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VOL. II, No. 3.

1886

ONT. APRIL 14.

PUBLISHED EXCLUSIVELY IN THE INTERESTS OF THE HONEY PRODUCER



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ONE DOLLAR PER YEAR

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BEECHER, ONT.

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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 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.

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Price, 10 Cents. By Mail, 11 cents.
JONES, MACPHERSON & CO.,
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Off all goods which may be ordered now for use next season we will give the above discount. This is to induce early orders and in case you need anything for this season, you could save freight charges and the discount by ordering ALL TOGETHER. Will be given till further notice.

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

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

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QUINBY'S NEW BEEKEEPING, by L. C. Root. Price in cloth, \$1.50.

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

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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 9 1/2 inches) 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

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IN THE SOUTH FOR EARLY NUCLEI & QUEENS.

Four frame nucleus, with pure Italian Queen, in April 4 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, 25c 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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Queen City Oil Works!

The Highest Honors and Gold Medal For Our

PEERLESS OIL,

Manufactured only by

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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-hive s 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. Nucle and full colonies. Order from my new circular.

OLIVER FOSTER,
Mt. Vernon, Linn Co., Iowa.

EASTERN BEE WIVE 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.

Largest Bee-Hive Factory in the World.

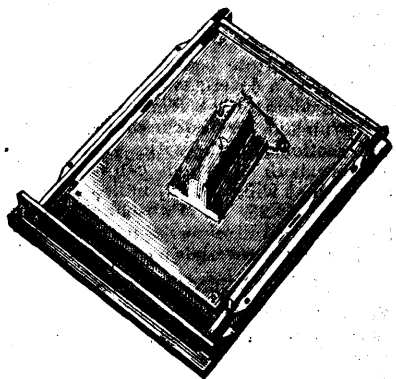
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THE MITCHELL FRAME NAILER.

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



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For Jones' Frame.....\$1.25
For Langstroth Frame.....\$1.50

Ready to go by express or freight.

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

BEES 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 section

and is the same in all particulars as sample hive. Price \$2.80 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 Gear, Honey Jar, 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.

SAVE MONEY!

By Making Your Own Foundation.

FOUNDATION MILLS.

Through arrangements made with Manufacturers I am enabled to offer Canadian customers the following makes of mills at prices much lower than they can be ordered singly and but little above makers list prices.

VANDERVORT,

ROOT, GIVEN,

PELHAM, OLM.

Duty free and freight or c. charges to be paid from my station. Don't fail to write me before purchasing, stating kind and size of mill wanted. ORDER EARLY. Circulars and samples free.

Frank W. Jones,

Bedford, Quebec.



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

VOL. II. No. 3. BEETON, ONTARIO, APRIL 14, 1886. WHOLE No. 55

THE INDIAN AND COLONIAL EXHIBIT.

FROM Mr. Alfred Neighbour come the following kind words, relative to our proposed display, and in the name of Canadian Bee-keepers, we thank him for this expression of courtesy:

I see by your JOURNAL that I am deputed to see to first arrival of exhibits for Colonial Exhibition at South Kensington. I shall be happy to do all I can in the matter and as I am well acquainted with the authorities at South Kensington, I think I can be of service. A cordial welcome awaits our honey friends.

Yours truly

ALFRED NEIGHBOUR.

London, Eng., March 20, 1886.

FOR THE CANADIAN BEE JOURNAL.

HEDDON'S INVENTION.

IN response to Mr. Pond's article, on page 821, I wish first to say that this is the first fair, reasonable and gentlemanly controversial criticism coming from any of my Brother bee-keepers, with whom I have formally entered the arena of warm apicultural debate.

I wish to publicly thank Mr. P. not only for the fairness and candor of the article, but for the noble sentiment he expresses when he tells us that bee-keepers should respect the results of another's mental labor, as they would the results of physical labor, and that, too, upon principle, whether forced to do so by law or not.

We do not purchase a patent. Civilized nations grant it, as a natural right. We pay our attorney for properly preparing our application, and our government for recording our invention

so that should we find any who will not do justice unless compelled to, we have a record with which to force them to do right.

It is very evident that Mr. Pond understands and appreciates the spirit of patent laws and as I have studied that branch of law, more or less for 20 years, and also done some soliciting, I will endeavour to point out to him something in regard to the letter, as well as to the spirit of American patent laws, more particularly as connected with my late invention.

It is a well known fact, that nearly all patent claims are for new combinations of old parts.

Further, that many of our most useful inventions and valuable patents are made up entirely of combination claims. All the claims of my late inventions are of this class, except one. I refer to the original and prior manufacture and use of half bee spaces or shifting bee spaces without which no tiering interchanging arrangement can be made invertible, in a cheap, practical manner, and I wish right here, to say, that whoever gives the matter as much experiment as I have done, will not be willing to do without the invertible feature. I have experimented with it for four years on a large scale.

To make this matter clear, let me here record some disclaimers before I explain what I claim.

First.—I do not claim closed end frames. I do not claim invertible hives or frames. It is too late, and I do not now claim my own invention (in which I was original and prior) of slat honey boards, embracing the break-joint principle.

