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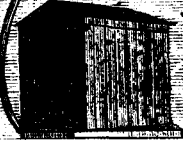
VOL. III, NO. 35

1887

NOVEMBER 23

PUBLISHED EXCLUSIVELY IN THE INTERESTS OF THE HONEY PRODUCER

THE CANADIAN



JOURNAL

THE FIRST \$ WEEKLY IN THE WORLD

ONE DOLLAR PER YEAR

THE GREATEST POSSIBLE GOOD TO THE GREATEST POSSIBLE NUMBER

PUBLISHED BY
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THE D. A. JONES CO., Beeton, Ontario.

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

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TO CONTRIBUTORS

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

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

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

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

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BEEES FOR SALE.

To Be Disposed Of At Once.

We have 200 colonies more than we require, and to any one who wishes to embark in the business, we will sell in lots of fifty or over, at a very low rate, and with satisfactory security we will meet our customer as to time, should it be needed. This is a splendid chance. The price will be away down low. If you have any thought of investing, at least write us for particulars.

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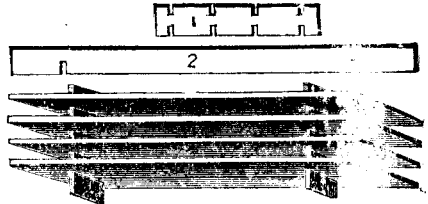
THE CANADIAN FEEDER.



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

IMPROVED CANADIAN FEEDER.

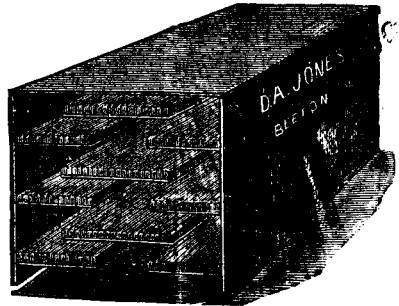
This is the Feeder spoken of on page 610 of the current volume of the JOURNAL. It is arranged with the float as shown in the engraving below. Holds 12 to 15 pounds of feed, and



may be divided making two feeders if needed.

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

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

Price each, made up.....	\$0 30
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These are placed above the cluster, filled with candy which is made by taking pulverized or granulated sugar, and stirring it into honey nicely warmed up, until the latter will not hold any more in solution. Allow the mass to stand till both are thoroughly mixed. Then place in Feeders and set over frames, packing around nicely to keep in the heat.

THE D. A. JONES CO., LD.,
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We will take all the No. 1 EXTRACTED HONEY that is offered us at
100. PER POUND

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

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

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

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

For prices where supplies are not wanted, write us.

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

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

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

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



YOU ARE A SUBSCRIBER

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THIS OFFER WILL INTEREST YOU.

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

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

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

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

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

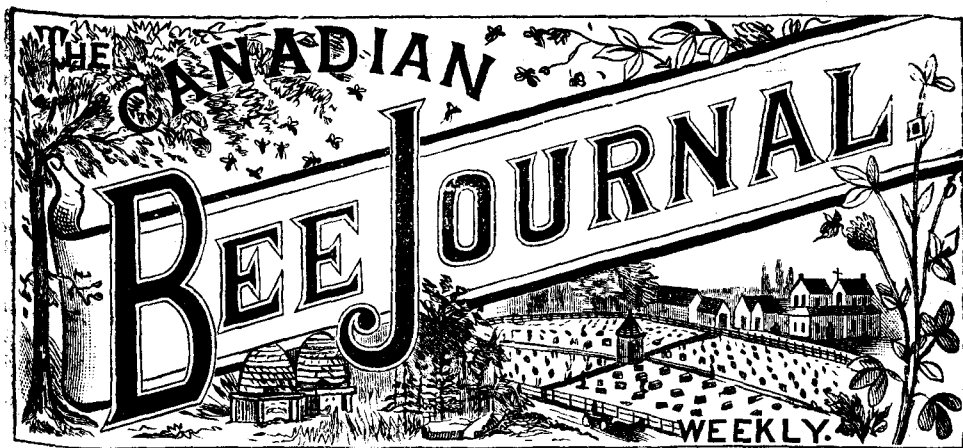
To those sending us five *new* names and \$5.00, we will send either Prof. Cook's "Bee-keepers' Guide," cloth, or Root's "A. B. C. in Bee Culture," cloth; price, each \$1.25

