them and the hives being set closely together made it easy to move from one to another. In two colonies, the queens had not yet been destroyed. It is all right to place hives closely together if the temperature is not allowed to get too high, but when it cannot be controlled, if there should be a space of two or three inches between them it will prevent them uniting one with another. An assistant who has had over fifteen years' experience, said that he had never seen bees set out in finer condition.

CLOSING ENTRANCES IN COOL WEATHER.

For the past two weeks the weather here has been exceptionally fine and it has had a very beneficial effect on our bees; should it continue we may look out for a successful season. We do not remember such weather at this season of the year before. The thermometer has ranged from 60 to 90° , and it is more like June than April. The merest nucleus can carry on brooding. Watch closely, however, and see that the entrances are not left open too wide as a sudden change will chill the brood, (of which there are large quantities in hives,) tending to discourage the colony. Keep the entrances just wide enough

open to give sufficient room for air in cool weather and at nights, and unless the colony is very strong even this precaution is unnecessary. See that the entrances are open early in the morning on fine days to allow the bees to fly.

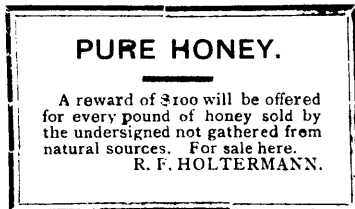
P.S.—Since the above was written, and at this date (April 24th) it is raining and the weather is a good deal cooler, so that our advice with regard to closing up the entrances is very applicable just at this minute. Protect the tops of frames by quilts or cushions.

FOR THE CANADIAN BEE JOURNAL.

THE HONEY MARKET.

HAVE to thank Mr. W. Z. Hutchinson for his kind remarks in C. B. J. I will briefly relate my experience since writing the same.

I found out who the bee-keeper with the 1500 lbs. was. Thought I would go to work: got 512 lbs. from him, sold it all as before with little loss of time, and have since that sold 500 lbs. more, and expect another shipment of 400 lbs. shortly. Now, I consider, with the exception of Hamilton, that Brantford is, to my knowledge, the poorest place in Canada to sell honey. But the three Brantford papers had a condensed report of our convention here, and of my paper upon honey. Then I had printed a nice card about 6 in. x 8 in. as follows:



It happened very opportunely that at the time two people disappeared very mysteriously, and I leave you to guess the result. Every store purchasing honey from me received one of these cards, and it attracted attention and enabled me to sell more readily. Then a baking-powder company started to bake and dish out free hot biscuits, baking in the grocery windows here to advertise their baking-powder (what bee-keeper has tried anything of the kind to create a demand for their honey?); then a coffee firm supplied that beverage, and finally I dropped in and supplied honey, and there was a grand free lunch. It was advertised by the grocer in the paper, hand bills were struck off and it has paid me over and over again. Two of the best boarding houses, one using 10 lbs. per week, who never used honey extracted before, are using it

right along. In two week's time one of the leading churches is going to have a honey social, and I am to read a paper on bees and honey, and I shall give them a sweet dose.

Now, I know had I not set to work, not one-tenth of the honey sold now would have been sold for the rest of the season, and I think this is only a beginning and shall try and keep the ball rolling.

But now for a less pleasant report. I had business in Hamilton and Toronto; the latter place might have waited, but I thought I would go, and in Toronto I made up my mind to "try my luck" selling honey. Every place was full, and I gave up the attempt for the present, but I feel there is lots of work in Toronto, only it will take more means; more power is required, as it is a larger body than Brantford. If some of us could only combine and get people "off" about honey as they will anything with the least merit properly advertised, there would be a new demand. If we could only start a really nice honey store in Toronto with beautiful and attractive comb and extracted honey, the best and most suitable canned and preserved fruits (done with honey) and cake and pastry of all the best kinds, got up by the very best baker, candy specially made as far as possible with honey, and all got up in such a way that that class willing to pay any price as long as their taste is gratified, will patronize us, and, on the other hand, those looking for a food will see they can get the value of their money there. Then we will make a wonderful stride towards developing the home market. Every hand through which we sell is an obstacle to us. It used to be that we sold to the wholesale grocer, and he sold to the retail grocer, and he again to the consumer. All had to have a margin; there was not much in it for anyone, and they cared little whether they sold or not. The wholesale man in consequence neglected ten per cent. of the grocers, and the grocer 90 per cent. of his customers. Any of the ninety that wanted honey had to ask for it. I think the wholesale grocers have dropped out pretty well, and there are three reasons why the next middle men will have to drop out: (1) They do not push our honey as we should do. (2) They know nothing about honey, and if they do say anything to talk it up, it is only nonsense. (3) It only increases the cost to the consumer. There are minor reasons I will not here enumerate. This appears to me to be the situation as to the future. I, and many others, are no advocates of hindering people from keeping bees and keeping bee knowledge from them. It will be "the survival of the fittest." As honey gets more plentiful men will have to wake up and try and sell it, and combine to do it when necessary.

As prices come down the demand will increase; then a million or more of brains will set to work and find a way to produce honey at less expense and solve the problem, too, and eventually those in the less favored localities will have to knuckle under—localities less favored as to quantity and quality of honey. And Canadians, with their natural advantages as to the latter, and in a measure, the former, if they start their foreign market properly by sending only A 1 honey and keep it up—are surely not going to the wall.

In conclusion, referring to Mr. W. Z. Hutchinson's article at its close, although it has paid me, one cannot expect that A can sell B's honey, and the latter sell it for what he can afford, and A still make a margin on it; as long as this can be done honey has still room to drop.

I do not say it is easy to sell honey, but I think not more difficult than it is to sell anything else in these days of keen competition. But we must bestir ourselves.

R. F. HOLTERMANN.

Brantford, March 17, 1886.

We think that we can, without any hesitancy on our part, endorse all that Mr. Holtermann has written. There are those who cannot sell honey under any circumstances, because they lack the qualities needed to make good *salesmen*. And, when you think of it, isn't *selling* honey, or anything else, just as much an art as *producing* it.

FOR THE CANADIAN BEE JOURNAL.

ALSIKE CLOVER.

NOTES FROM THE ENTERPRISE APIARY.

HOPE you will excuse me for writing on the above topic so soon after the able article by J. M. Hicks, on page 775, on March 3rd, but I had been thinking of this matter and as it is about sowing time I am sure every beekeeper who is alive to his own interest will not let the spring pass without a few acres being sown within reach of his bees. I have grown Alsike on my own farm and watched its habits closely for several years and I can not see in the plant anything to indicate its being a "thoroughbred" if I may be allowed the term. I should, from its habit of growth, judge it to be a cross between Mammoth red and white clovers, retaining the blossom of the latter slightly modified the habit of growth of the form except the roots (which are a strong indication of its being a hybrid). Some plants you will find with a strong tap root with another right by its side with no tap root, but fibre roots like the white clover. Mr. Hicks states that the seed is saved from

the first crop which is true, there being but little after growth and what little there is seldom yields honey. But the first growth just swarms with bees for about three weeks, or from the time its rich blossoms open until the seed is ripe. In my locality it begins to yield honey shortly after white clover and continues well into basswood. Believing it to be a hybrid I am watching the fields for another cross and shall try this coming summer to produce one between it (Alsike) and the small kind of clover. If this could be effected the prospects for clover honey could scarcely be estimated. If Alsike would only grow quickly after being cut it would soon supplant all other clovers in this locality. Farmers are in the habit of pasturing their meadows for a short time in the latter part of summer and want a clover that will start quick. This the small kind will do, but insects work in it to such an extent that no seed can be saved and it is not doing nearly so well as formerly. Alsike is perfectly hardy, of extra quality as hay, a heavy seeder reaching in rare cases to ten bushels per acre, and in all respects just what the farmer wants, only it grows once a year. Will not Prof. Cook or some other "scientific chap" help us in our endeavors to make a cross. If it is possible to do it what we now want is a clover that will give two crops per year of good quality with the blossom so our bees can get at the honey. That kind of clover farmers will not want a second invitation to take hold of.