Mr. J. M. Shuck's patent, issued later than mine, although the application was made first, and the fact that his application was never cited to me, shows that there is no interference between us. Each one is working for cherished objects—

working in his own special way, and each completed and patented the results of his labor without any knowledge of the work of the other.

I have examined Mr. Shuck's patent and found it valid and well constructed.

My new hive was designed to be adapted to a new, or varied system of management, which, so far as I know, originated with me, and one of the important features of which is to handle moveable frames by series, rather than singly, accomplishing nearly all desirable manipulations, in that way, yet being readily susceptible of single frame manipulation (including invertibility) in rare instances of necessity.

To be able to divest one of the shallow cases of nearly all its bees, enabling us with other advantages, to quickly find the queen, the frames snugly fit the case, their combs snugly and completely fit and fill them (by means of inverting) and their tops and bottom bars are narrowed to exact worker-comb thickness, on thirteen-sixteenths inch.

We cannot patent principles. We patent their mechanical application. No one could get a patent on fastening frames by compression, but they could on their own preferred method of applying that compression. I have no patent on holding frames by compression. I have a claim on holding closed end frames by compression when applied by the use of a set screw, and in my opinion this is the best and only quickly manipulated and practical arrangement by which they can be held sufficiently firm to make that system of support, ample for inverting.

After originally inventing this screw power, I found that it had been used by Mr. A. E. Manum, for tightly pressing sections, in combination with a follower and for another purpose.

Let it be remembered that the force and breadth of any claim is greatly affected by the specification to which it refers.

The words "as and for the purposes specified" and "equivalent," which usually appear at the end of a claim and whether or not, are legally held by any claim, testifying to the truth of the above statement. Further on this subject, let me quote from third volume Bann and Ard. 1 1877. In case of Adams vs. Manufacturing company, "Changing the relative position of the parts of a machine or manufacture, does not avert infringement where the parts transposed perform the same respective functions, after the change as before."

The above throws some light upon the relation between a claim and its purposes, as given in the specification. In response to Mr. Pond's last sentence, let me say that we do not patent ideas, but the application of principles, and of

course every one of my claims are new, or they wouldn't be worthy of the name.

I might go on for pages endeavoring to throw light upon this subject, but I will wind up by telling your readers what is new in my invention.

First.—Half or shifting bee spaces as before stated (by the above we mean so arranging frames within a case whose depth is bee space greater than said frames, in such manner as to hold the frames in the centre of the case, vertically; or quickly shift them from one side of the case, to the other, thus reversing said bee space without reversing the case, or more practically, reversing the case without reversing the bee space.)

Second.—The use of set screws in combination with closed end frames for the purposes specified.

Third.—The combination of my old honey board, containing a bee-space all in one side or equally divided between the two sides with brood cases as above described.

Fourth.—The tin strips for supporting the frames, in combination with the set screws and frames.

Fifth.—A cover containing a whole or partial bee space when used in combination with my cases as above described.

Sixth.—The combination of these cases, with the arrangement of my cleated bottom board as arranged on my bottom stand, both of which I invented over 10 years ago.

Seventh.—A brood chamber (not a hive) composed of two or more horizontally separable and interchangeable sections, each section containing a set of comb frames whose depth is bee space less than the said section and when said sections are invertible all the above, substantially as, and for the purposes described in the specifications.

All the above claims and specifications are new. I have not aimed to give them in legal form, but simply to convey the ideas.

It seems to me strange that any one can believe that I have discovered nothing new, if not, why have I over 100 testimonials, to that effect; over thirty of which came from our oldest and most prominent bee-keepers and from all parts of the country.

If not, why is it that so many now desire to make and use double interchangeable brood-chambers, when for years past, nothing has been said about them; no one has advertised any such things for sale, and to find anything resembling such a hive, we are led back 20, 40 and 100 years and pointed to old hives so impractically constructed that they have long been dead and

forgotten, and such men as Prof. Cook and others, who have studied our science for over 20 years, fearlessly assert that "no one will say his new book or new hive is copied."

"Nothing more original in the line of a bee-hive, has appeared since Mr. Langstroth's invention." Yesterday, I received a letter from a very angry bee-keeper, and one whose ignorance regarding inventions and patents is truly astonishing and in which occurred the following sentence, or words to that effect:—"If you want to prosecute come on. I am going to use what you claim as your invention. The same thing has been in use here for years, and I transferred a colony out of just such a hive."

This is a fair illustration of the facts in the case. This bee-keeper is mistaken about the old hive being like mine, and he is in no way liable to prosecution, for making that old hive just as it was before. You see, he has been transferring out of a hive just like mine," and now since my book has been issued, he is going to defiantly transfer back into this hive, or one "just like mine."

Do bee-keepers desire to reap the results of my labor, whether as an inventor, promulgator or advertiser? Haven't I as much right to the the results of my labor in the one case as in the other?

JAMES HEDDON.

Dowagiac, Mich.