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

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

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

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



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

VOL. III. No. 35 BEETON, ONT., NOV. 23, 1887. WHOLE No. 139

EDITORIAL

THE *Bee-keepers' Magazine* published the present year by Aspinwall & Treadwell, has passed into the hands of Mr. John Aspinwall, who will in future conduct it as a separate enterprise, not connected with a supply business at all. The editor in his prospectus remarks that he "has always contended that a bee journal could not support itself with profit to the publishers unless connected with a supply business, and he still holds that ground." "We mean," he says, "by profit a sum sufficient to support the editor comfortably without devoting his time to something else." Unless he purposes pursuing that "something else" we fail to understand how he purposes making it pay now, even though the price has been put at the old figure—50c. per year. However, the *Magazine* is a live journal, untrammelled and unbound in all its principles, and we wish it every success.

Mr. Ivar S. Young, Editor *Norwegian Bee Journal*, has left for home carrying with him a lot of goods such as he found on this side of the Atlantic suitable to the use of the bee-keepers of Norway.

The Michigan bee-keepers are doing a good thing in meeting with the Michigan Horticultural Society in joint convention at East Saginaw on the 6th, 7th, 8th, 9th and 10th of December next. On Dec. 7th the questions to

come up for discussion are as follows: "Do bees injure maturing fruit? What trees are valuable for honey and also beneficial for decorative purposes about a homestead? How great are the benefits of honey bees in promoting the setting of fruits? How does bee-keeping supplement horticulture commercially?" The discussion of these topics jointly by the two societies will prove exceedingly beneficial to both, and it may be the means of doing away with a good deal of useless litigation in the future. Fruit raisers and bee-keepers will meet and talk over the matter in a friendly way and both will learn much of which they have been ignorant heretofore, and in all probability the trouble which has arisen between these two classes of the community will be to a great extent harmonised. The committee appointed to arrange this joint convention were Messrs. Cook, Cutting, and Hutchinson, and they have evidently done their work well. In another column will be found the program of the bee-keepers' meeting.

Our report of the North American Bee-keepers' Convention, held on the 16th, 17th, and 18th insts. will commence with next issue.

The date of the annual Convention of the Ontario Bee-keepers' Association has been set for Tuesday and Wednesday, 10th and 11th January. J. B. Hall, Vice-President, W. Couse, Secretary,

Directors Emigh and Clarke, and Mr. F. Malcolm have been appointed a committee on program, which we shall hope to publish in next issue.

ESTABLISHING OUT APIARIES.

THROUGH a misunderstanding as to instructions the paper which the editor of this JOURNAL was to have given at the North American Convention just closed at Chicago, it was not forwarded in time to reach there until after the Convention had adjourned. We regret this exceedingly but it cannot be helped now. We send proofs of the article to the other journals so that they may have the article for insertion if they desire.

ESTABLISHING OUT APIARIES.

This is the question that has been assigned me by your secretary, and it is one which is receiving considerable attention just now, as many engaged in apiculture are increasing their colonies until they have, frequently, more than they can afford to keep in one apiary. Then the questions arise, what should they do? Should they sell them off or start "out apiaries?" There are some localities where 500 colonies might be kept with success, and there are others where 100 would overstock them. We consider from 100 to 200 colonies as many as is profitable to keep in the average apiary. In establishing out apiaries fifty colonies would make a start, but we would recommend a hundred, as no more trouble need be taken to manipulate them. These would contain 200 in the fall, which might be divided again; thus your apiaries, if you double your colonies, would double every year. But counting mishaps, sales and losses, perhaps we might more reasonably expect to double our colonies every two years. This, of course, depends largely on the practice of the apiarist. One man is required at each out apiary during the season, which in this country varies from four to five months. From our home apiary we located one about one and a half miles to the north west, the next about four miles to the north east, next seven miles to the north east then one five miles north, one six miles north west and one ten miles north west, with sometimes smaller ones between. From personal experience we are satisfied that in good localities from two to three miles apart is far enough to have them. We have had as good results from the closest apiaries as from those farthest apart and that too when there were over 200 colonies in each. If the locality were suitable, we should

