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VOL. II, No. 3

1886

APRIL 21

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

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When writing 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.

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

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Italian Queens—untested in April, each, \$1.25, per doz., \$12. 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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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

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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

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

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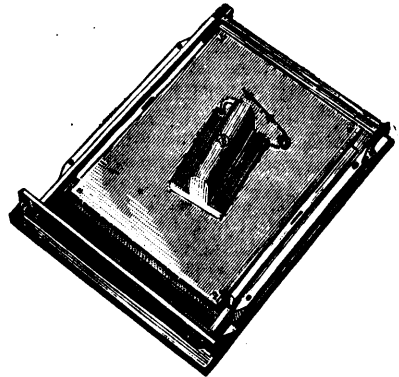
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Saves the cost of the machine in nailing 500 frames, to say nothing of the extra quality of the work obtained by its use.



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

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TO ALL that are interested in Bees and Honey, send for our Free and Illustrated Catalogue of Apianian 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 section

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.

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

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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.

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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

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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. 4. BEETON, ONTARIO, APRIL 21, 1886. WHOLE No. 56

THE INDIAN AND COLONIAL EXHIBITION.

THE *British Bee Journal*, in its issue of the 25th March has quite a lengthy editorial on the proposed Canadian Apiarian Exhibition, and it speaks in glowing terms of Canadian efforts to make their exhibit a success. We copy the following paragraphs:

"At the last meeting of the Committee of the British Bee-keepers' Association, a suggestion was made that during the time that the Colonial Exhibition was being held it would be desirable that a British exhibition of honey and bee-appliances should be held in the large Conservatory of the Royal Horticultural Gardens; and to give effect to this suggestion, a number of those present expressed their willingness to contribute towards a fund to cover the preliminary expenses and other possible charges. Since that meeting the members of the Committee have been using every effort to make arrangements to carry out the above suggestion; but we are not at present in a position to say to what extent their endeavours have met with success.

While, then, the matter of the British exhibition is still pending, it will be desirable to look abroad and see what is being effected in our Colonies, and the position they desire to occupy in the forthcoming International Show. We are not able to state to what degree Australia, New Zealand, the West Indies, and other colonies, intend to exhibit; but as the time approaches for the opening, they will, doubtless, give evidence that they have not overlooked the opportunity now afforded them of proving to the world the ability of their respective countries to produce honey and wax.

Canadian apiarists, however, have taken the initiative in the matter, and they are evidently determined to use every effort to make an effective exhibit of their honey produce.

Mr. S. T. Pettit is the chairman of the Ontario B. K. A. and he is now the medium of all communications respecting the Canadian Exhibition. It was determined by Mr. Pettit and his Committee to interview the members of the Ontario Legislature with a view to obtaining from them the necessary assistance in carrying out their purpose. The members having been appealed to, the result has been most gratifying and hopeful. The Government have expressed their willingness to give the Association the assistance they required, and have granted them the sum they asked for, namely, \$1000, and have also promised to incorporate the Association, and give it annually a grant of \$500.

The services of Mr. Neighbour will be put in requisition, and he, assisted by Dr. May, of Ontario, will arrange the first exhibit.

Provision will be made for exhibitors to sell honey while the exhibition is going on, provided the main exhibit is left in order, and the goods can also be sold in the lunch-room or dining hall.

It was the purpose of the Commissioners that all exhibits of honey should be conveyed to Beeton, Ontario, at the expense of the exhibitors; but the distances between places in Canada are very great, and the probability is that the Ontario B. K. A. will defray the expenses of transit to Beeton and the Government subsidy be utilised in paying the expenses from Beeton.

It is therefore seen from the foregoing summary that our Canadian brethren are proceeding very systematically and successfully

with the work they have undertaken, and that their exhibits of honey will not only be large in amount, but the best and the purest that the country can produce. They have the right men as their leaders, who are ready to prove their ability to take a proper advantage of the opportunity now offered them, and to see that Canadian apiculture is worthily represented at the forthcoming Exhibition.

CURRENT NEWS FOR BEE-KEEPERS.

THE HEDDON HIVE.

Read at the meeting of the Rhode Island Bee-Keepers' Society, held at Providence, R. I., March 17th.

I HAVE been requested to give the current news relating to our industry and will endeavor to do so by touching on the ideas that interest me most and which seem important and desirable for application in our apiaries.

Perhaps the subject now causing the most interest is that relating to the new Heddon hive and system of hive manipulation. As all may not have seen the description, I will say that the brood chamber of this hive consists of shallow cases or hives of closed end frames; one or several of these cases are used according to the requirements of the colony, making a sectional brood nest.

Each horizontal section can be interchanged, also inverted. Each frame can also be inverted singly. These frames are the Quinby closed-end and open top standing frame, but made shallow as used by Mr. Bingham, of Mich., for many years. A thumb-screw crowds them together that the case may be inverted. The surplus department consists of wide frame with the separators for holding sections arranged on same principle, also invertible. The system is in handling hives instead of frames, and it seems to me must be appreciated by all who give it a careful study.

About all can be accomplished by manipulating these sections of brood nest that are obtained by reversing singly each full depth frame.