We think your explanation is quite clear and satisfactory. There is no doubt that many have thought they had something very nearly like the new hive, in fact, we have been working on many inventions and have used things that we might claim were similar but if we undertook to make a perfect hive to work on the same principle as yours they would lack many important features. We agree with you regarding Mr. Shuck's invention—that we believe his patent is valid and his hive original and differs in many respects from anything that we have ever seen or heard tell of. There are many good points in connection with his hive. His feeders are too well known and too much appreciated to require any comment.

FOR THE CANADIAN BEE JOURNAL.

SCIENCE AND APICULTURE.

Ⓘ WAS much surprised at many of the statements in Friend Pringle's article in last C. B. J. Our friend is usually so accurate, but in this article he makes many statements, that I supposed were without any foundation.

I will also add that I teach Physiology and Anatomy, and I intend at least to keep abreast the progress of the science. I did not intend to speak again, and will be very brief.

1st. It was Lavoisier and not Liebig who said that animal heat was caused by combustion in the lungs. As the blood in the left ventricle just from the lungs is 1° colder than that on the other side, it is evident that the lungs are a refrigerator and not a furnace. Thus Lavoisier's theory was very short lived. Liebig said it was combustion, but he placed the furnace in the capillaries, and not in the lungs. Yet the experiments I have already given show this to be untenable. Animals that can live some time without oxygen will still give off carbonic acid and even faster than when the condition is normal. This is because the tissues are irritated, from lack of the most necessary food, oxygen, and so wear out faster, and so give off more waste.

The late Dr. Carpenter was a great scientist but his physiology is very old, and is now no authority. Huxley is a great and a recent authority and agrees with the view I have given, exactly as does Foster, Martin, indeed I think all the authorities; nor are they dogmatic, for the experiments I have given demonstrate, that heat comes from the work of the body. We may say, as does Huxley, that it is from the oxidation of the tissues, for this occurs with vital work. To quote Huxley's last ed. Physiology p. 128, Heat is generated wherever tissues are being converted into waste products. This is oxidation, but probably never direct oxidation.

Pyrogallic acid has such an affinity for oxygen that it is used to measure the oxygen of the air. Yet when injected into the blood it passes from the body unoxidized. We may say then that oxygen is taken to serve as food; is used to build up tissues. When such tissues act, oxidation occurs, and carbon dioxide is eliminated. I am done.

A. J. COOK.

Lansing, Mich., April, 1886.

FOR THE CANADIAN BEE JOURNAL.

"THE POLLEN THEORY."

Ⓘ T would be hard to better the remarks made by Rev. W. F. Clarke (page 645, C. B. J.) in regard to Prof. Cook's essay on the "Pollen Theory," read at the Detroit Convention. They were that "the Pollen Theory had got its quietus from Prof. Cook. He has mentioned that bees cannot breed without taking nitrogenous food. If they take that food it must be digested and the feces excreted. Well, Mr. Barber and Mr. Hall have proved that bees breed

largely, i. e. work hard, and therefore must eat and digest strong food. The inference is plain. The bees, if they excreted, do it in dry feces. They must excrete, that is clear. Therefore there is no danger in having pollen in the hive. On the contrary it is necessary.'

The professor's essay (page 647, C. B. J.) is one of the best articles against the theory that I have seen, and it seems to me that bee-keepers who read it must realize (in spite of the Prof's. conclusion) what a serious matter it would be to deprive the bees of their pollen. The fact that the bees, which were deprived of their pollen, died without showing diarrhœa does not prove that bees winter better without it. It only shows that bees dying without it in their hive did not have any in their excreta, or in their intestines. I fail to see anything favorable to the theory in this, why did they not live? If they died without pollen, how much better off were they than if they had it and had died showing diarrhœa. It would look as though they were chilled by cold in each case. Cold caused such a depression of function that food eaten was not digested, or possibly caused such excessive exertion to keep warm as to prevent digestion, result death from lack of nutrition. Suppose the bees, both with and without pollen, had not been exposed long enough to kill them, warm weather gave them a let up for several days, they were exhausted in each case from exertion and lack of nutrition. Which colonies have the best chance to repair the waste of nerve and muscle, those with pollen or those without? Those without have only the supply contained in their bodies which has been largely drawn upon; they will have to wait until spring if they live until then before they can get materials for repairs, while the others can supply their needs at once. You may say, if they were not exposed to such excessive cold they would not need repairs, neither would they have diarrhœa, or eat more pollen than they could digest. We are shown that pollen does no harm if the temperature is right, and that quantities of brood are reared before their spring flight.

Animals that hibernate store their carbonaceous or heat giving, as well as the nitrogenous elements in their bodies, enough to last all winter.

Bees store both in combs, and have we any more reason to think that they have, *in their bodies, a sufficient supply* for winter of one and not the other of these elements.

Man, or animals, require for food carbon, nitrogen and mineral salts in certain proportions. Different seasons and circumstances require different proportions, but neither of these ele-

ments should be entirely lacking. I do not doubt that under certain very favorable conditions bees may be brought through the winter alive without pollen, but in my opinion with same conditions they would be much better off with it.