prefer to place them so we could visit all the apiaries by driving the shortest possible distance, that is, five or six apiaries might be placed round a central one, or in a way that you could drive or take them all in in one route. Ours, unfortunately are not so placed, and it gives us five or ten miles of an extra drive to take them all in but as the locations suited us better, we thought it would more than overbalance the extra cost of the journey to place them as we did. Each apiary should have a practical man or woman in charge. We have frequently had students look after them, but it pays much better to have assistants with, at least, one year's experience, as the foreman cannot manage to go around to each apiary more than once per week and sometimes scarcely that, especially if he has to give a day to each apiary, to instruct the one in charge. The assistant in charge has spare time enough on his hands to keep the yard in nice condition, besides preparing sections, putting them on, keeping the hives painted and making new ones when required. We never expect him to do all the work during the honey flow but give him assistance in extracting. The more assistance that is required for this purpose the better the apiary pays. When extracting we use little boys and girls for carrying the combs to and from the hives to the extractor. Two of them, a little larger and a little practised, do the uncapping and extracting. We have also had boys from ten to twelve years old that could put the combs back in the hives very well after they had been extracted. This class of labor with us is very cheap and there is generally plenty of it in the neighborhood of every apiary that can be got when required, the youngsters think it as good as a holiday to get an opportunity to work in the bee yard. With a good practical foreman to visit the yards and see after them, as much can be realised from the out apiaries as from the home ones. Very often they bring in better returns because they are selected on account of their fitness while your home apiary may only be tolerated because of its being your "home," rather than the most favorable place for an apiary. Almost any number of apiaries may be managed in this way if the owner is thoroughly practical, and will devote his entire attention to the business, or if a good reliable foreman and trusty students can be secured, or better those who have had, say a year's experience. We are satisfied that after one has mastered the business and understands it thoroughly, if his surroundings are suitable, he is only fooling away his time with one apiary, as he can manage several without any more trouble than is required to manage one. He would require a suitable rig, so that in driving to each

apiary he could take such supplies as he might require, and in returning could bring any honey that there might be on hand.

We have parties offering us the privilege of establishing apiaries on their premises without any charge. One man, where we had an apiary for over ten years, sold his place and moved away. He has asked us to come and establish one on his new place, free of charge, knowing as he does the benefit that the clovers, fruit trees and vines receive from the fertilization of the flowers by the bees. The highest that we have ever paid is \$25.00 a year for bee-houses or cellar to winter in. All the ground that is required is a quarter to a half-acre to place the bees on. From \$5.00 to \$10.00 a year is the usual rent where a charge is made at all. Even though a person has a sale for all the extra colonies of bees they can spare, it will pay them to have at least one or two out apiaries, because if increase is their principal object the sale of bees will doubly repay the interest on capital invested. Any honey that they may stow away more than is required can either be extracted or the filled combs may be kept for future use, as it is desirable to have some such combs on hand to save feeding colonies that are run more exclusively for honey. We believe that all such apiaries should be managed for both honey and increase unless the sale of bees is almost impossible at a very low figure, in which case increase is a thing not so much to be desired.

From our English Correspondent.

Something About Straw Skeps, Bee-Driving and "Bumping."

PURPOSE telling you something in this paper about the hive of the British cottager. My observations and reading leads me to the conclusion that bees are not kept in this kind of hive on your side but in wood boxes. You are acquainted with it in pictures—on the cover of this JOURNAL for example—but most of you never saw a straw skep in actual use. Am I wrong in this surmise?

This is the bee-hive of our Saxon ancestors and probably the Britons before them. They are a copy of the bees' natural habitation—the crown of a hollow tree—and with all their other drawbacks are the best hive for wintering bees in our climate that I know of.