The hive and system came out about Jan. 1st, although it was described a few weeks before at the convention of the North American Bee-Keepers' Society held at Detroit. Since then the editor of the *American Bee Journal* has come out in its favor, and both he and D. A. Jones, of the CANADIAN BEE JOURNAL, manufacture them for sale.

W. L. Hutchinson, Rev. W. F. Clarke and many other of our brightest writers have written of it in glowing terms. Our large producers are also looking upon it with approval, among them

Mr. Manum, of Vermont, who has nearly a thousand colonies and whose crop last season was twenty-two (22) tons.

The general verdict is that it is a good thing and will change our methods of hive construction and management. Mr. Heddon has patented the hive, and so far as I can see he has a right to *for the combination*, as it is new even if the different principles combined are old and common property. I have not read the specifications of his patent, but should judge from the writings of Messrs. Pond and Demaree, that he had claimed as original principles in common use, and as they were not patented he has received a patent on them.

A brood nest having horizontal sections is not new, as will be seen by referring to ninth edition of *Encyclopædia Britannica*, 1878, where under head of "Bees" are illustrated and described several hives, one of the which "The Stewarton Hive" is a top bar hive although frames are sometimes fitted to it. It is described as follows:

"It usually consists of three octagon breeding boxes, 14 inches in diameter, by 6 inches deep—there are also two supers or honey boxes the same diameter as the stock boxes, but only 4 inches deep; these are furnished with wider bars." On the next page the management is given, two boxes are given to a swarm, and soon another empty one, or one containing another swarm, is added by placing underneath or between the two, then the shallow supers are placed on the top. In "Miner's Am. Bee-Keepers' Manual," 1851, he illustrates and describes the Subtended Hive (page 141), which hive consists of three horizontal sections with openings from one to another, one receives the swarm and others are added beneath as required, each section was 11½ inches square, by 9 inches deep. He speaks of it being in use in New Jersey, and that "some savant is deluding the good people by causing them to believe that it is original and the very best hive in existence," that empty parts are placed under or between two full ones and the lower one only left when wintering. He condemns the hive and plan and praises his own system. These principles seem to have been lost sight of by the majority after the invention of Langstroth's easily movable hanging frame hive.

Mr. Bingham binds his frames together and handles them like a shallow box. Mr. Manum has used wood thumb screws in section cases which were invertible. Invertible frames are common, and J. M. Shuck has given us a patent invertible hive. Shallow frames in cases were also used by the Dadants for extracting supers, and in the *American Apiculturist*, Vol. 2, page

222, Oct., 1884, Mr. Demaree gives his plan of taking honey with queenless bees where he uses shallow cases of brood frames tiered one above another, and tells us that in taking comb honey one shallow case at the bottom, might catch the pollen and keep it out of the sections, and says:

"Hence I shall work a set of shallow frames under the cases. As my shallow frames for extracting are worked in cases the same size of my section cases, they will work all right together. I propose hereafter to substitute the cases of shallow frames for full sized hives in obtaining extracted honey."

These facts will show the material for such a hive, and Mr. Heddon has used that material and combined the many good points in one hive. If he has patented separately what is common property and can legally prevent us using what we have used, we are all interested and want to know it.

I may appreciate his hive more from the fact that I have been using for six years the Hoffman partly-closed-end, hanging frame, and following Demaree's idea had planned to cut down these frames to fit my shallow, wide-frame cases, and use both for extracting supers, and for brood nest for new swarms, giving empty brood frames, perforated zinc honey board, and two tiers of sections filled with full sheets of foundation on the Hutchinson plan. Had also thought of giving a case of sealed honey for wintering after removing sections. Had ordered my frames and cases, and had got so far when this new system came out.

These Hoffman frames can be wedged up and inverted if required, but I do not expect to practise tipping brood upside down just to get combs built to bottom bar, or to spread brood when I can do it just as well without. Honey will be carried up and brood brought close to sections, or spread by simply interchanging cases, and as to having combs built in frames down to bottom bar, I shall use full sheets of foundation snug all around, and so fastened by hot wax to frame and wires that in these frames it will not sag. When using starters only will put a narrow one all around frame, top ends and bottom, and if it don't work I will report.

The advantages of these cases over the Heddon style are these: I use ten frames, or less as required, thus get more room on top for sections, and movable division boards, which shut off bees from wedge or screw. Frames are 2 $\frac{1}{2}$ inches deep, so can use cases for either wide frames or brood frames, or both, end bar being but two-thirds closed; the open third gives bees access to bee space behind ends of frames.

With Heddon's hive frames are deeper and but eight in number, giving less room on top. At end of frame is a space inaccessible to bees, but large enough to harbor moth worms I should suppose.

Mr. Alves, in *American Bee Journal*, asks if shallow cases of hanging frames will not do just as well. Mr. Heddon's friend answers "No," but gives no reason why. I should say "yes," especially if you use the Hoffman frame.

We are all greatly indebted to Mr. Heddon for modernizing, perfecting and so plainly bringing to our notice the many advantages of the system given in his new book, which contains much that will be new to all and will be found nowhere else.

ALSIKE CLOVER.

All writers for Agricultural and Bee Journals agree as the superior qualities of Alsike over other clover for pasturage or hay. Having fine stalks and little woody fibre it is eaten clean by all stock and yields heavily, often producing three tons of good hay per acre. It is said as a fertilizer for land it has no superior, if an equal.