Possibly there may be times and locations when a hive might contain *too much*, not giving enough honey room in *some combs*, and if cold confined the cluster to these combs the result would be disastrous, but in such a case with enough honey in the hive to support them and the *proper* temperature maintained, no trouble would occur. Bees will not eat it to harm them unless in an unnatural condition. Shall we not regulate the temperature instead of depriving them of a necessary food because they eat excessively of this food when in an unnatural condition from lowered temperature? then when they choose to rear brood they have the means to do so.

Although this theory has been advocated and supported by a few such prominent apiarists and writers as Prof. Cook, Prof. Hasbrouch, James Heddon and others, it does not seem to meet with favor from the majority of bee-keepers, and most of them "are tired and sick of seeing it in print." Our heaviest and most successful producers continue to leave a liberal supply of pollen in their hives for winter.

In the Prof's essay we are told that *nitrogen may be changed or transformed into fat*. Does he mean to tell us that by a vital process nitrogen may be chemically changed in the body into fat? He gives fatty degeneration of the heart as an example. I have always supposed that in this case the nitrogen was replaced by fat, that the muscle was wasted by use and slow oxidation and through faulty nutrition was not renewed, but fat being abundant in the blood was deposited instead of the proper material. This may be another case when "a little knowledge is a dangerous thing," either with Prof. Cook or myself. Here is another chance for our medical readers to enlighten us, and I hope they will. Prof. Cook has rectified the impression given as to the amount of air required by bees, and I hope we shall yet hear from both him and Mr. Heddon, that it is not advisable to remove the pollen from the hives, that every thing considered bees stand a better chance with than without it, that fermented or thin honey may also cause diarrhœa, that a low temperature is harmful, pollen or no pollen, and that the point to be considered is temperature and pure air and how to keep it right.

Whether Mr. Heddon has been of benefit or not to our industry in advocating this theory, there is no question in my mind but that he has

done great good and deserves much credit for perfecting and so strikingly bringing to our notice an improved system of hive manipulation, which it seems to me all progressive bee-keepers must appreciate.

I do not refer to the reversing or inverting feature but to the interchanging of shallow brood frames in cases instead of frames.

More on this system soon.

SAMUEL CUSHMAN.

Pawtucket, R. I.

We think you are quite right, friend Cushman, about the high temperature. We wonder if anybody ever knew of a case of dysentery where the temperature was kept so high that all moisture or dampness passed off. It seems to us that if bees had dysentery badly raising the temperature in the bee house sufficiently high for a time would almost cure them. It is not an uncommon thing to hear of some one putting his bees away in a house or cellar where the temperature is much too low, then reporting large losses from dysentery. We never recollect hearing of a single case where the temperature was kept at the proper degree. Is it not about time that we began to study the best remedy to apply at the first appearance of dysentery. Think the pollen theory has been pretty well talked up. Perhaps if we add a little heat to our repository and do away with the "pollen theory" we will be taking a step in the right direction.

SUNDRY SELECTIONS.

BEE-KEEPING IN NOVA SCOTIA.

H. H. ROACH.—Although I am not as yet a bee-keeper of any experience and cannot say anything of interest to bee-keepers, yet I thought I would like to tell the numerous friends of the "busy bee" what kind of a place Nova Scotia is for the apiarian. The season here is very short, does not open until well into May; although late there is a continuous flow of honey until frost comes. Among the pollen and honey producing plants and shrubs we have the following: Alder, willow, mayflower, hard and soft maple in abundance, cherry, dandelion in great abundance, apple, plum, white alsike and red clover, the white grows in wild profusion, raspberry and all other kinds of berries, August flower (or black dandelion) continues in blossom from the middle of July to the first of September, and is visited by bees from early until late, touch me

not, and other herbs, thistle, asters, pennyroyal. Friend Root says in A. B. C. that California white mountain sage will grow where pennyroyal will, if that is so, here is just the place for it, and I think I will get some of the seed and give it a trial. Goldenrod and buckwheat in abundance. Basswood does not grow here to my knowledge, but we have a tree called moose wood that resembles it somewhat, only it does not grow large, not over five or six inches in diameter. Now, friend Jones, I think bee-keeping can be made a success here. The season is warm in summer and changeable, but not cold, in the winter. Years ago there were a good many bees kept in this place, but owing to improper wintering they have become, with a few exceptions, a thing of the past; what few are kept are kept in the old box hive and wintered on their summer stands without protection. Are you acquainted with the mayflower, if not I will send you a sample as soon as it blossoms. Its buds are formed under the snow and if the snow goes off in February or March, so as to leave the tops of the hills and knolls bare, it is not uncommon to find the modest little flower in bloom. It grows in beds on the side of hills and dry places; the flowers hidden by the foliage are bell-shaped and grow in small clusters; in color it varies from the most beautiful pink to snowy whiteness, and they are so fragrant a handful of the blossoms will scent the whole house with its delicate and exquisite perfume, and a bed of them will scent the air for rods. Now, in conclusion, I would like to ask a few questions. (1) I am a young man of 21 with limited means, I have purchased two colonies of black bees to be delivered in the spring and what I want to know is, how can I by purchasing one Italian queen increase them to the greatest number of stocks and Italianize them at the same time? (2) What size section will hold just one pound? If you or some of your kind readers will please answer the above questions I will be very much obliged. Will give you the dimensions of my hive, which I consider an improvement on the Langstroth hive. I thank you for the samples sent and wish you and the C. B. J. success.