There are thousands of colonies of bees kept in them to this day. I know one supply dealer whose annual retail of them is 2,000 and he is only one of several. I keep a couple of them myself for "auld lang syne," and within a mile radius of my house there are ten of them to every bar frame hive, and advanced bee-keepers

are pretty thick in these parts. Plain box-hives are with us almost unknown. Many skeps are in a wretched rotten state, swarms are often hived in them year after year, long after they are only fit for the fire, and it is not because they are costly, as a good one can be bought anywhere for half a dollar. The old plan was to take the swarms in Autumn, suffocate the bees with sulphur, appropriate the contents of the skep, strain out the honey (?) and make mead and methylen with the residue. The sulphur pit is not yet wholly unknown, but the B.B.K.A everywhere discourages the practice, and at the same time improves the form of the skep and encourages their owners to work for super honey.

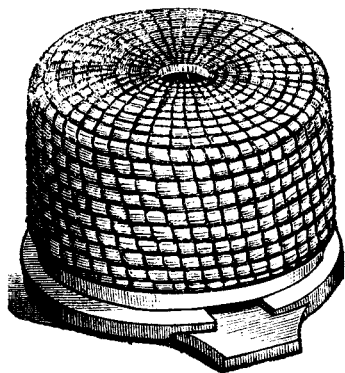


FIG. 1.

Fig. 1 shows you a skep altered from a conical to a flat top. A hole about 4 inches in diameter is also made in the crown for feeding and supering. Skeps are also frequently made with a rim of wood at the bottom edge, this preserves the straw and makes them more lasting. I need scarcely point out that bees kept in skeps must be "let-alone;" it is well nigh impossible to examine them in any way, and only by using judgment from external appearances can their owners arrive at right conclusions as to the well being or otherwise of its inhabitants.

Mr. Cowan has told you we try to induce every one to keep bees, and certainly there is no reason why every one, except in large towns and cities, should not do so in these straw hives. I have seen a hive on each side of a cottage door not a foot from the door posts and the children pass in and out, the dog lie down along side and the cat roll herself up and sleep on the top on a sunny day and no one get stung. There is one thing I greatly regret the old straw "hackle" is seldom used as a covering in these degenerate days, they are quite a curiosity now except in remote villages, "far from the madding crowd." An earthenware milk pan is usually inverted over

them now as a protection from the weather, it answers the purpose very well but is by no means so picturesque as a hackle.

I took Mr. Jones into an old "grandmother-bee-garden" near my "hive" when he was my guest. He made a hasty sketch of it for the benefit of Canadian bee-keepers, perhaps he will give it you here. It will not only give you a better idea of an old English rural scene, but make you better acquainted with the chief editors' abilities as an artist.

This old lady follows in the same old paths as her grandmother did before her and probably is now using the identical hives that were used then.

The cut Fig. III. will help to make it plain.

The swarms, are as a rule, taken; the old stocks have the young queen so that the wisdom of this is apparent. Moreover the swarms are likely to have the best looking honey. In "driving" you first smoke the hive you intend to operate on sufficiently to make the bees gorge. You then invert it, placing it in a pail to keep it steady, and fasten an empty skep on with a wire skewer at the back and two hooks—one on each side—as shown in the engraving. You then proceed to jar the bottom skep by striking it with a stick or your hand, about as frequent as your foot would fall on the ground were you doing a four-miles-an-hour walk. If the bees

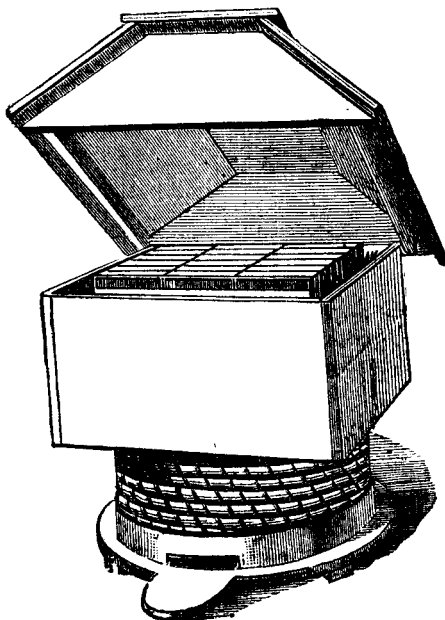


FIG. 2.