While it pays well as a farm crop it is also our best crop for honey, and all bee-keepers recommend it in the highest terms, as will be seen by reading the reports of all the Bee-Keeper's Conventions held this winter.

It is claimed that as great yields may be obtained from it as from basswood and the quality of honey much superior. Mr. J. M. Hicks, of Battle Ground, Ind., says, in a late article in CANADIAN BEE JOURNAL, "we have no hesitancy in saying that Alsike clover will produce 500 lbs. of the richest and best honey per acre in a good season."

As a seed crop it pays well, the seed bringing, at wholesale, from \$6 to \$7 per bush., and an acre frequently yields 4 bushels of seed.

Mr. C. M. Goodspeed, Thornhill, N. Y., gives the net profit on his crop as \$60.00 per acre and speaks of the hay as the best he ever fed.

If the bee-keepers of R. I. are to supply the state, they will have to offer something better than dark honey, and if each one will distribute among his neighbors every spring a bushel or two of this clover, I believe we would soon be able to compete with any honey in the country, and to keep one hundred colonies with profit in the same area that now supports but ten. Vermont produced 160 tons, and Maine 192 tons, of honey the past season, and much of it was from clover.

Alsike clover does better on clay or wet land and is sometimes unsatisfactory on dry or light soil. It is said to be hardy and does not easily winter kill; from 4 to 6 lbs. are sown per acre. Part of the piece can be mowed before it blossoms.

soms and fed to stock; it will then blossom late, after the usual bloom is over. From this it would seem that by a comparatively small outlay we will get it back a hundred fold, besides benefitting the parties who raise the crop.

THE BEE FOR BUSINESS.

This topic is continually coming up for discussion. Most of the writers for Bee and Agricultural Journals advocate Italians as most profitable and desirable, but once in a while we get the other side. Those who write so much in their favor are found to breed and sell queens. Mr. Heddon and many large producers of comb honey prefer the German, or Native Bee, to the pure Italian and generally uses a cross between the two. The first crosses seem to have all the desirable qualities of both races except that they sting worse than either and often without the slightest provocation, but all agree that they are the greatest honey gatherers.

Mr. Quinby obtained his largest yield from Hybrids. At the meeting of the Vermont Bee-Keepers' Society this winter the members were strong in giving the Hybrid the preference as the best bee for business. In working for comb honey it may be possible that gentle bees are not desirable. The very qualities that make bees cross also make them hardy and energetic honey gatherers.

The poison of the bee is found to be mostly formic acid, which we are told is a great preservative, and that the raw nectars of flowers, mostly natural sugar and water by evaporation, and the addition of this acid by the bees is changed to the smooth mellow sweet known as honey. A plentiful supply of this acid is necessary, or the change will be slow or imperfect. It is also said that bees are able to cure foul brood and similar diseases by its use.

Now, it is not proven that a gentle bee has a deficient secretion of formic acid, or that bees that sting readily have any more, but until we know more about it I shall favor this view and shall not object to stinging bees as long as I am able to protect myself from their venom when they are disturbed. Much honey is capped that is not ripe and is sold in that shape, but it is much oftener the case with extracted honey. Evaporation may thicken, but I can not believe it will ripen it. When working for comb honey I shall depend upon Hybrids, but if working for extracted honey or keeping bees for pleasure, I should keep pure Italians. I would not discourage the sale of Italians, for without them where would we get such desirable Hybrids. Nor would I buy Hybrid queens, as their blood could not be told by any distinctive marks, or distin-

guished from other crosses or mongrels. As a rule in all breeding, whether of fowls, animals or other stock, the first cross from different races of thoroughbreds are better than either; after that they lose their characteristics and are inferior to either. With a well established strain outside blood may be used and the undesirable qualities bred out, leaving an improvement in stamina or vitality, but unless cautiously and intelligently done it will undo the work of years of careful selection.

We may find that it is a mistake to entirely discard natives if we are not in the queen rearing business, and that by continually using the pure breeds for crossing and not allowing the cross to rear, queens or drones, we will get the best results.

SAMUEL CUSHMAN.

March 17th.

Friend Cushman, you touch on many valuable points. We like what you say about Alsike clover, and we recollect that the largest yield of honey we ever had was from Alsike. That year we had nearly 100 acres in one field, besides several other large fields which gave the bees a grand opportunity to show what they would do. We believe the bees averaged about 250 lbs. of honey to the colony. Comb honey may be ripened by placing it in a dry warm room properly ventilated. If placed in a damp room it will receive moisture, swell, and burst the capping.

FOR THE CANADIAN BEE JOURNAL, IS THE SO CALLED "POLLEN THEORY" TENABLE?