Clarence, Annapolis Co., N. S., March 8, '86.

You must have an excellent locality; with the exception of basswood you seem to be specially favored. By all means send us a sample of your flowers. Could you not press a few of them so we could have them for the exhibition. By taking ordinary wrapping paper if you have no blotting paper, putting several thicknesses between each layer of flowers, warming it before

placing it there; then by changing the paper twice a day, flowers may be pressed quite nicely. The pressure should be as great as possible. (1) By letting them swarm naturally you will probably succeed best, as a novice is almost sure to blunder if he attempts artificial swarming. (2) It depends on whether separators are used $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$, the object should not be so much to get a section that would hold exactly a pound as to get one in which the bees will place the most honey and do it in the best shape and in a manner to stand shipment best long distances.

SHIPPING BEES IN SPRING.

EMILE GARON.—(1.) What would be the best time to have my bees shipped down here?

It is not wise to ship bees too early in the spring. A sudden change in temperature might cause the brood to chill, or the combs to become brittle and break down; besides it is well to let them get to brooding and hatching, if possible, before shipping. The weather should always be fine and warm.

STRENGTHENING COLONIES.

(2.) At what time of the day do you strengthen a colony by adding bees when one intends to work for queen rearing?

You may do it any time, but in the warm part of the day they can be handled and managed much more easily in early spring, but in mid-summer it may be done morning and evening.

WHEN TO BEGIN EXTRACTING.

(3.) At what time of the day do you commence extracting the honey, and how late can you keep extracting in the afternoon?

We commence in the morning as soon as they are gathering honey, say, 8 o'clock, sometimes earlier, sometimes later, everything depending on the weather.

MAKING NUCLEI.

(4.) At what time of the day is the best to make nuclei?

If the weather is warm enough we make them at all times in the day. If the mornings and evenings are cold we do it in the middle of the day. Those made in the evening are less liable to become depopulated from bees returning to the old stand.

LIBERATING QUEENS.

(5.) For queen fertilizing, as soon as a queen is fertilized, we remove her and liberate another,

and so on. Is it necessary that the colony be queenless during 48 hours before having the other one liberated, or can we liberate her immediately after the fertilized one is removed?

We have frequently liberated them after the removal of the fertile one, but when the honey is scarce and none coming in and you do not feed them liberally, it is a dangerous operation. Liberal feeding and smoking, especially if fed before the removal of the fertile queen, will remove all the difficulty.

CHLOROFORMING.

(6.) Do you use the chloroform in introducing young queens in order to get them fertilized?

(7.) Do you use the chloroform when you give a fertilized or a virgin queen to a nuclei?

When we have a difficult case we use chloroform. Smoking and feeding in the ordinary way is generally sufficient for introducing, and when they are first hatched they run in without any trouble.

(8.) How many puffs of chloroform do you give to a colony when you introduce a queen? I ask you that because last fall I tried to smother a colony with chloroform and I did not succeed. I have been obliged to use the smoke to kill them. The colony was about two thousand bees strong. It cost me \$8. I got neither swarms nor honey from it.

We merely give them enough chloroform to stupify them. The number of puffs would depend entirely on the quantity of chloroform and size of smoker. There is little or no danger of smothering them with chloroform.

FRAMES FROM DEAD COLONIES.

(9.) I tried to winter one colony of bees outdoors; they got along first rate until the 16th of February, and I found them smothered on the 19th. There were three frames left full, and the remainder are about two-thirds. Will I keep the full one to feed nuclei or extract them?

You may use them all for feeding purposes if you require them, otherwise extract them.

CHAFF CUSHIONS.

(10.) What is the thickness of the chaff cushions that you put on your hives?

Two to four inches, prefer the latter, but instead of chaff we use very fine sawdust, cedar, if obtainable.

(11.) When do you take off the cushions in the spring and when do you put them on in the fall?

Not until the weather becomes warm. As soon as the nights begin to get cold.

WEIGHT FOR WINTER QUARTERS.

(12.) When you say a hive with 7 frames should weigh, when put into winter quarters, 60 to 65 pounds, hive and all, do you mean with the cover on?

Yes.

ITALIANIZING.

(13.) I want to Italianize my bees next spring. Towards what date should I buy the queens? I wish to have them as early as possible in order to have all Italians not late in summer.

June and July.

QUEEN REARING.

(14.) With my queen nursery do you think that I will be able to rear queens for the first nucleus that I will have. Generally the bees commence swarming towards the 10th and 20th of June. Towards what date should I commence queen rearing?

It would be better to get your strongest colonies so strong that they will raise enough queens for all the rest before the others got ready to swarm.

SULPHURING OLD COMBS.

(15.) Do you sulphur your old combs before putting them into the hives?

We do not unless there are moths in them which we wish to destroy, which is seldom the case.

St. Ann de la Pocatiere, Que.