We have learned many cottagers to super these hives. Fig. 11 gives you one with a super on. I have got 30 lbs. of section honey from one hive in one season and considering the stock cost me nothing in food for five years, an average yield of 20 lbs. per annum is no very bad return for my trouble.

We have also taught the cottagers to "drive" their bees in autumn instead of burning them, and thus save the bees and unite them to the old stocks, making the latter stronger. Mr. McKnight confessed at our second conversazione that he did not know what we meant by "bee-driving." I suppose there are many of you like him.

are fully gorged they soon proceed to leave their stores and run up into the empty skep above. When most of the bees are out, you remove the top skep and set it on the ground with one edge resting on a stone. You next proceed to break out a comb, brush the few straggling bees off on to the ground so that they run in and join their fellows, lay the comb on a dish, cover with a cloth, and proceed to treat all the combs in this fashion, thus emptying the skep which is then cleared out and stowed away for future use. If you are about to unite the bees to another lot you must capture the queen as she ascends and if you do not wish to keep her, destroy her of course.

The process I have described is known as "open-driving." If you dispense with the hooks and fasten the top skep down close on to the bottom one with three skewers and then proceed to drive as above; it is known as "close-driving." In this case nothing is to be seen, but the bees will often leave and ascend quicker in the dark than they will with light blazing in upon them. "Open-driving" in a bee-tent at a flower or agricultural show or fair is a sight that never fails to attract a crowd around the expert. If you wish to unite a "driven" lot of bees to another stock, proceed as follows:—Drive the

and giving them bars filled with winter stores from other hives. This is an easy way some of us have of recovering some of our losses, if we have been negligent or blundering; in fact "condemned" bees are a real god-send to many bee-squashers who are ever learning but never come to the knowledge of the truth. Artificial swarms are also made from straw skeps by driving as described above. But it requires judgment when to do it and the swarm must be placed on the old stand and the old stock removed a few yards away.

A third class expert has to drive a stock in



FIG. 3.

old stock as well as the condemned one. Replace the hive of the old stock but tilt up the front edge to give ventilation and shoot both lots of bees on to a sloping board in front and allow them all to run in together, co-mingling as they go. Cottagers, as a rule, do not care for this, as the bees are "very naughty" for many days after, consequently they readily allow us to go and drive the condemned lots, we having the bees for our trouble. We use the bees, sometimes to make weak lots strong for winter, at others to make new stocks, by putting three or four condemned lots together, reserving the best queen

this way, capture the queen as she ascends and clean out the bees in ten minutes, or he fails to get a certificate. A feat that the examiner probably could not accomplish in ten hours; but there are examiners and examiners, and they all know when it is done well if they cannot take the tools and show the non-successful how. Do you know the "fortune of war?" I will tell you. If you say or do such things you must take the consequences. Lucky for me the C.B.J. has not a very large circulation on my side. Sometimes there is a "driving" competition at shows, where prizes are given for doing the job, the quickest

and neatest. I have never entered the lists for an expert's certificate always feeling so timorous, but I have a lively recollection of winning a half-sovereign in a drizzling rain for driving out a weak lot in four minutes. There were seven competitors, three of them "certified." Some took twenty-five minutes to find the queen, and others never did find her, but like all competitions there is a fluke in it.

Just a word or two about "bumping." We will suppose I intended to take the bees in the skep shown in the pail Fig. III. by bumping instead of driving I should remove the top skep, take the bottom one in my two hands and strike the skep on the ground a violent bump *about the spot where the left ear of the pail now is.* The effect of the blow on the edge of the crown of the skep just at that spot would be to jar all the combs away from their attachments. I should then clear the combs of the bees, as described in driving, by brushing them off each comb and allowing them to run into what was the top skep. The thing about the whole process that would surprise you most is, that if you had well gorged the bees at the commencement, very few of them would take to the wing during the operation, probably not a dozen. Bumping is often attended with great sacrifice of bee life as well as dripping honey, but it is very expeditious.

If there is any point I have not made plain, do be so good as to name it in the C.B.J. Nothing will please me more than to try to clear up the obscurity.

AMATEUR EXPERT.

England, Oct. 5th, 1887.

For the Canadian Bee Journal.