THE originator of the "pollen theory" claims that in that theory lies the whole secret of success in wintering. Prof. Cook, one of our ablest bee-keeping entomologists, says the theory is scientific; but does all this prove the theory true? Its author says further, that he can winter his bees as safely as the farmer can his stock, but admits that as yet he has not been able to save more than 50% of them. Let us look at the facts as he states them himself. He says in his new book, that of one lot of 40 colonies wintered in a cellar containing nothing but sugar syrup for stores, in the winter of 1884-85, he saved but five colonies; of ninety-one colonies wintered in another cellar, seventy-five on sugar syrup came through in good shape, while sixteen died. Of his bees out of doors, supplied with sugar syrup almost entirely, out of forty-nine colonies none lived. Of seventeen colonies just below them on natural stores only two survived. Of seventy-three other

colonies supplied with syrup and a little pollen about one-half survived. From this data he attempts to prove his theory, but to me it shows simply this: That when our bees are kept in the right condition, they live; when not so kept they die. Individually I care nothing for theories, save as they tend to aid us in our efforts to achieve success; what I desire solely is to ascertain how and in what manner I must prepare my bees in the fall, in order to be assured they will go through the winter safely. I have not lost a full colony in winter for sixteen years, save two, and they both starved last spring, at a time when I was confined to my room by illness. I have always wintered on summer stands, and have never removed any pollen from my hives, but have allowed such stores to remain as the hives contained in the fall. If the pollen theory was true, I must have lost nearly if not quite all my bees; losing none I am well assured we must look further for a solution of the winter problem, and the facts stated by the author of the pollen theory tend to prove my position correct.

J. E. POND, JR.

Foxboro, Mass., Jan. 20th, 1886.

We think it would be a difficult matter to ascertain who is really the author of the "pollen theory." Few understand the pollen theory to be the pollen stored in the combs for brood rearing. It appears that it is not the pollen stored for brood rearing, but the pollen grains that are mixed in the honey, and it seems to be the opinion of some of our scientists now that more pollen is found in some kinds of honey than in others. If other conditions are all right we fear nothing from pollen in stores for winter. Mr. Heddon having written upon the matter more prominently of late, has been styled the "father of the pollen theory." Perhaps he could explain through the C. B. J. some facts that have come under his notice in order to throw more light on the subject. But when a colony is strong enough and the temperature kept sufficiently high to evaporate or pass off the surplus moisture, leaving the pollen residue in a more solid form, we think no bad results are likely to occur from its effects.

E. S. DART.—Commenced the season of 1885 with twenty-six colonies, increased to fifty-five; took 1,400 comb in one lb. sections, 600 lbs. extracted put up in pint, quart and two quart pails. Comb sold in Chicago at 15 cts. per lb., and extracted in home market at 12 cts. per lb.
Casnovia, Mich., April 2, 1886.

FOR THE CANADIAN BEE JOURNAL.

DEAD BROOD AND FOUL BROOD.

ON page 748. C. B. J., I notice a short article from Mr. Wm. McEvoy, "Cutting out dead brood." Mr. McEvoy asserts very positively that the only cause of foul brood is the uncared for brood, or dead brood, which may be put in a hive by the apiarist. I can not think that such a thing is true. In the first place I have put in hundreds of such combs (one in a hive), and have yet to see that a case of foul brood ever came from any such cause. In the second place, were it true that foul brood could be produced in such a way, how many apiaries would there be, but what would have it, for the practice of putting old combs with dead brood in them into strong colonies for the purpose of having them cleaned, is so universally practiced by the majority of our best bee-keepers, that, if a colony was at all liable to get foul brood by so doing, it seems to me the practice would soon be abandoned. No, I think if a man has handled much foul brood, he will not mistake dead brood. What do you say?

A. W. OSBURN.

Apartado 278, Havana, Cuba.

The presence of the brown rosy matter is one of the surest signs of foul brood. We have placed hundreds of combs containing dead brood around in hives for the bees to clean out and have never known of a case of foul brood. Where there is a large quantity of dead brood placed in a hive the odor from it might cause some of the larvæ to die. This might be mistaken for foul brood, but the ordinary practice of placing combs of dead brood in strong colonies to have them cleaned is not, in our opinion, likely to result disastrously. Our pamphlet on foul brood goes into the matter pretty fully.

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.

EXTRACTED HONEY FROM ONE AND TWO STORY HIVES.

QUERY No. 68.—Can you produce as much extracted honey in your one-storey hive as in a two-storey one?

O. O. POPPLETON, WILLIAMSTON, IOWA.—Yes.

DR. C. C. MILLER, MARENGO, ILL.—Depends on size of hive.

H. D. CUTTING, CLINTON, MICH.—Not with the same labor.

DR. DUNCAN, EMBRO.—No. I always had poor success in a one-storey hive.

M. EMIGH, HOLBROOK, ONT.—One storey of my hive would be too small.

G. M. DOOLITTLE, BORDINO, N. Y.—Yes. Obtained my largest yield (566 lbs) from a one-storey hive.

Prof. A. J. COOK, LANSING, MICH.—Just as much. Yet on the whole I prefer the two-storey.

JUDGE ANDREWS, MCKENNY, TEXAS.—Deep frames. I would say one-storey; shallow frames, two-storeys. I use deep frames, one-storey.

ALLEN PRINGLE, SELBY, ONT.—With the right size and shape of one-storey hive and with proper manipulation and close attention you can. The work, however, will be a little more.

P. H. ELWOOD, STARKVILLE, N. Y.—I don't know. I suppose there is not much difference with entrances properly arranged. It seems a little more natural for the bee to store its surplus above.