C. M. GOODSPEED.

P. S.—My bees are all alive so far, winter in cellar, temperature from 32° to 40°. The consumption of honey has been *very light*. No indication of disease. Snow nearly all gone.

No doubt Prof. Cook or some other scientist will be able to give us another hybrid clover, but it would require several years to test it sufficiently to ascertain whether or not it possessed any honey producing qualities. Would not the pollen taken from the red-clover and dusted over the protected heads of white clover assist in the matter? It seems to us that although the Alsike does not yield as much fall pasture, yet the superior quality of the hay and value of seed per acre have far overbalanced that. Red clover will soon be a thing of the past as Alsike seed is now in great demand not only for seeding purposes but for dyeing purposes. We are informed that large quantities are being shipped to Europe for that purpose.

THE INDIAN AND COLONIAL EXHIBITION.

ONTARIO'S EXECUTIVE MEETS.

THE President, S. T. Pettit, having received a cablegram from Sir Charles Tupper through Mr. Lowe, stating that "space for bee-keeper's collections is ninety-five feet by twenty-five, returned a message and also a long letter explaining the absolute necessity of having all we were promised, viz: 4000 feet space; but Sir Charles returned a message stating that it is impossible for him to obtain more space, and asks whether he must accept the space or let it go to be utilized for other purposes. To this the President replied, "keep space for bee-keepers' collections, by all means, we cannot afford to have one of Canada's most important industries ignored," and hastily called a meeting of Managing Committee to consider the situation and also to transact other important business for the Association, on the 12th inst.

Members present—The President, and Messrs. McKnight, Jones, Hall, Emigh, Corneil, and the Sec.-Treas.

The President in the chair.

Considerable discussion took place regarding the matter mentioned above. The Commissioners consider the amount of space last promised too small to enable our Association to make as creditable a display as it was wished to make; therefore it was resolved, that we as Commissioners do express in a letter to Sir Charles Tupper, our views in regard to the space now set apart as being too small, and asking that it be enlarged to 30 x 130 feet. The letter was written, approved of and forwarded.

The following resolutions were passed:

1st. That no coke tin be used for making tins for shipping extracted honey to England.

2nd. That the package we use for shipping extracted honey in bulk be what is known as the square sixty-pound tin, encased in wood; containing 56 lbs. net, as honey is sold by the cwt. in England. There should be a large screw or pressed top on each tin, also a small screw-top if desired.

3rd. That one-eighth of the extracted honey be put up in small tins holding 10, 5, [2½] and 1 lb. each, put up in cases holding 60 lbs. and packed with some light material.

4th. That sections should be placed in crates so they will run lengthways, with outer case when placed there or end of section to end of case, and end of case to end of car. The reason for the above is the great danger of breaking when the cars are being shunted, if the sections run across the car. The size of the case that will suit of the principal producers will be from

30 to 36 inches long, and 12 to 14 inches wide, and about the same depth.

5th. That crates should hold about 12 lbs., and six crates packed in each case, making the gross weight about 100 lbs. No open space in crates.

6th. That the crates be packed in cases with dry shingle sawdust, rye or wheat straw, well packed, depth of packing to be, for ends and bottoms, 2 inches; sides and tops 1 inch.

7th. That lumber for cases should be planed on both sides. Use for ends ¾ inch, with hand-holds, about 2 inches from top cut by wabbling saw or otherwise; for sides and tops use not less than ¾ inch.

8th. That there be used a sheet of Manilla paper cut one inch larger each way than the bottoms of crates used to be placed in the bottom of the crates so that there will be ¼ inch lining of paper up around the sides and end of crate, with ½ inch strips laid on top of the paper on which the sections are placed; this prevents any daubing should there be any leakage.

The lithographed labels are considered by the Commissioners as the best label to use for the tins.

The commissioners are ascertaining what will be the best and cheapest retail package in England—whether glass, tin or paper.

The following rules were adopted for the guidance of those who intend to contribute to the proposed exhibit:

(1) Intending contributors shall send to the President, Mr. Pettit, Belmont P. O., not later than the 1st day of June, a request to be allowed to contribute, stating at the same time the amount and kind of his proposed contribution.

(2) The Committee shall decide upon the quantity that will be accepted and notify the applicant of their decision at a date sufficiently early to prevent inconvenience or loss in preparing more than can be accepted—giving preference to first offers other things being equal.

(3) Contributions must be prepared and put up in such a manner as the Committee may decide upon. Upon every package there must be a label setting out the name and address of the owner and the net weight it contains. Every case containing more than one package must also be labelled with the name and address as well as the gross and net weights of the case. Full weights must be guaranteed in every case and fractions of less than half pounds will not be credited to the contributor and must not be charged in invoice. Shipping labels will be supplied by applying to the Secretary of the Association, but personal labels must be provided by the contributor.

(4) All contributions must be sent to the depot at Toronto for re-shipment at a date to be hereafter fixed upon.

(5) The Committee will not hold themselves responsible for loss from accident, defective receptacles or careless packing.

(6) Every contributor must abide by the prices realized and expenses necessarily incurred will be chargeable to the sales account upon an equitable basis.

(7) Before shipping to the depot every contributor shall make out an invoice of the goods, and each case shall be numbered consecutively on the invoice, which must show the gross and net weights of the case or cases.

(8) The Secretary of the Committee shall keep a book on which an account shall be opened with each contributor, and an account of sales shall be sent him at the general settlement.

I will be willing to give any information in my power on the above subject to persons desiring such.

W. COUSE,
Secretary-Treasurer.

Meadowvale, Ont., April 15th, 1886.

ARTIFICIAL FERTILIZATION.

THE following we extract from the author's edition of the Report on Experiments in Apiculture, by Nelson W. McLain, agent in charge of the apicultural experimental station at Aurora, Ill.:

ARTIFICIAL FERTILIZATION.

Since we began this work we have given much thought and labor to experiments in methods of artificial fertilization.

No other branch of apicultural experiment possesses the same scientific interest or practical value to the industry of bee-keeping.

Ever since the art of bee-keeping began to be practised upon scientific principles, the value of exact knowledge and perfect control of the process of fecundation has been recognized.

In 1846 an able German apiarist wrote: "If it were possible to ascertain the reproductive process of bees with as much certainty as that of our domestic animals, bee culture might unquestionably be pursued with positive assurance of profit, and would assume a high rank among the various branches of rural economy."