"Setting in Winter Quarters Early."

BEES PUT IN OCT. 25TH.

Ⓔ WAS much interested in "Our Own Apiary" Oct. 26th, relative to setting bees in winter quarters early, for that is just what I had done. On Oct. 25th weather was cold, some snow falling, mercury about freezing point, windy and everything dry, with prospects, I thought, of a little winter, nor was I deceived, as next morning 20° was reached, and on the 30th 10° above zero was registered. Such weather I have not felt before at this time of year.

A few days before this was beautiful weather and the bees had a good fly. I have noticed we will often miss putting them in just after a good fly and leave them on and on for another fine time, but alas it does not come. Perchance half a day or so may be fine enough for a few to venture out, but of little account. They get a

good deal of frost when it reaches near zero weather; we then put them in and it is so cold outside that ventilation cannot be given successfully unless there are underground ventilators and such like improvements, but many have not got all these equipments and need moderate weather to ventilate for a while until the bees get rightly settled down to winter torpor, when it seems to me the cellar can be closed pretty well up without disastrous results.

I commenced carrying the bees down after dinner. It is a cellar four feet underground and two above, with double floor above filled between with eight inches of sawdust. Above this is a workshop 12x16 feet. Cellar 10x14, with an addition at the east end on the side of the slope extending six feet from the main building, having in it three doors. This is double boarded, having on sides and on top twelve inches of sawdust. Left the doors open a few days and nights to cool off. Thermometer indicated 41° when taking bees down. I set them on stands eighteen inches high, left on the procolised quilts, also adding another. I carried them down with entrances open so carefully that out of very few hives did bees appear at all, while others, some came out of the entrance and looked about and went back; only single ones flew at all. The doors were open while carrying down the thirty-seven colonies. Weighed the hives a few days before and marked it on the hive; am much pleased with results. To-day, Nov. 9th, there is scarcely a murmur heard, everything dry and nice. Thermometer 47° in cellar, 21 outside, with high south east winds. Very few nights have been without frost.

THOS. STOKES.

Minesing, Simcoe Co.

EARLY HOUSING—MORE ON THE SUBJECT.

In re putting into winter quarters early, I put in 20 colonies on Nov. 5th and 24 on the 9th, and will put in the balance later on. Before seeing your article in regard to it, I had come to the conclusion that I was always too late in putting them in. I believe that leaving them out until cold weather sets in is a mistake, as when they are transferred from a temperature of say 20° or more of frost to say 12° above freezing is considerable of a jump and I think tends to make them break cluster more than they would at an even temperature. In the former case I notice that they crowd out at the entrance considerably and in the latter case very little, and if carefully handled, not any. Of course, as you suggest, I intend to give those put in early

a good fly if I find a suitable day, but even without it I think they will not suffer as much from the extra two weeks or so confinement as they would by being left out in the cold until late, however we will see how they will pan out in the spring if all is well. I will let you know from time to time how they are getting on.

JNO. MCKIMMIE.

Lisle, Ont., Nov. 11th, '87.

Thanks for your report. You are on the right track, no doubt. Perhaps we will soon learn to put them in winter quarters, in mid-summer, if the honey flow should cease, and that without bad results. We think it is much better to have them inside resting quietly and consuming very little stores than to have them out flying about, many going one or two miles away from home and never returning.

AMERICA AS SEEN BY MR. COWAN.

CONTINUED FROM LAST WEEK.

In reply to questions by Mr. Meggy, the Rev. Mr. Clay, Mr. Garratt, and Mr. Lyon, the Chairman said that Captain Hetherington's bees were Italians, or crosses between them and black bees. Large honey producers like the Captain raised their own queens and did not deal with queen-raisers, because where an extensive business was done queens were wanted by the dozen. It was found by experience that Italian bees or a cross between them and black bees were best suited to the American climate, at any rate in that district. Carniolan bees were being introduced in some places, but not largely. It was the practice always to select queens from the best stocks. All the sales at the show were retail. A large quantity of honey was sold by producers to the stores in the neighborhood. The only place where he had examined foul brood was at Mr. Root's.