R. MCKNIGHT, OWEN SOUND, ONT.—Use two-storey hives for extracting, but am persuaded more honey can be taken from a one storey hive; the work, however, is not so agreeable and the brood nest is less disturbed in manipulating a two storey hive than a one.

G. W. DEMAREE, CHRISTIANSBURG, KY.—I cannot. I get more honey, and of better body, by using frames only 5½ inches deep adjusted in cases so as to "tier up" on the hives just as fast as the bees need the room, and no faster.

H. COUSE, THE GRANGE, ONT.—Have never used a two-storey hive for extracting, but think that you can get as much with the one storey hive but will require to extract oftener in order to give the bees room for storing.

J. E. POND, JR., FOXBORO, MASS.—I cannot; but my apiary is small and run more for experiments than for production, consequently my opinion is not of as much value as that of others who are real producers of honey.

S. T. PETTIT, BELMONT, ONT.—Certainly not unless the hive is very large, and even then I very much doubt it. By all means use a two storey hive. When you extract from the brood chamber you get baby bees food into the honey which I think injures it. The tiering up sys-

tem, I think, will soon come into general use. This system gives the bees lots of room, while the honey is left with them a sufficient length of time for them to ripen and cap it.

DR. A. B. MASON, WAGON WORKS, O.—"As much extracted," what? If you mean extracted "fun," I say yes, more in a one than a two-storey hive. You know, Mr. Editor, that I was the butt of ridicule on the one storey, eight frame extracting arrangement, at the Detroit Convention last December, because I got only 65 lbs. of extracted honey per colony last season; but I see by the journals that I did very much better than many others. Seriously, I think a two storey the best, but the lower storey should be reversible.

S. CORNELL, LINDSAY, ONT.—If we have plenty of bees, plenty of combs, plenty of nectar in the flowers and good weather in which to gather it, I don't think it makes much difference as to the quantity of honey stored in a given time, whether the combs are extended horizontally or stacked up over each other. There may be an advantage in a two-storey hive in regard to ripening the honey in the upper storey on account of the warm air rising from below. For the best results in either plan there must be plenty of combs during a good honey flow. I have had thirty-seven pounds stored in forty-eight hours ripe enough to be packed for market at once. If I had only two or three combs besides those containing brood the bees could not have stored as much for want of room and it would not have been as well ripened because other conditions being the same the rapidity of evaporation depends upon the extent of the surface exposed.

WELLINGTON BEE-KEEPERS.

A MEETING of those interested in bee-culture was held at Fergus a short time since for the purpose of forming a bee-keepers' association in the County of Wellington. There was a fair attendance of those interested in apiculture. The Rev. J. R. Black, of Belwood, was called to the chair, and Mr. James Clyne was appointed secretary. It was resolved to form a society to be known as the "Bee-keepers' Association of Wellington." A membership fee of 25 cents was fixed upon. The meeting will be held quarterly from the time of the present meeting. The following officers were elected: President, Peter Gerrie,

Belwood; Sec.-Treas., Henry Switzer. Members—J. R. Black, J. Jamieson, C. Wilson, Geo. Vickers, W. Ward, W. McNeil, G. B. Allan, J. Masson, W. Newcomb, J. Clyne. The secretary will notify all members of the days of meetings, and also all known bee-keepers in the County. Some discussion as to the best means of wintering bees took place in which most of the members took an active part. The meeting then adjourned till June.

NOTES FROM MISSISQUOI CO., QUE.

BEDFORD is a thriving town of 3500 or 4000 inhabitants situated in Missisquoi Co., about forty miles south of Montreal, and only a short distance from the domains of Uncle Sam. This county in common with several others is known as the Eastern townships; they are noted for producing fine butter and cheese and finer farming lands it would be hard to find. The townships are as a rule peopled by English speaking people, but a short distance north begins what is called the "French Country," the inhabitants of which are all French.

BEEKEEPING IN QUEBEC.

Of late years apiculture has made wonderful strides in this province—in the townships especially. A few years ago it was difficult to find anyone interesting themselves in bees, but now I can count among my acquaintances within 20 miles a score or more not all making a regular business of it, but conducting it in a scientific manner and possessing from 40 to 60 colonies, in some cases more. The hive used here principally is the 10 frame Langstroth, although some few use a deeper frame. Quite a number use a chaff hive known as the "Bristol L." I built a hundred of this kind last spring and am wintering about half of my bees outside this winter. So far I like them first rate.

THE O. B. K. A.

I attended a meeting of the above Association at Toronto last autumn and met with several of the leading bee-men of Ontario. I never before saw such an immense display of honey in all shapes as was shown at the exhibition. To anyone interested in apiculture such a sight would well repay him for a long journey.

Here in the honey house were to be seen such men as Hall, Spence, Jones and a score of others all busy as bees. If all large exhibitions and small ones too for that matter, would give as much prominence to apicultural exhibits it would add much to their attractiveness.