And in a current number of one of the most progressive bee journals, a prominent writer on apiculture says: "The apiarist who finds out a sure, safe, and certain method of controlling fecundation as it is controlled in the animal kingdom, will confer a great and lasting blessing upon bee-keepers, and be the means of advancing the profession a long way towards perfec-

tion." Realizing the difficulties to be overcome, there was little encouragement to expect success. However, all progress "is usually the slow outgrowth of repeated trials," and "failures precede successes."

Various methods and expedients have been adopted for securing the fertilization of queens in confinement, none of which have proved satisfactory.

During the past two years reference has occasionally been made in apicultural papers to a process of fecundating queens while in the larva and the pupa or nymph stage of development, by crushing drone larva upon the queen larva, or by opening the cell and introducing crushed drone larva upon the nymph queen. In a few instances experimenters have reported that the practice has been successful, and the queens thus treated have begun laying fecundated eggs in from one to two days after leaving the cell.

In each of the reported cases some important fact in the evidence tending to establish the genuineness of the claim to success seems to have been wanting or doubtful. In consequence these reports have been received with reserve and often with ridicule.

For putting these claims to the test, we caused a number of queen cells to be built, and just before the cells were capped I squeezed the contents of the generative organs of nymph drones upon the larval queens. The bees removed the larvæ and destroyed the cells. After other queen cells were capped we opened them by making a horizontal incision at the base of the cells, and another at right angles down the side of the cell, and laid back a part of the side, exposing the queen pupa. Through the opening in the cell we squeezed the liquid contents of the generative organs of imago drones upon the pupa queens. The sides of the cells were then replaced and sealed with melted bees-wax and rosin. These cells were placed in nursery cages and hatched in queenless nuclei colonies. These queens were liberated in nucleus colonies after their wings were clipped. Upon being hatched they resembled fecundated laying queens more than virgin queens. The treatment they received from the bees and their action upon the combs was that of fecundated rather than that of virgin queens. Repeated experiments, however failed to produce a queen capable of laying fecundated eggs. Still, the fact that the treatment given the embryo queens had to such an extent changed their physiological characteristics was suggestive. From the analogy between the animal and vegetable kingdom when ripe seed is known to grow better than unripe, it seemed more than probable that the contents of the generative

organs of a mature drone would have more virility than those of a drone larva or pupa.

That the active principle in the fluid contained in the procreative organs of the drones attains a degree of activity at a very early stage in their development is evident from the effect produced by exposing the larval queens to its influence. Continuing the experiment we caused more queen cells to be built. Removing the testes and seminal sack from mature drones with a pair of pliers, the contents were pressed upon the larval queens. The bees removed the uncapped larvæ as before. Most of the pupa queens so treated and placed in nursery cages for hatching died in the cell after assuming the imago state and after being partly colored. We hope to be able yet to discover what principles and practice are essential to success which seems possible, for many possible opportunities remain untried. While possessing possibilities of the greatest interest and value to the embryologist and entomologist, it is doubtful whether a demonstrated method of what may be called parthenogenetical fecundation would possess the essentials of certainty and permanence in such a degree as to make the method serviceable to beekeepers. It remains to be tried whether a sufficient number of active spermatozoa may be received into the spermatheca of queens while in the larva, pupa, or imago state to render them serviceable for any practicable purpose, even if some of the reported successes were true. Failing to succeed by these methods it appears more reasonable that the best time to fecundate a queen is when she wants to be fecundated, or when orgasm appears. Orgasm takes place in from five to seven days, unusually in five days, after the queen leaves the cell, and continues for eight or ten days, and a few instances are reported where queens have been fertilized as late as twenty-three days after leaving the cell.

When orgasm takes place the generative organs of the queen are highly excited and much distended. We confined a queenless colony in their hive and gave them a queen-cell which had not been disturbed while maturing, and allowed the queen to hatch. When the virgin queen was six days old orgasm occurred, and on the seventh day we removed her from the hive and placed drops of male sperm upon the open vulva as she was held back downwards, by gently grasping the thorax between the thumb and forefinger. The instant the male sperm was pressed from the testes and seminal sack of a mature drone upon the excited and distended vulva, it was curious to observed the effect. The action of the abdomen and vulva resembled that of young birds being fed. There was the

reaching up after the seminal fluid, and an action of the parts resembling the opening of the mouth and swallowing food. As much seminal fluid as could be obtained, by the imperfect method employed, from three or four drones, was utilized and readily absorbed by the queen, after which she was dropped on a frame covered with bees and returned to the hive, and the bees were liberated. Up to this time her appearance and action was that of a virgin queen. The next morning, twelve hours after exposure to the seminal fluid, her abdomen was distended, and her appearance and action in all respects was that common to fertile, laying queens. She was moving about slowly over the combs and peering into the cells, and in twenty-four hours afterward she had 400 or 500 eggs in worker cells. We watched the development of larvæ from those eggs. In due time worker larvæ appeared, and at this date, November 13, worker bees in considerable numbers are being hatched. We then reared two queens from the eggs laid by this artificially fecundated queen, in queenless colonies, and as soon as they were hatched I clipped their wings, and when orgasm appeared they were treated as before described, and in three days one laid a few eggs in worker cells. The other has the appearance and action of a fertile queen, but has laid no eggs, and the lateness of the season forbids advantageous continuance of the experiments.

Fully realizing the necessity for exactness and certainty in all details, before tabulating the results of any method so revolutionary, I have endeavored to effectually guard against all possibility of the test being abortive. Instances have been reported where fecundation had taken place in the hive; but as many examinations proved that there were no drones in these hives, and judging from the lateness of the season and severity of the weather, probably none in the country, except a few which had been preserved in a queenless nucleus colony by frequently feeding the bees, and confining them in the hive, and from the further fact that the experiments were conducted when few bees at my time attempted to leave the hive, and from the fact that these queens' wings were clipped when they were removed from the nursery cage, we cannot confidently assert that fecundation by the natural method did not take place. These later experiments in fecundation have been conducted through the months of October and November, during the prevalence of most unpropitious weather, and those acquainted with the habits and instinct of bees will understand the difficulties under which we have had to labor. With the return of spring and the advantageous conditions attend-

ing the normal season for breeding, and after discovering and adopting better methods and devices for appropriating and depositing the seminal fluid, we are hopeful that the fecundation of queen bees may be controlled with the same ease and certainty as fecundation is regulated among all domestic animals, and that the pedigree of the breeding stock in the apiary will be as readily traced and as highly valued as is the recorded pedigree of the illustrious scions of the turf, and the aristocratic families of the American Herd Book.

We regret that the lateness of the season prevents the further continuance of these tests now, and as we fully appreciate the necessity of placing the evidence in support of the facts set forth on the incontestable basis of continued and often repeated successes, and not upon the success obtained in two individual cases. However, the fact that I have succeeded in producing queen bees of two generations which have by artificial means been made to perform the normal functions of naturally fecundated queens, seems to furnish ground to hope that this subject has passed from the plane of experiment to the position of practicability. Other methods for controlling fecundation also remain to be tested.