Mr. Lyon asked what was the average price per lb. of honey paid to producers, because he thought, considering the market price of Canadian honey in this country, a bee-keeper over there who only had 400 hives could not make a very good living.

The Chairman replied that the usual price was from fourpence to eightpence per lb. Mr. Hall had a very bad season last year, but as a rule he made a good living by bee-keeping.

In reply to the Rev. Mr. Raynor the Chairman said that Captain Hetherington always introduced his queens by means of a cage very similar to the pipe cover cage. The Captain said it

would not pay him to practice direct introduction. He must make sure of introducing every queen successfully. He had tried the direct method, but had lost so many queens thereby that he could not afford to waste any more time by experiments. The question was governed entirely by cents and dollars, and every day was of consequence. One gentleman he (the Chairman) met who frequently tried direct introduction, and by taking the precaution to smoke the bees and the queen and thus give them all the same scent, had been successful.

In answer to Mr. Grimshaw and Mr. Garratt the chairman said that Captain Hetherington used a different smoker to those employed here. A fire was lit in the American smoker, which sent out an immense quantity of smoke. He (the Chairman) had been present during the manipulation by Captain Hetherington. That gentleman would not allow any of his friends to be present on such occasions unless veiled. A tremendous puff of smoke was blown into the sections, which caused the bees to rush down and crate after crate was removed in that way—a work occupying only a few moments. Very few bees were killed or taken away, perhaps not more than two or three. The wood used in the smoker was maple cut out into pieces about four inches long and half an inch square. Some people, like Mr. Hepdon, used moistened plane-shavings mixed with dry shavings, which combination smouldered very much and gave off a considerable amount of smoke and steam. In every apiary there was always a smoker ready at hand. He (the speaker) took the opportunity of testing Mr. Grimshaw's apifuge at Messrs. Knickerbocker & Lock's. Mr. Lock put some on his face and hands when examining a hive of savage Cyprians. One bee flew direct at his face, but did not sting, at which Mr. Lock was agreeably surprised. He (the Chairman) left some of the apifuge with several persons.

In reply to Mr. Sambels, the Chairman said that sections in America were propolised late in the season just as much as here, but early in the season the honey flow there was very rapid, and they were consequently not propolised so much. Captain Hetherington considered seventy pounds per colony a very fair yield. With regard to carrying bees away on the sections he had omitted to say that every establishment had its honey house, and the windows in these were so arranged that bees taken in could get out again. In America, however, they were not so particular about destroying a few bees as were, so long as time was saved. They do not trouble to remove the sections as carefully as we do, and with them it is of no consequence to crush a few bees. Win-

tering in Canada is much easier than in the States, owing to the dryness and equable temperature. The climate of the former is colder but less changeable than that of the States. Captain Hetherington's greatest difficulty was in wintering. He moved all his hives into cellars, but his losses during the spring had been great. He had lost as many as ninety per cent some years and could not ascertain the cause. He had a house built partly above and partly below the ground, which was ventilated by a pipe running a long distance under the ground, the air inside the building being warmed to the temperature of the earth. That gentleman's apiaries were in New York state and occupied a very cold region; in fact they existed in a snow belt which extended for about fifty miles north and south. The district seemed always to be visited with a larger quantity of snow than was experienced either north or south of it for many thousands of miles. Melons would not thrive in that belt, though they came to perfection both north and south of it. In Iowa and Illinois bees can be wintered out-of-doors.

The Rev. Mr. Raynor said he thought the meeting was deeply indebted to Mr. Cowan for the very lucid and interesting description of apiculture as carried on across the Atlantic with which he had favored them that evening, and he (Mr. Raynor) wished to express on behalf of his brethren their heartfelt thanks to the Chairman. He was glad to know that, with the exception of pasturage bee-keepers here were in every way equal to their co-workers in America.

The Hon. and Rev. Henry Bligh seconded the motion, which, upon the suggestion of Mr. Garratt, was formulated thus:—

'That this meeting expresses its best thanks to Mr. Cowan for his kind and lucid description of the American apiculture in the United States and Canada, and also desires to record its sense of the kindness and hospitality shown to him as the representative of British Bee-keepers by American and Canadian bee-keepers.'