E. T. B. K. ASSOCIATION.

The bee-keepers of the Eastern Townships met in convention at Cowansville, Oct. 20th, 1885, and organized an Association to be known as the E. T. B. K. Association, Mr. E. E. Spence, M.P., of Freligsburg, was elected president, and Mr. D. Small, of Cowansville, Sec.-Treas. Although the first meeting was fairly well attended we look for a larger attendance at our next meeting in May. There are more than enough active bee-keepers within the limits of the above Association to form a large and useful society. The Executive Committee of which I was elected a member was instructed to procure the attendance of Mr. D. A. Jones at our next meeting.

MARKETING HONEY.

I was much interested in the able and valuable article of Friend Hoiterman in the JOURNAL of Jan. 20th. It would be well for every bee-keeper to carefully read what he says and as far as he is able act accordingly.

FRANK W. JONES.

Bedford, Que., Feb. 3rd, 1886.

SUNDRY SELECTIONS.

BARRELS FOR STORING PURPOSES.

JNO. CALVERT.—What kind of barrels are cheapest and best for storing honey in, not for shipping, but to be taken out again in the winter and sold around home? Should one end be left out of the barrel? If it is necessary to wax the barrel, please tell us how to do it?

Several years ago we ran short of storage and purchased twenty to thirty large whiskey barrels, drove the hoops very tight on them, when they were dry, took the heads out and put honey-gate near the bottom, and set them on a bench high enough from the floor to allow tins to set under and be filled by simply opening the honey-gate. It is not necessary to wax the barrels, but they should be very dry and the hoops driven very tight.

HONEY VINEGAR.

Do bees gather from chestnut blossom ; if so what kind of honey is it ? Please give a recipe for making vinegar out of honey.

There are no chestnut trees in this locality, and we do not think there is much honey gathered from the chestnut, unless it is what is called "honey dew." We produce a recipe for making honey vinegar which was published in the "Bee Department" of the *World* some time since, and which is from the pen of Miss H. F. Buller, of Campbellford, a very successful lady bee-keeper :

If making from the cappings, I soak them in warm water to dissolve the honey, and then strain through cheese cloth into an open cask or tub, which keep in a warm room with a thin cloth over it until fermentation is over, and it tastes slightly sour, when I strain it again, first removing the scum from the top, and put it into a cask which I leave with the bung-hole open, and covered only with a piece of thin muslin. Putting it into a vinegar cask makes it sour more quickly, or the cask may have a little vinegar left in it a few days first, and a little stronger vinegar added to the honey water after it has worked. It will be fine vinegar by the spring, when it may be drawn off from the mother and the cask cleansed before returning it. I make the water about as sweet as a pint of honey will one gallon of water.

Campbellford, Ont.

SMALL BEES IN OLD COMBS.

M. W. VERNON.—Do bees become smaller and enfeebled from being hatched in old comb, as they do not clean the comb but cover up their dirt, hence old combs become so thick ?

You will find if you take a piece of old comb and warm it to about 120° that you can separate the two sides from the septum and count the number of cocoons in each cell and find out in this way the number of young bees that have been hatched. We think there is very little dirt covered up but simply the cocoon covered slightly with wax. To prove that it is the cocoon and not dirt, cut out some of this matter, place it on a warm iron and you will find the wax separating from the cocoons. If the combs are too close together to lengthen out the cells then the bees are smaller but if they have room to lengthen them out they usually do it, and the bees are about the usual size. However we *have known* smaller bees to be hatched in such combs.

WINTERING.

A. S. CROSBY.—I thought last fall by the help of the C. B. J. I could prepare my bees for wintering without any difficulty. But it teaches me that just as I think I have a thing learned I know but little about it. Last September I fed my bees according to directions given in C. B. J., I then thought I had them all right for winter. In October I found some of them had used so much of their stores for breeding that they had not enough to winter on. I then fed them more syrup (the use of Good candy had not then appeared). It is large colonies of young bees and their stores are not capped ; as two of the colonies would not go into the top so late for syrup I fear they have not enough to winter on. My bees were all packed in clamp the last of October. Would it be best to remove the top packing, the first warm day, say the first of April, and examine them and feed if necessary ? What is best to feed in Spring and the best way to feed ?

To feed in winter go according to directions in back numbers of C. B. J., and use candy. You may pour some thick warm syrup in combs setting them in next to the brood nest. For Spring feeding use one of the new Canadian bee feeders. Yes.

How do you wire frames so as to keep foundation in the centre ?

You will observe the article of Mr. Deadman.

How many pounds of Bokhara clover do you sow to the acre ?

From four to six pounds.

Can a crop of grain be raised on the ground the first year ?

Yes.

Compton, Que.

BEES WINTERING WELL IN DAMP CELLARS.

L. HIGHBARGER.—Bees have wintered splendidly so far. I have not discovered any signs of diarrhoea amongst mine yet. The greatest loss will be from starvation from what I can learn. Mine appear to be all living yet. I winter in a cellar and a very damp one at that ; there has been more or less water in it since last January. The temperature has been from 36° to 40° during the winter, and never as high as 45°, and at this date I consider them in good condition.

Adeline, Ill., April 1st, 1886.

W. H. WEBBER.—I have a large root-house, mostly above ground ; if I partition off one end, board around the wall then fill with one foot of saw-dust, run a pipe from the bottom up thirty feet, but no sub-ventilation, will it make a good bee-house for wintering ?

Lakelet, Ont.

We think you would be able to winter in such a place without difficulty if your bees were put in good condition.