QUERIES AND REPLIES.

UNDER THIS HEAD will appear Questions which have been asked of and replied to by prominent and practical bee-keepers—also by the Editor. Only questions of importance should be asked in this Department, and such question 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.

BEEES BY THE POUND VS. LIGHT SWARMS

QUERY No. 69.—Which would be the more valuable, a nucleus consisting of half a pound of bees and one comb of brood (comb to be filled as well with brood as are those usually sent out) delivered May 15th, or a natural swarm, (say about three pounds of bees) issuing June 15th, the queens in either case to be of the same value? J. F. D. Rridge-way, Ont.

H. COUSE, THE GRANGE, ONT.—The natural swarm.

S. T. PETTIT, BELMONT, ONT.—Natural swarm every time.

DR. A. B. MASON, WAGON WORKS, O.—In my locality, a nucleus.

S. CONNEIL, LINDSAY, ONT.—As a matter of choice, I would take the swarm.

M. EMIGH, HOLBROOK, ONT.—Can't say to a fraction. I would take the swarm.

G. M. DOOLITTLE, BORODINO, N.Y.—Would

prefer the swarm for honey. The other if I desired increase.

PROF. A. J. COOK, LANSING, MICH.—I have had so little experience with bees by the pound that I could not answer.

DR. J. C. THOM, STREETSVILLE, ONT.—If properly cared for right along, the nucleus and comb would be most valuable by June 15.

DR. C. C. MILLER, MARENGO, ILL.—The swarm would be my guess, but it is only a guess, as I never had experience in buying half pounds.

ALLEN PRINGLE, SELBY, ONT.—You do not say whether or not the natural swarm is also to be supplied with one frame of comb. If so I would prefer the natural swarm on June 15th to the half pound of bees on one frame of brood on May 15th, the queens of course being equal.

BY THE EDITOR.—It depends entirely on the quantity of brood in the comb and what stage brood was in, whether capped or merely hatched from newly laid eggs. If it was capped brood and some of it emerging in a full comb, would prefer the bees and brood, but if only eggs and young larvæ we would much prefer the swarm. We might also say that it would depend on the weather, which if favorable would incline us to favor the brood and bees, but if otherwise the swarm.

TIERING UP SECTIONS.

QUERY No. 70.—In the tiering up of sections there are two systems followed. Many place the empty case between the nearly finished ones and the brood, others place the empty case on top each time. (1). What are the reasons for, and the advantage of the latter plan? (2). Would it not lessen the chance of having unfinished sections? (3). Would less honey be obtained? (4). Would it make any difference in the condition of the cappings or in the complete ripening of the honey? (5). Which plan do you follow?

DR. A. B. MASON, WAGON WORKS, O.—Have had no experience in raising comb honey.

H. COUSE, THE GRANGE, ONT.—Will leave this question to the more experienced and larger producers of comb honey.

PROF. A. J. COOK, LANSING, MICH.—I prefer empty cases below, as it hastens the completion of the sections.

M. EMIGH, HOLBROOK, ONT.—(1) Don't know. No advantage. (2) Don't think so. (3) Yes. (4) Yes. (5) Empty case next the brood.

G. M. DOOLITTLE, BORODINO, N.Y.—I do not use the tiering up plan, believing that more honey can be secured in another way.

ALLEN PRINGLE, SELBY, ONT.—In getting section honey I do not follow the "tiering up" plan. Let those who do answer these questions.

DR. C. C. MILLER, MARENGO, ILL.—(1) To avoid having sections started that will not be sure to be filled. (2) Yes. (3) If followed all through the season, yes. (4) I think it might. (5) Both; the latter toward the close of the season.

H. D. CUTTING, CLINTON, MICH.—I have tried each plan but prefer to raise the part full case and put the empty one under. You will get the cases filled in less time and the honey will have a better appearance and less trouble to take from the hive.

S. CORNEIL, LINDSAY, ONT.—(1) Because the lower tier would be more likely to be finished. The upper tier would contain good starters for next season. (2) Yes in the lower tier. (3) Think not. (4) No. (5) The first plan till a little before the close of the honey flow, then the second plan.

S. T. PETTIT, BELMONT, ONT.—(1) Being near the brood with bees both above and below at work, the bees set to work much more readily than they would if they had to go away off from the brood and above work nearly finished. The natural order of things in a hive is to work from the top downward. (2) It would. (3) No. (4) Both would be better done. (5) I place the empty case next the brood.

DR. J. C. THOM, STREETSVILLE, ONT.—(1) I do not know any reasons why the empty crate should be placed over the full or nearly completed one, but think it would not be as good a way as placing it between brood and completed case. (2) It might if honey flow was not abundant. (3) I believe less would be obtained. (4) No. (5) Raise partly completed case up and set empty one between it and brood chamber.

BY THE EDITOR.—Well, both plans are right. It would depend on the season, the flow of honey, etc., and can only be done properly by the superior judgment of the operator. In the early part of the season when the flow of honey is good the empty case may be placed; under in the latter part of the season when the flow is slackening it may be placed on top to catch any surplus that the lower case will not hold.

If placed next to the brood towards the end of the season it might leave you too many unfinished sections. If placed on top early in the season the yield might be less but the manipulations should be governed by strength of colony, season and circumstances.

BOTANICAL.

DAYTON BALFOUR.—I see in Mrs. Phelps' Botany in regard to the plant *Rhododendron Arborea* that by slight shaking drops of honey will fall like rain. (1) Where is this plant? (2) Would it not pay for honey alone? (3) What plant is commonly called "Kill-calf"? It is said to produce poisonous honey.

Tyler, Texas, Apl. 5, 1886.

In answer to the above: 1st. *Rhododendron Arborea*, a member of the great heath family, is found near the Blue Mountains, Penn., along the banks of streams.

2nd. As Mrs. Phelps says it is remarkable for its great yield of honey, and, if it should prove hardy out of its native place, it would be a most valuable addition to our honey supply; and moreover be highly ornamental, from the great beauty of its large, rose-colored flowers.

3rd. Your "kill-calf" is doubtless the *Kalmia Latifolia*, a member of the same family as the above (Ericaceæ) commonly called Calico-bush, Mountain-laurel, &c. This is one of our most beautiful shrubs, bearing in great profusion, splendid corymbs of rich, variously tinted, rose-colored flowers. In other respects its reputation is very bad. Its leaves are narcotic and fatal to young bovines and some other animals, when eaten by them, besides which, its honey is very poisonous and said to produce death when eaten even in small quantities. It is very common from Maine to Ohio and Kentucky and in Pennsylvania and southward forms dense thickets *Kalmia angustifolia* (Sheep laurel, Lamb-kill) is also said to be poisonous to some animals especially to sheep.

C. MACPHERSON.

Prescott, April 19, 1886.

PRICE LISTS RECEIVED.

J. R. H. Myers, Stratford, Ont.—8 pages—Bees, Queens and supplies generally.

M. H. Hunt, Bell Branch, Mich.—8 pages—supplies generally.

H. H. Brown, Light Street, Columbia Co. Pa.—22 pages—catalogue of Italian and Cyprian Bees, Queens and supplies.

S. W. Morrison, M. D. Oxford, Chester Co. Pa.—note circular—Carniolan Queens.

THE CANADIAN BEE JOURNAL.