PACKING IN CELLAR.

A. FYFE.—I write to advise you that all the colonies of bees purchased from you last fall are in splendid shape and seem to be nice and dry. The cellar has been on the cold side; taking the temperature on an average it has stood 40° above zero. I have the cellar well banked. When I put the bees in the cellar I placed a board at front and another at the back of each row of hives, leaving a two inch space, this I filled with dry chaff. I also put on cushions filled with same material. I think this should make up for the deficiency of heat. I left the entrances wide open, have a three inch pipe running from the stove pipe above down into the cellar which I find makes a great improvement, seeming to draw off the bad odors leaving the air in the cellar pure; occasionally on fine warm days I gave them a little fresh air. Quite a number around here have lost their bees already—want of stores. I like the JOURNAL very much and think it is improving every week, it is something like a fellow going to see his girl, the oftener he sees her the more he appreciates her.

Harriston, Ont.

Well, friend Fyfe, we had no idea that you knew how a fellow feels when he goes to see a girl, because you never availed yourself of any of the many chances you had when in Beeton, and we fancied you were one of those peculiar individuals known as "woman-haters." The way you arranged your bees will doubtless be equal to four or five degrees of heat, so that if the thermometer stands at 40° it may be equal to 45° of heat.

SIX COLONIES FROM ONE.

JOHN V. BATTRAM.—Last year from the one colony I purchased of you, I had three swarms, and the first of these swarmed twice as well. So I have six colonies in all, put away in clump with pine sawdust. Last Friday and Saturday they had a good fly, as the snow had all left the ground. They flew just as well as in summer, and to all appearances are all very strong, indeed some of them seem too strong. Last swarm came on August 22nd, and when hived filled two-thirds of the hive with bees. This was the second one from the first swarm. They filled about five frames. I fed them by giving them eight sections from the old hive and one full frame of honey. I took thirty-two one-pound sections and two full frames of comb honey from the old hive. I could have taken about twenty pounds from the first swarm, and fifteen pounds from the second, from the old hive, but did not think it best to do so. When I put away the six hives they must have averaged over fifty pounds each. I never saw bees make honey faster than they did from Sept. 1st to Sept. 20th from fire weed and golden-rod, of which there is an abundance around here.

Brigden, Ont. Feb. 20th, 1886

SETTING OUT IN SPRING.

A SUBSCRIBER.—How is it best to proceed to set out from fifty to one hundred colonies of bees in the spring? How many is it safe to put out at one time and what time of day should it be done?

We select a day after the snow has all disappeared, the wind in the south, southeast or southwest, with no indications of rain and the thermometer ranging from 60° to 70°. We then close all the entrances and carry the hives out as quietly as possible setting them on their summer stands. Sometimes when there is every prospect of continued fair weather we move them before day light. They might even be set out in the evening. When moved

before daylight they do not fly out so rapidly and are less likely to swarm out.

BARRELS FOR HOLDING HONEY.

What kind of wood should barrels be made of for holding extracted honey and what is the best size for marketing.

White ash, spruce or balsam and we think white poplar or basswood might be used. We would not care to make them to hold more than 100 lbs.

A LADY QUEEN WANTED.

DEAR EDITORS:—I read your valuable JOURNAL with interest and pleasure and it is of great assistance to me in bee-culture. I see a great many queens advertised in it but have not as yet seen the one I would like to have, I mean a lady queen with two good willing arms to help me get along in the future. I have a good comfortable home and everything complete in it and have as well a few thousand dollars worth of property. Now the lady I would like to have is to be middle aged, good natured, industrious and neat housekeeper and one with whom I can live a christian life, so that when our days are ended in this world we may both wear glorious crowns in the Kingdom of Heaven. Now, Mr. Editor, I have often thought of going to Beeton to see your large apiaries, but will wait till I have a companion, then we will both come and see you and your different kinds of bees. Ladies don't be bashful, let me hear from you at once. For farther particulars write to

Box 61, Clifford,
Wellington Co., Ont.

Now then ladies, here is your chance, a good home and a good husband all in one. Who will be the first to speak? But, mind, don't all speak at once.

BANKING UP THE ENTRANCE.

R. F. WHITESIDE.—I have been wondering how it would do to leave most of the quilts on the lower storey, using only a strip of perforated metal 3 inches wide to keep the queen from the upper storey. How would it do in out-door wintering to bank up the front of the hive with sawdust or dirt, leaving only a portico for the bees to come out and still keep them from flying in the snow; this place would be dry, warm and dark. A board could be leaned against the hive to bank up the earth and sawdust against.

Little Britain, Ont.

Your plan of banking up bees with earth around the hive might answer, providing you had a tube running down from the top of the packing to the top of frames over centre of cluster. The holes in the tube should be about two

inches square. A bee-keeper in this neighborhood has wintered successfully for a number of years by packing so no air could get in except through the top. Your plan might work providing the space you left was directly over the centre of cluster and you only used one or two rows of sections, directly over the cluster.

WIDTH OF SECTIONS.