Some have been quite successful without sub-earth ventilation, but we prefer it when it can be had.

CHICKENS EATING BEES.

S. RICHARDS.—I am happy to say that my five colonies of bees have wintered *splendidly* in chaff hives on their summer stands, even the three frame nucleus seems stronger than when packed in the fall. By the way, why do not bee books and "bee papers" warn beginners against the depredations of *domestic fowls*. In my experience I have found them worse than wild birds, toads, skunks or any other "varmint." Why, my light Bramahs and Rouen ducks not only eat every live bee they can catch, but will even eat quarts of old dead bees. You may think, Mr. Editor, that my hens are hungry, but no; they are fed twice a day with all the best wheat they can eat, also scraps of meat, etc., from the table. I have a very large poultry yard entirely overrun with a heavy growth of catnip and motherwort, and when in bloom I wish you could see the bees go for the honey and the young ducks and chickens go for the bees. There is about a quarter of an acre of this bee pasturage, and when in bloom is completely loaded with bees from morning till night. My poultry house is in this yard so it is impossible to keep my bees out unless I destroy the pasturage, which I should be loth to do.

South Paris, Me., April 14, 1886.

BEES GATHERING POLLEN.

WILL. ELLIS.—Bees gathering pollen from maples to-day.

St. David's Ont., April 13, 1886.

J. D. EVANS.—My bees are busy carrying in in pollen to-day. Pretty early is it not?

Islington, April 14, 1886.

On the 15th our bees at the Richardson yard were bringing in pollen. | Thermometer registered 71 degrees. Weather beautiful.

J. T. DUNN.—Bees brought in first pollen to-day, color dark green and light yellow. Just seven days earlier than last year in this locality, latitude 42° 53' 17". An unusual amount of stores have been consumed this winter; brood rearing will commence in earnest now and stores must be supplied (if not in hives) if we expect good results later, colonies must be looked after sharp now—will send you my Spring report (whether good or otherwise) as soon as danger of Spring dwindling is over.

Ridgeway, April 14th, 1886.

THE CANADIAN BEE JOURNAL.

JONES, MACPHERSON, & Co.,

EDITORS AND PUBLISHERS,

BRETON, ONTARIO.

WEEKLY, \$1.00 per Year, Postpaid.

BRETON, ONTARIO, APRIL 21ST, 1886

Bee journals are springing up like mushrooms this weather; the latest is *The Bee Hive*, a bi-monthly, published at Andover, Conn., by E. H. Cook. The price is certainly cheap enough—20 cents per year.

We are now able to furnish all those who lack No. 2 in the completion of Volume I of the JOURNAL, having reprinted that issue; a card with address will secure that or any other missing numbers in the volume by return mail, with no extra charge.

Now that the weather has subsided into a sufficiently warm state to render it possible to ship foundation with safety, all orders in hand will be forwarded in a week or two. With a couple of new mills we hope to turn out such quantities as will fill all orders as promptly as received, and of an extra nice quality.

OUR EXCHANGE AND MART.

If you are not a regular dealer and want to dispose of or exchange anything such as surplus colonies, poultry, eggs, queens, use our advertising column with the above caption. One insertion is usually sufficient and the price charged is merely nominal (25c.). The majority of us have many articles for which we have no use and which others are desirous of procuring at a moderate figure. To all such this column is invaluable.

KIND WORDS

ONE OF THE VERY BEST.

The CANADIAN BEE JOURNAL is surely one of our very best bee publications.

A. W. OSBURN.

Havana, Cuba, W. I.

EXCEEDS EXPECTATIONS.

It is with pleasure that I again forward my subscription to the CANADIAN BEE JOURNAL. It has far exceeded my expectations in the many fine articles from Canadian and American writers.

ROBT. WARDROP.

North Bruce, Ont., April 10, 1886.

LOGICAL AND CLEAR.

Well, the year is up and your paper has turned out even better than Brother Schultz, of Lethbridge claimed for it. I don't see how any man having but one swarm of bees could feel content without it, because it seems to anticipate trouble one is likely to fall into, and then shows the way out so logically, and all this for a whole year for only a \$.

J. P. COCKBURN.

Gravenhurst, April, 1886.

CONVENTION NOTICES.

THE BRANT BEE-KEEPER'S ASSOCIATION.

The above Association will convene at the Kirby House, Brantford, Saturday, April 24th, 1.30 afternoon. A full attendance of all bee-keepers of the County is particularly requested. Spring management, etc., will be fully discussed. Those attending are all requested to bring as complete a list with names of owners and number of colonies (winter count) in the County. Those not able to attend will oblige by forwarding names and number to the secretary, Brantford, to enable the Association to get a complete list of the extent of the industry in the County. Any names not to be published will kindly say so on the report.

R. F. HOLTERMAN, Secy.

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.

MCCALL & HILDRETH BROS.

EXCHANGE AND MART.

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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, Molesworth.

ADVERTISEMENTS.

20 Colonies of Italian Bees

For sale at \$8 per colony.

Italian Queens, 4 frame nuclei. Fees by the pound. Foundation and Bee-keepers' Supplies. Send for illustrated price list.