JONES, MACPHERSON, & Co.,

EDITORS AND PUBLISHERS,

BEETON, ONTARIO.

WEELY, \$1.00 per Year, Postpaid.

BEETON, ONTARIO, APRIL 28TH, 1886

We have too much to see to and shall dispose of a limited number of colonies to those desiring them—we can guarantee to furnish some of the finest "bees for business" that can be found. See the advt.

The Indian and Colonial Exhibition will be opened on the 24th May, by Her Majesty Queen Victoria, in person. A special poem written by Lord Tennyson will be recited and Sir Arthur Sullivan will conduct the music, which has been specially composed for the occasion.

Please examine your address label, and if it is numbered "52" or any less number your subscription is in arrears, and the favor of an early remittance is requested. It takes a lot of money to publish *weekly* such a journal as we are endeavoring to supply.

In the new price list which we are just issuing, the prices of a great many supplies have been reduced. This we are able to do, because of our increased facilities for manufacturing and producing. If you have not received one yet, drop us a card and we will send you one by return of mail.

Students are beginning to arrive—two came on the 23rd. We have had applications from a large number, and to those who have not arrived yet we would throw out the suggestion that as spring management is one of the most important factors in bee-keeping it would be well to lose as little time as possible in getting here.

We are much encouraged by the large increase in our subscription list since we added the cover, which has been so much praised. Even with this addition we are unable to find room for all the good matter which is being sent us for publication, and for the delay which has attended the appearance of many good articles we must apologise.

EXPERIMENTS IN APICULTURE.

The above report is by Nelson W. McLain, agent in charge of the United States Apicultural Station, Aurora, Ill., a copy of which is before us and is full of good things. It treats of economy in the production of wax, devices for feeding sugar syrup and for other purposes.

wintering bees, bees vs. fruit, artificial fertilization, bee forage, improved races, importance of apiculture, etc. It has seldom been our pleasure to receive so many valuable hints in such condensed form. His experiments to prove that bees do not injure fruit are conclusive beyond question, and those in connection with artificial fertilization have brought out many new and interesting points regarding the process. Those who attended the National Convention at Detroit, listened with profit and pleasure to his explanations of his *modus operandi*. Mr. McLain deserves a great deal of credit for the efforts he is putting forth in the interest of apiculture. We shall make extracts as our space admits.

MRS. LIZZIE E. COTTON.

Well, we have heard from Mrs. Cotton, and instead of making any answer to the arguments contained in the item referring to her, page 34, she falls to and abuses us in good round terms for "slandering" her, as she terms it; and at the bottom of her letter she attaches clippings from her circular in which she says:—"All statements, from whatever source, charging me with fraud or deception in any form, are wholly without foundation. I challenge investigation. I have been in business here at West Gorham for more than twelve years. Every intelligent person knows that if I am engaged in a fraudulent business the laws would not permit me to continue from year to year." We will call attention only to the last sentence which is certainly misleading. As we understand the laws of the U.S., the word "fraudulent" means obtaining money under false pretences and giving no value therefor or not *attempting* to give value, and relates more particularly to such people as Dr. Hale, Dr. Sniffen, Dr. Voegeler and people of that ilk, so that Mrs. Cotton might go on for years without any interference on the part of the authorities. We repeat that if Mrs. Cotton wishes to exonerate herself from the imputations which are now resting upon her character that *she* must be the one to bring the matter to the notice of the authorities. Unless she does this, we must ask our readers to be particular in any transactions they may have with her.

CONVENTION NOTICES.

The officers and members of the Texas State Bee-Keepers Association send fraternal greeting to all bee-keepers' associations throughout the U. S. and Canada, and extend to them and D. A. Jones, the editor of that spicy little weekly, the C. B. J., in particular a most cordial invitation to be with us at our eighth annual meeting to be held at the bee-farm of Judge Wm. H. Andrews, McKenney, Collin Co., Texas, May 5th and 6th next. Every effort

will be made to render our meeting the most interesting ever held in the Sunny South. No hotel bills to pay and fraternal treatment to all. Among the subjects to be discussed are the fertilization of queens by mechanical force. Drones from laying workers as good as any for mating with virgin queens, and a new departure all around. Come one, come all. Fraternally.

B. F. CARROLL.
Sec. Texas State B.K.A

HONEY MARKET.

DETROIT HONEY MARKET.

The market is a little better for comb honey. Best white, in 1 lb. sections, 13 to 14c. Beeswax 23 to 25c. with but little in sight.
Bell Branch Mich. M. H. HUNT.

BOSTON.

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

BLAKE & RIPLEY.

CINCINNATI, O.

Demand is extremely slow for extracted honey. Manufacturers seem to have taken a rest. There is only a fair demand for honey in glass jars and for comb honey. Prices are unchanged and nominal with occasional arrivals and a large stock on the market. We quote extracted honey at 4c. to 8c. on arrival and choice comb honey at 12c to 14c. in a jobbing way. There is a good home demand for bees wax. We pay 25c. a lbs for choice yellow.

CHAS. F. MUTH & SON.

Cincinnati,

CHICAGO.

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

R. A. BURNETT.

Chicago,

NEW YORK.

We quote quite an improvement in sales of comb honey the past two weeks, and owing to the lateness of the season prices rule low. In consequence of the low freight rates from San Francisco to New York, many dealers in honey are availing themselves of the rates and shipping extracted honey to this market at prices ranging from 4½ to 5½ cts. per lb. This has already had its effect on stale goods. We quote prices as follows: Fancy white comb honey, 1 lb. sections, 12 and 13 cts. per lb.; fancy white comb honey, 2 lb. sections, 9 and 10 cts. per lb.; fancy buckwheat comb honey, 1 lb. sections, 9 cts. per lb.; fancy buckwheat comb honey, 2 lb. sections, 7 and 8 cts. per lb.; off grades, 1 and 2 cts per lb. less; extracted white clover honey, 6 and 7 cts. per lb.; extracted buckwheat honey, 5 and 5½ cts. per lb.; extracted California honey, 5 and 6 cents per lb.; extracted Southern, as to color and flavor, 5 and 6 cts.

McCAUL & HILDRETH BROS.

ADVERTISEMENTS.

FOR SALE.

A number of colonies Italian bees bred from A. I. Root's queens, \$8 to \$11. Hatching eggs from pure bred W. F. B. Spanish, \$1.50 setting of 13, or \$2.50 for 2.

JAS. STEWART, Meaford, Ont.

For Sale Cheap.

50 colonies in frames 10 x 12, and 10 frames per hive only \$5 each, also 500 or 600 straight combs built on e. f. cheap. Illustrated circular free, ready by 1st of May. Send for it, and save freight in ordering from Montreal. Address,

J. B. LAMONTAGNE,
Box 964, Montreal, Que.

50 COLONIES OF BEES FOR SALE.

ITALIANS, \$9. HYBRIDS \$8.

Also bee-smokers, honey knives, comb foundation, perforated metal and apiary supplies. No circular. Write for wants. D. P. CAMPBELL, Park Hill, Ont.

ITALIAN QUEENS 1886.