J. W. WHEALY.—In working for comb honey what is the best width for sections where separators are not used, the sections being $4\frac{1}{2} \times 4\frac{1}{2}$ or $4\frac{1}{2} \times 3\frac{1}{2}$, taking into account, freedom from bulging, thorough filling to the wood all around and general marketable qualities?

Our largest and best comb honey producers in Canada are, we believe, not using more than $1\frac{5}{8}$. most of them $1\frac{1}{2}$ or between $1\frac{1}{2}$ and $1\frac{5}{8}$. It is a settled fact with many that too wide a section is objectionable in many respects. Would not advise more than $1\frac{1}{2}$.

B. Losee, Cobourg, sends the following from the Chinese for insertion:

How doth the little busy bee
Delight to bark and bite,
And gather honey all the day
And eat it up at night.

Aspinwall & Treadwell, Barrytown on Hudson, N.Y.—thirty-two pages—Bee-keepers supplies, Bees, Queens, etc.

KIND WORDS

LIKED VERY MUCH.

Enclosed is my renewal. It is needless to say I like the JOURNAL very much, and am pleased to hear of its success.

MISS FANNIE REED.

Brooksdale, Ont., March 22, 1886.

WORTH TWICE THE MONEY.

Enclosed find renewal of my subscription for the C. B. J. I would not be without it for twice the money.

WM. THURSTON.

Bobcaygeon, March 18, 1886.

MORE THAN FULFILLED OUR EXPECTATIONS.

With the first of April the CANADIAN BEE JOURNAL commences its second year. It has fulfilled more than our expectations. May it also prove remunerative to you.

E. SCHULZ.

Lethbridge, Mus. March 24, 1886.

PLeASING AND INSTRUCTIVE.

We heartily congratulate you on the success of the CANADIAN BEE JOURNAL, through the first year of its existence, the perusal of its pages has afforded me much pleasure and instruction, and I hope to enjoy the same privilege for years to come.

JOSHUA BULL.

Seymour, Wis., April 3, 1886.

LIKES IT IMMENSELY.

I enclose my renewal. I am immensely pleased with it, and the index makes it complete. I don't know what your binders are like but I am afraid they are not good enough for the C. B. J., and I am going to get mine bound in the city in a manner befitting its importance. Wishing you and it every success.

J. D. EVANS.

Islington, March 24, 1886.

DON'T NEGLECT THE FOOT-NOTES.

Enclosed find my renewal to the CANADIAN BEE JOURNAL; also for pamphlet on "Foul Brood." The foot notes are to me the greatest point in favor of your JOURNAL. The same consideration makes me rank *Gleanings* first among bee-journals. I wish to have the JOURNAL continued until I stop it, even if I should not renew just in time.

ALFRED MOTTAZ.

Ottawa, Ill.

THE CANADIAN BEE JOURNAL.

JONES, MACPHERSON & Co.,

EDITORS AND PUBLISHERS,

BEEON, ONTARIO.

WEELY, \$1.00 per Year, Postpaid.

BEEON, ONTARIO, APRIL 14TH, 1886

Bees on their summer stands will have had a good chance to take a cleansing flight on several of the warm days of last week—here the thermometer registered as high as 67 degrees.

Watts Bros., Murray, Clearfield Co., Pa., send us a descriptive pricelist of supplies, etc. The first 31 pages consist of a concise and practical treatise on bee culture, which makes the little book a valuable one.

Probably all our readers don't know that Dr. C. C. Miller has written a bee-book, but he has and it will soon be in print—say three weeks or so. We have ordered a lot of them already, though we haven't seen one at all as yet; we know that they will sell though, and consequently

do not feel that we are running any risk in placing an order for a lot. The price in the U. S. will be 75c—probably the same in Canada.

CIRCULARS RECEIVED.

W. O. Dore, Pinkerton, Ont.—Foundation, extractors, etc.

A. E. Woodward, Groove's Corners, Saratoga Co., N. Y.—three pages—bees, queens, &c.

J. C. Bowman, North Lima, Mahoney Co., Ohio.—12 pages, bees, supplies, fowl, &c.

A. B. Howe, Council Bluffs, Iowa—20 pages—hives and supplies generally.

J. M. Shuck, Des Moines, Iowa—34 pages, descriptive of the Shuck hive and feeder. In it Mr. Shuck mentions ourselves as agents in Canada for his goods. We will have something further to say about the hive later.

Jno. C. Melcher, O'Quinn, Texas, has just patented a "Rip Van Winkle" style of extractor, of which we have received the specification sheet. It is a novel and ingenious style of extractor, but is not one which would meet with much favor at the hands of intelligent honey producers. It works on the principle of a "top," such as children usually play with, and it must be great fun to work the machine.

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.

Sales continue slow; but with fair prospect to close out present stock before new honey comes in. Best white, in 1 lb. sections, 13 to 14c. Beeswax in good demand at 25-27c.

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 15 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 beeswax. We pay 25c. a lbs. for choice yellow.

CHAS. F. MUTH & SON.

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 4 1/2 to 5 1/2 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 5 1/2 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.

EXCHANGE AND MART.

Advertisements for this Department will be inserted at the uniform rate of 25 cents each insertion, not to exceed 5 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 advt.