J. & R. H. MYERS,

P. O. Box 94, Stratford, Ont.

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 Alley, we run the largest queen rearing apiaries in the world. Circular and price list free. Address

AMERICAN APICULTURIST

Wenham, Essex Co. Mass

SMALL FRUIT PLANTS.

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

Send for price list.

JAMES R. HOWELL,

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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., 47c. 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 2 1/4 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 60
" " " " " per 15 00	.....
" " 1885 raising, sent in May	.....	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,

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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.

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RAYS 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.,

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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



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 disappointed customer in 1883, 1884, and 1885. Price, untested, \$1.50; Tested, \$2.00; Selected tested, \$3.00. Colony in Jones' Hive, \$9.00. 1 *Alto* 1/2

Agent for all kinds of Apiarian Supplies.



BEE-KEEPERS' SUPPLIES.

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

LOWEST BED 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.

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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.

Rearing 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.

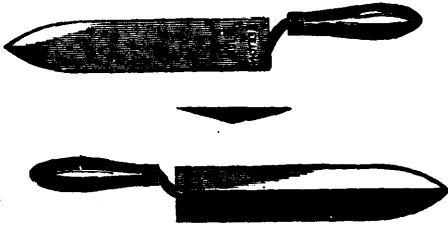
Makes a specialty of rearing Pure Italian Queens and of Shipping Bees in two, three, and four frame nuclei. My queens will be bred from the best imported mothers. Tested Queens, in March and April, \$2.50; after, \$2.00. Untested Queens, in April, \$1.25; after, \$1. Safe arrival and satisfaction guaranteed.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



These Knives are made of the Finest Razor Steel

- Ebony Polished Handle, mirror polish\$1 50
 - Ebony Polished Handle, glazed polish..... 1 25
 - Wood Polished Handle, glazed polish..... 1 00
- If by mail, add 18c extra for, each knife.
THE D. A. JONES CO., LD., 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 years' 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 trouble. Send for Price List of Poultry Supplies. Address

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

TAR HEEL APIARIES.
71-66.
ABBOTT L. SWINSON,

PROPRIETOR
Goldsboro. 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.

NOW 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:

PENETANGUISHENE, 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. SEEBLY,
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 a descriptive price-list of the latest improvements in Hives, Honey Extractors, Comb Foundation, SECTION HONEY BOXES, all books and journals, and everything pertaining to Bee Culture. Nothing Patented. Simply send your address on a postal card, written plainly
A. I. ROOT, Medina Ohio

180 ACRES SELECTED,
High, gray hummock and pine lands, not subject to over flow, situated on the
GULF COAST RIDGE.

In Tropical Florida, 81° 50 m longitude west of Gr., and 26° 35 north latitude. 16 miles south of Fort Meyers, 2 1/2 miles distant from Oyster Bay, crossed in its whole length by the lovely Estero Creek, for the culture of Oranges, lemons, limes, pineapple datepalm, cocoanuts 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 140 acre tract, at \$10.00 per acre. 70 to 100 colonies of Italian bees can be had if wanted. Apply to

G. DAMKOHLER,
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, \$9.00. Hives or boxes for shipping extra as follow: 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,

B. 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 4,000, per 1,000,	\$5.00
" " " 5,000	4.75
" " " 8,000	4.50
" " " 12,000	4.25

4 1/2 x 4 1/2, at same prices. All V-grooved.

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 1/2 x 5 1/2 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-Nellis**. 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 BEES AND QUEENS**, can also procure and furnish **ITALIAN BEES AND QUEENS** bred in my Tennessee Apiary, queens warranted pure to name and untested Queens warranted purely fertilized.

Tested Queens prior to June 15th..... \$3.00

Tested Queens, 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.

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and numbers of other dealers. Write for **SAMPLES FREE**

and **Price List of Supplies**, accompanied with

150 COMPLIMENTARY

and **UNSOLICITED TESTIMONIALS** from as many bee-keepers in 1883. **We Guarantee every inch of our Foundation equal to sample in every respect.**

CHAS. DADANT & SON,

HAMILTON Hancock Co., Ill.

1886. **ITALIAN QUEENS.** 1886.

Six Warranted Queens for \$5. Send for circulars. No circulars sent unless called for.

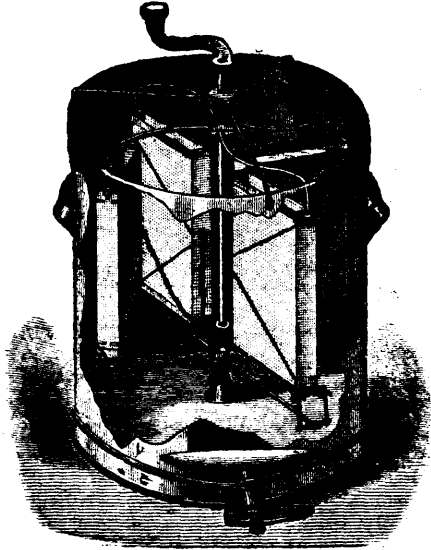
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Manufacturers of and dealers in a full line of
BEE KEEPER'S SUPPLIES.

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.

ESTABLISHED MAY 1ST, 1883.

The American Apiculturist,

A JOURNAL OF 32 PAGES DEVOTED TO

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

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