For Italian Bees and Queens in their purity for beauty and working qualities they are equal to any in the U. S. or Canada. Comb foundation 40c. per lb. Untested queens \$1 each, \$11 per dozen; tested \$3.50 each. Queens reared in full colonies from egg; safe arrival and satisfaction guaranteed. Send for circular.

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

Bees For Sale!

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

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

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

THE D. A. JONES CO., L'T'D.
Beeton, Ont.

EXCHANGE AND MART.

Advertisements for this Department will be inserted at the uniform rate of 25 cents each insertion—not to exceed 3 lines—and 5 cents each additional line each insertion. If you desire your advertisement in this column, be particular to mention the fact, else they will be inserted at regular rates. Cash must accompany the adv t.

BEEES! BEEES! For sale—Thirty or forty colonies in fine condition, cheap. Address, W.H. SANFORD, Tottenham.

FOR sale—Five colonies of bees, well wintered. Also first swarms. Good foundation. Hives made up, or in flat extra lumber; also sections, smokers and extractors. CHAS. MITCHELL, Moleaworth.

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

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

ESTABLISHED MAY 1ST, 1883.

The * American * Apiculturist,

A JOURNAL OF 32 PAGES DEVOTED TO

PRACTICAL BEE CULTURE.

SEND FOR SAMPLE COPY.

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

AMERICAN APICULTURIST
Wenham, Essex Co. Mass

SMALL FRUITS PLANTS.

Raspberries, Blackberries, Strawberries, Currants, Gooseberries, Grape Vines, Russian Mulberries. First-Class Plants at Low Prices.

Send for price list.

JAMES R. HOWELL,
Box 293, Brantford

20 COLONIES

Of Italian Bees for sale. Originated from D. A. Jones' and S. Corneil's apiaries. Complete Jones' hive; 10 frames with each hive; good queens. Price \$9 to \$10. Apply to
ERNEST SCHULZ, Lethbridge, Muskoka.

150 FULL COLONIES

Italian Bees in Langstroth Hive.

PRICE FROM \$8.00 TO \$10.00.

According to number ordered. Correspondence solicited.
R. L. MEADE,

Nassagaweya, Ont.

Foundation Wholesale and Retail.

I make a specialty of manufacturing foundation of all kinds and sizes and in any quantity. Correspondence with dealers solicited. All of my foundation is made from pure yellow wax, and cleansed and purified by steam, and I guarantee every lb. equal to samples. HEAVY, 5 to 7 sq. feet, cut to fit any frame, in 25 lb. lots, 49c.; 50 lbs., 48c.; 100 lbs., 47½c. BEAUTIFUL THIN foundation, 10 to 12 sq. ft, 25 lbs., 58c.; 50 lbs., 57c. FOUNDATION MADE UP, HEAVY, 50 lbs., 12c.; 100 lbs., 11c. THIN, 25 lbs., 20c.; 50 lbs., 18c. Papered and packed in light boxes free. Customers have choice of mills on which foundation is made. A few fine stocks of ITALIAN BEES in May or June on 7 L. frames in light shipping box, \$8. A good 2½ inch SMOKER by mail, \$1. SECTIONS, CRATES, &c. FREIGHT to Montreal per 100 lbs., 28c.; EXPRESS per 100 lbs., 35c. NO CIRCULARS. Prospective customers furnished with SAMPLES of foundation upon application. Remember I continue to act as agent for all makes of FOUNDATION MILLS, and write me before purchasing. See former ad. REFERENCES: Exp. Agent, P.M., or Manager E. T. BANK, all of Bedford.
FRANK W. JONES,
Bedford, Que.

DOOLITTLE!

Wishes to say to the readers of the CANADIAN BEE JOURNAL, that he has concluded to again rear queens for sale, during 1886, at the following prices:

Untested Queens, each	\$ 1 00
“ “ per five.....	4 00
“ “ “ ten.....	7 50
“ “ “ twenty.....	14 00
Untested Queens, reared by natural swarming, each.....	1 50
per five.....	6 25
per ten.....	11 00
per twenty.....	20 00
Tested Queens, each	2 00
“ “ per five.....	7 00
“ “ by natural swarming, each	3 00
“ “ “ “ “ per	15 00
“ “ 1885 raising, sent in May	
or after, each.....	5 00
Extra selected, two years old, each....	10 00

Circular free, giving full particulars regarding each class of Queens. If Canada money is sent, add 5 per cent., as it costs me that in exchange. Also add eight cents for single Queen, six cents for two and ten cents for five to cover extra postage to Canada. Address

G. M. DOOLITTLE,
BORODINO, OYAN Co., N. Y., U. S.

BEES FOR SALE.

For sale cheaper than the cheapest.—Blacks, Hybrids and Italian bees in lots of from one to fifty, in Jones' hive. Price \$5, \$6 and \$7 respectively, for strong colonies delivered at the nearest railway in May. Also one Honey Extractor, good as new, for sale cheap.

T. M. CRAIG,
Shefford Mountain, Que.

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

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

THE INVERTIBLE HIVE

INVERTIBLE FRAMES,

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

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

J. M. SHUCK,
DES MOINES IOWA

IMPORTED QUEENS.

In April.....11 francs in gold.
 May and June.....10 " " "
 July and August.....9 " " "
 September and October.....7 " " "

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

C. BIANCONCINI & Co., Bologna, Italy.

STANLEY'S

AUTOMATIC HONEY EXTRACTOR.

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

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

20 Colonies of Italian Bees

For sale at \$8 per colony.

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

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

PRICES CURRENT.

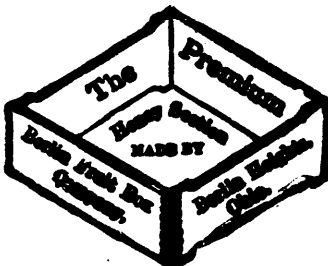
BEE SWAX

Beeton, April 28th, 1886.

We pay 31c. in cash (30 days) or 34c. in trade for good pure Beeswax, delivered at Beeton, at this date, sediment, (if any), deducted. American customers must remember that there is a duty of 25 per cent. on Wax coming into Canada.

FOUNDATION

Brood Foundation, cut to "Jones' size" per pound...52c
 " " over 50 lbs. " " ...50c
 " " cut to other sizes " " ...53c
 " " over 50 lbs. " " ...51c
 Section " in sheets per pound.....65c
 Section Foundation cut to fit 3 1/2 x 4 1/2 and 4 1/2 x 4 1/2 per lb. 70c.
 Brood Foundation, starters, being wide enough for Frames, but only three to ten inches deep...50c



If you want to use the best one-piece sections made, try ours. They have taken 1st premium wherever exhibited, and all who use them once want no other. H. R. Boardman, of

East Townsend, O., who used 10,000 of them last season, says: "In trying them I *folded 1000 without breaking a piece.* Send for our price list of Apiarian Supplies and

Berry Packages. Address as above.

Beeton Printing & Publishing Co.,

FINE BOOK, JOB, & LABEL PRINTING.

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

F. H. MACPHERSON,
 Manager, Beeton, Ont

3-t.f.

Pure Italians.