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

RUBBER Printing Stamps for Bee-keepers. Send for catalogue and circulars to G. W. BEBCAW, Berwick, Ohio, Seneca Co.

WANTED—To exchange good extracted honey for one piece sections, hives in the flat or almost any kind of bee-keeper's supplies. JAS. ARMSTRONG, Cheapside, Ont.

ADVERTISEMENTS.

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.

JACOB SPENCE,

—AGENT FOR—

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

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

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 1/2 inch SMOKER by mail, \$1. SECTIONS, CHARTS, &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.O.P. 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 5	.....	10 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

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20 COLONIES

Of Italian Bees for sale. Originated from D. A. Jones' and S. Cornell's apiaries. Complete Jones' hive; 10 frames with each hive; good queens Price \$9 to \$10. Apply to
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WAYS 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.

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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 tows, (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.

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

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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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BEESWAX WANTED.

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

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Also agent for D. A. Jones' supplies.

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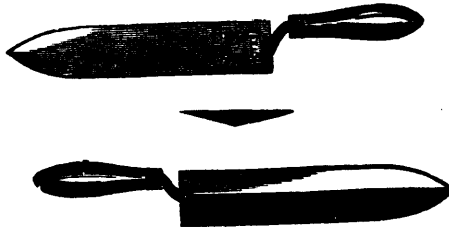
REARED IN FULL COLONIE.

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 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
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- If by mail, add 18c extra for, each knife.

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

THE INVERTIBLE HIVE

INVERTIBLE FRAMES,

Invertible Surplus Honey ases,
 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

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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 Apiarian Supplies.



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

BED ROCK PRICES.

WE MANUFACTURE

5 Styles of Hives, 6 Styles of Honey Extractors,
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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.

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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.

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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.

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QUEENS. 1886. QUEENS.

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

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

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Murray, Clearfield Co., Pa.

VANDERVORT

Comb Foundation Mills.

Send for samples and reduced price list.

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Italian Bees and Queens.

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

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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, \$3.00. Untested Queens, in April, \$1.25; after, \$1. Safe arrival and satisfaction guaranteed. Send for circulars.

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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
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**Bee - Breeding Establishment of
 F J DOKOUPIL,**
 Vigana, Upper Carniola, Austria, Europe.

Queens sent free of charge. Safe arrival and purity of separate races guaranteed.

Price of each in Marks, German Money.

	April	May	June	July	Aug.	Sep	Autumn
Carniolan Original Queen	8	9	6	5	5	4	4
Italian Original Queen.....	9	9	8	7	7	6	6
Cyprian or Syrian Original Queen.....	20	20	20	20	18	18	18
Cyprian - Syrian Queens, bred in Carniola.....	12	12	11	11	10	10	10

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 trouble. Send for Price List of Poultry Supplies. Address
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HIS 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	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,
 Kilmarnagh, 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.

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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 CLEARINGS IN BEE CULTURE**, with a descriptive price-list of the latest improvements in HIVES, HONEY EXTRACTORS, COMB FOUNDATION, SECTION HONEY BOXES, all books and journals, and everything pertaining to Bee Culture. Nothing Patented. Simply send your address on a postal card, written plainly
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High, gray hammock and pine lands, not subject to overflow, situated on the
GULF COAST RIDGE.

In Tropical Florida, 81° 50' in longitude west of Gr., and 26° 35' north latitude. 16 miles south of Fort Meyers, 24 miles distant from Ocala Bay, crossed in its whole length by the lovely **Estero Creek**, for the culture of Oranges, lemons, limes, pineapples, datepalm, 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 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 Gassa 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 queens 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 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 30 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.

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We have constantly on hand a large stock of Domestic and Imported Beeswax 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,

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

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Having a large stock of sections on hand we will all 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
" " " " " " " " " "	4.75
" " " " " " " " " "	4.50
" " " " " " " " " "	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.
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SECTIONS!

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

4 1/2 x 4 1/2 x 2—to 1 1/8.....	\$3.00 PER 1,000.
5 1/2 x 5 1/2 x 2—to 1 1/8.....	\$4.00 PER 1,000.

SPECIAL FREIGHT RATES GUARANTEED.

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MANUFACTURED BY

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Italian Bees and Queens For 1886.

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

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

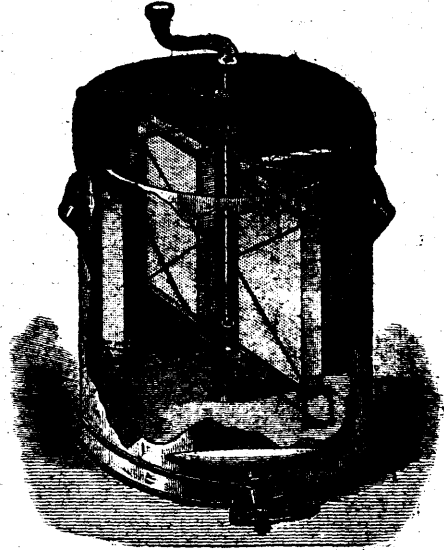
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