	May	June 1st to 18	June 22 to Oct. 1
Tested queens.....	\$2.50	\$2.25	\$1.75
Untested queens.....		1.25	1.00
Bees per pound.....	2.00	1.50	1.00
Nuclei per comb.....	90	65	50

Communications promptly responded to and all questions cheerfully answered.

S. C. PERRY,
 Portland, Ionia Co., Mich.

100 Colonies of Bees For Sale.

My 650 Colonies are more than I wish to handle, and I want to sell 100 full Colonies at \$5 each for Hybrids and 6.00 for pure Italians. I will also sell a few last year's Queens of pure Italians and Caucasian bees. Discount given on larger numbers of Colonies. Safe arrivals guaranteed and references given: Address

JULIUS HOFFMAN,
 Canajoharie, Mont Co., N. Y.

Queens From The South.

EARLY

ITALIAN

In April, \$1.25 each; \$13.00 per dozen.
 In May, \$1.15 each; \$12.00 per dozen.
 In June, \$1.00 each; \$10.00 per dozen.
 Tested, \$2.50.

Safe arrival and satisfaction guaranteed. Special rates to dealers.

W. J. ELLISON,
 STATEBURG, SUMTER Co., S. C.

Queen Bees and Nuclei.

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

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

FOR SALE CHEAP.

100 Colonies of Bees, 2000 lbs. of Extracted Honey. Will exchange Bees for an Engine and Boiler, 6 or 8 horse power. Send \$1.00 for one of my frame nailers for Jones' frames, and be happy putting frames together. All kinds of hives made to order. Write for prices.

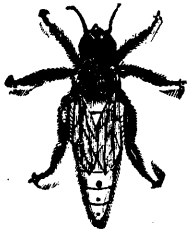
JAS. ARMSTRONG, Cheapside, Ont.

BEE CITY SUPPLY ESTABLISHMENT

NEW REVERSIBLE CRATE HIVE.

Taking the standard Langstroth frame arranged for section or extracted honey at the will of the apiarist. A perfect saving-of-work-hive. Honey can be marketed as raised in the hive without re-handling. Given foundation, all-in-one-piece sections, smokers, honey crates, honey knives, frames, extractors, &c., &c. For circulars and samples address

WM. MCKENZIE,
 Drawer E., Port Burwell, Ont.



THE ITALIAN APIARY.

M. B. HOLMES, Delta, Ont.

IMPORTER OF AND DEALER IN

ITALIAN :: BEES :: AND :: QUEENS.

The best of Italy's choicest queens their mothers. Not one dissatisfied customer in 1883, 1884, and 1885. Price, untested, \$1.50; Tested, \$2.00; Selected tested, \$3.00. Colony in Jones' Hive, \$9.00.

Agent for all kinds of Apian Supplies.



BEE-KEEPERS' SUPPLIES.

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

RED ROCK PRICES.

WE MANUFACTURE

5 Styles of Hives, 6 Styles of Honey Extractors,
7 Styles Foundation, Etc., 2 Styles of Smokers,
2 Styles Wax Extractors, "V" Groove Sections, Etc.
WE GUARANTEE OUR WORK FIRST-CLASS.

Liberal Discount on Large Orders.

Send a Postal Card for our Illustrated Catalogue

ASPINWALL & TREADWELL, BARRYTOWN, N.Y.

EGGS FOR HATCHING.

From two grand yards of W. F. Black Spanish and One yard of Light Bramahs. Eggs, \$2.00 for 13. or \$3.50 for 26. A few Fowl for sale. Send for circular.

G. H. SHEERES,
Clarksburg, Ont.

BEE-KEEPER'S GUIDE.

OR

MANUAL OF THE APIARY.

11,000 SOLD SINCE 1876.

The twelfth thousand just out. 10th thousand sold in just four months. 2,000 sold the past year. More than 50 pages and more than 50 costly illustrations were added in the 8th edition. It has been thoroughly revised and contains the very latest in respect to Bee-Keeping.

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

A. J. Cook, Author and Publisher
State Agricultural College Lansing, Mich

NORTHSHADE APIARY

AND COMB FOUNDATION WORKS.

Prices greatly reduced. 50 to 100 colonies of choice Italian bees for spring delivery. Nuclei, queens, and bees by the pound, for the season. Foundation for sale. Wax worked by the pound, or for a share. Samples of foundation free. Send for price list.

O. H. TOWNSEND,
Alamo, Mich., Kal. Co.

QUEENS. 1886. QUEENS.

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

FRANK A. EATON, Bluffton, Ohio.

BEE CULTURE

A short, practical treatise on the art and description. Catalogue of bee-keeper's supplies, with prices. Send for one to

WATTS BROS.
Murray, Clearfield Co., Pa.

VANDERVORT

Comb Foundation Mills.

Send for samples and reduced price list.

JNO. VANDERVORT, Laceyville, Pa.

Italian Bees and Queens.

Full Colonies, Nuclei and Queens, sent on short notice.

A. NEEDHAM
Sarrento, Orange Co., Fla

J. P. Connell,

HILLSBORO, HILL CO., TEXAS.,

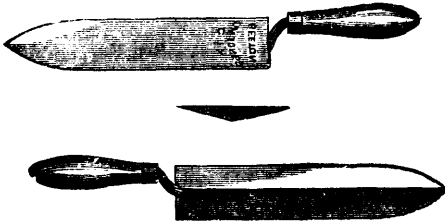
Makes a specialty of rearing Pure Italian Queens and of Shipping Bees in two, three, and four frame nuclei. My queens will be bred from the best imported mothers. Tested Queens, in March and April, \$2.50; after, \$2.00. Untested Queens, in April, \$1.25; after, \$1. Safe arrival and satisfaction guaranteed. Send for circulars.

BUCKEYE SECTIONS, V. GROOVE

White as snow, any size, very cheap. We manufacture the Scientific Bee Hive, shipped in the flat (body and frames) can be set up in five minutes without hammer or nails. This hive beats them all for honey. Send for circular to J. B. MURRAY, Ada, Ohio.

HONEY KNIVES.

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



These Knives are made of the Finest Razor Steel

- Ebony Polished Handle, mirror polish\$1 50
 - Ebony Polished Handle, glazed polish..... 1 25
 - Wood Polished Handle, glazed polish..... 1 00
- If by mail, add 18c extra for each knife.
THE D. A. JONES CO., L.D., Beeton

WHAT EVERYBODY WANTS.

—THE—

CHAMPION EGG TESTER.

PRICE, 50 CENTS.



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

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

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

THE POULTRY MONTHLY.
P. O. Box 215, Toronto, Canada.

TAR HEEL APIARIES.

1881
71-66.
ABBOTT L. SWINSON,
1881

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

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

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

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

NO THEN ORDER.

Having determined to devote my time exclusively to the production of

PURE ITALIAN BEES & QUEENS

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

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

See what last season's customers say:

PENETANGUSHENE, CANADA.

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

HARVY L. LEACH.

The queens are both giving satisfaction.

R. M. TAYLOR,

Port Dover, Can.

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

JNO. G. KNIDENGER,

Kilmanagh, Mich.

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

J. S. SEELY,

Sodus Point, N.Y.

and hundreds of others.

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

THOS. HORN.

Box 1691, Sherburne, N. Y.

FRIENDS If you are in any way interested in **BEEES AND HONEY.**

We will with pleasure send you a sample copy of our **SEMI-MONTHLY GLEANINGS IN BEE CULTURE**, with descriptive price-list of the latest improvements in Hives, Honey Extractors, Comb Foundation, Section Honey Boxes, all books and journals, and everything pertaining to Bee Culture. Nothing Patented. Simply send your address on a postal card, written plainly
A. L. ROOF, Medina, Ohio

180 ACRES, SELECTED,

High, dry hammock and pine lands, not subject to over flow, situated on the

GULF COAST RIDGE.

In Tropical Florida, 87° 30' longitude west of Gr., and 26° 35' north latitude, 10 miles south of Fort Meyers, 21 miles distant from Osage Bay, crossed in its whole length by the lovely Esoto Creek, for the culture of Oranges, lemons, limes, pineapples, date-palm, coconuts and winter vegetables, etc. Climate grand and delightful, water good and healthy, health unsurpassed. In 5 acre lots, \$12.50 per acre. The whole, a 147 acre tract, at \$100.00 per acre. 70 to 100 colonies of Italian bees can be had if wanted. Apply to

G. DAMKÖHLER,
Punta Rassa P. O., Monroe Co., Florida.

50 Colonies of Bees For Sale.

Containing Queens raised from choice mothers. They are on straight selected frames, most of which are wired. The queen can occupy them nearly to the top bar. Prices as follows: One colony of bees on eight Jones' frames for delivery in May, \$2.00. Hives or boxes for shipping extra as follows: Box, suitable for shipping, 50c. can be returned if desired; a hive to hold 10 or 12 frames, \$1. or \$3 for my special storey and a half hive, 28 inches long inside, with one-inch chaff space at the sides, contains 2 division boards, and has a special feeder whereby you can feed without removing cover or disturbing cushion. It is made of first-class material and well painted. With this hive the honey can remain until well ripened, as you can extract 50 lbs at one time.

G. A. DEADMAN,
Druggist, etc., Brussels

THE YUCCA BRUSH!!

BY MAIL SIX CENTS EACH.

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

W. W. BLISS,
Duarte, Cal.

ESTABLISHED 1855.

BEE SWAX HEADQUARTERS.

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

R. ECKERMANN & WILL,
Beeswax Bleachers and Refiners. **Syracuse, N. Y.**

NORWAY SPRUCE.

Something for every Bee-Keeper. Shelter your Apiary. Large quantities at low prices. Send for price list.

A. GILCHRIST,
GUELPH P. O., ONT

BEE-HIVES, SECTIONS,

Foundation & Apiarian Supplies.

Having a large stock of sections on hand we will fill orders in March at the following prices:

4 1/2 x 4 1/2, in lots of 500 to 1,000, per 1,000,	\$5.00
" " " " " " " " " " " "	4.75
" " " " " " " " " " " "	4.50
" " " " " " " " " " " "	4.25
4 3/4 x 4 3/4, at same prices. All V-grooved.	1.50

Our Section-Cases and Shipping-Crates are as good as any in the market, and at correspondingly low prices. For description and prices of the **SUCCESS HIVE**, send for Price-List. Estimates given on all other hives

QUEENS AND BEES FOR 1886.

We make a specialty of rearing the **ALBINO QUEENS AND BEES**. Price-List free.
S. VALENTINE & SON Hagerstown, Md.

SECTIONS!

SECTIONS!

Lake's All-In-One-Piece !!

4 1/2 x 4 1/2 x 2 - to 1 1/2	\$3.00 PER 1,000.
5 1/4 x 5 1/4 x 2 - to 1 1/2	\$4.00 PER 1,000.

SPECIAL FREIGHT RATES GUARANTEED.

New Firm.

New Factory

New Machinery.

Samples and Price List, with unsolicited Testimonials, sent on receipt of five cent stamp to pay postage.

"Sections received. As far as material and workmanship is concerned they cannot be excelled. Send me 10,000.

"R. STEHLE,
Marietta, Ohio.

"We would like the exclusive agency of the whole Northwest Territory. Send us 10,000 at once.

"HAVE & SON,
Council Bluffs, Iowa.

Address,

LAKE BROS. & CO.,
CATONSVILLE, MD.

Lock Box, 17.

APIARIAN SUPPLIES

MANUFACTURED BY

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

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

DOVE-TAILED SECTION.

Same price as one-piece. Also manufacturer of **VAN-DEUSSEN FOUNDATION**. Dealer in a full line of **Bee-Keepers' Supplies**. Send for Illustrated Catalogue for 1886, Free. Prices always reasonable. Mention this paper.

I. R. GOOD'S PRICE LIST.

Italian Bees and Queens For 1886.

HAVING again located at NAPPANEE, where I expect to devote my entire time to the breeding of **PURE ITALIAN** and **QUEENS** bred in my Tennessee Apary. All queens warranted pure to name and untested Queens very fertilized.

Tested Queens, prior to June 15th.....	\$3.00
Tested Bees, later than June 15th, each....	2.00
Untested Queens, prior to June 15th, each....	1.00
Untested Queens, later than June 15th, each.	1.00

Six for \$5.00. 12 or more 75c. each.

4-Frame Nucleus, very strong, prior to June 15th, \$5.00 each, later \$4.00 each. With untested queen \$1.00 less each. Bees by the pound same price as untested queens. Will also furnish all kinds of sections and hives at A. I. Root's price.

I. R. GOOD, Nappanee, Ind

DADANTS FOUNDATION

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

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

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

150 COMPLIMENTARY

and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1885. We guarantee every inch of our Foundation equal to sample in every respect.

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

1886. ITALIAN QUEENS. 1886.

See Wanted Queens for \$5. Send for circular free. No circulars sent unless called for.

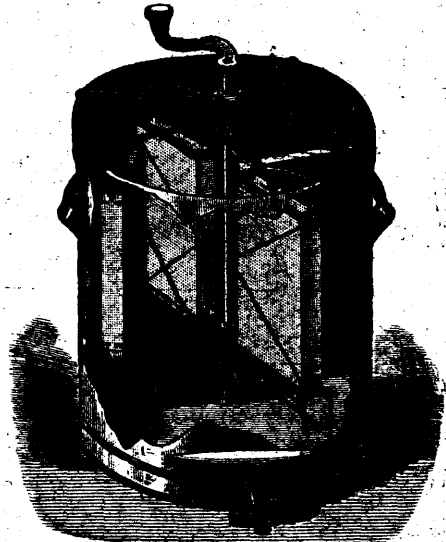
J. T. WILSON,
Nicholasville, Ky.

E. L. GOULD & CO,

BRANTFORD, ONT.

Manufacturers of and dealers in a full line of **BEE KEEPER'S SUPPLIES.**

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



THE STANLEY AUTOMATIC HONEY EXTRACTOR

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

JACOB SPENCH

—AGENT FOR—

E. L. GOULD & CO'S BEE-KEEPER'S SUPPLIES.

Wholesale Honey Depot. 75 Colborne St., Toronto. Glass a specialty.

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

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