Mr. Grimshaw, in supporting the resolution, said he was very glad to know that the bacillus of foul brood seen by the Chairman was exactly like that which English bee-keepers were accustomed to. It was a comfort to think that instead of having a dozen different varieties to fight there was probably only one kind.

Mr. Sambels also supported the resolution, saying he was glad that Mr. Cowan had convinced the Americans that English bee-keepers were not a few decades behind them. He thought after the Chairman's visit they would, perhaps, adopt some such system and organization as prevailed in this country.

The resolution having been carried, amid applause, the Chairman expressed his thanks to the members for their kindness. He said his visit to the great western Continent was quite a labor of love, and that he and Mrs. Cowan had benefited greatly by the tour, notwithstanding that the railway journeys were often very fatiguing. When at Toronto he was asked to give an opinion respecting Canadian honey, and efforts were made to induce him to commit himself on that subject, and in that connection he was very much pressed by the persistence of interviews. He could only confess that their clover and lime honeys were very similar to those in England. With regard to thistle honey he was rather sceptical last year, and had said he could not understand any country producing sufficient thistles to give a crop of honey; but his opinion on that point had been rudely shaken when he saw hundreds of acres of thistles. Although an act existed against the cultivation of thistles it was not put in force. He thought his visit and the reception accorded him would have the effect of cementing the bonds of friendship between bee-keepers in all three countries. He had found that some little prejudice was felt in the States against English bee-keepers, who it was thought had treated the American honey dealers somewhat badly. However, a little explanation soon removed the grievance and secured the American's approval of the steps taken by the Association. He was quite sure their friends over the water would be gratified by the resolution just passed. (Cheers.)

After a short conversation between Mr. Garratt and the Chairman respecting Canadian thistles, Mr. Sambels proposed that a copy of the resolution should be sent to the *American Bee Journal*, the *CANADIAN BEE JOURNAL* and *Gleanings*, which proposition was seconded and supported by two gentlemen among the audience and carried unanimously.

Mr. Lyon asked whether the Chairman had any practical experience of the working of the Jones-Heddon hive in America.

The Chairman said that hive was not in very general use over there, and Mr. Heddon himself was not using it very largely.

Mr. Grimshaw and Mr. Sambels referred to the peculiar and various effects caused by the smell of honey on some persons. In answer to the latter gentleman and Mr. Lyon, the Chairman said he saw no skeps in America, bee-keepers there being too advanced for any such imperfect appliances.

Mr. Alpaugh's method of fixing foundation by means of slit sections was then exhibited for inspection.

Mr. Garratt feared that the foundation as fixed might buckle, but the contrivance was commented on in favorable terms.

Mr. Godman's machine for embossing foundations was also exhibited.

Mr. Baldwin said that although the Canadians had such vast tracts of pasturage they did not seem to have profited much by Nature's gifts, many bee-keepers in England having produced far larger yields of honey—the Chairman himself for instance.

The Chairman said the most he had produced from one hive was 230 lbs., but then he was a bee-keeper on a small scale compared to the Americans. Besides they could not afford to devote the time and care to bee management as was done in England.

Mr. Baldwin thought there was nothing to fear from American competition.

Mr. Sambels said Miss Gayton was a very successful lady bee-keeper in this county and had produced from one hive during the past season a far larger quantity of honey than any of the American yields to which the Chairman had referred.

After a few remarks from the Rev. Mr. Raynor the Chairman said it was not fair to select the produce of one single hive as an example of the amount of honey raised here or there; an average must always be struck. Mr. Hall, of Woodstock, has obtained 400 lbs. from a single hive, and Mr. L. C. Root as many as from 400 to 500 lbs. He (Mr. Cowan) could not say that his average was 230 or 200 lbs. A certain number of years must be considered when computing an average. Captain Hetherington did not complain of from 60 lbs. to 80 lbs. average. He (the speaker) had suggested that it would be better to reduce the number of hives and make sure of paying more attention to the management, by which means he thought an equal, if not better yield would be obtained.

After a few words from Messrs. Sambels, Baldwin, Hooker and Neighbor, Mr. Lee's system of dove-tailing sections was shown and explained; and a bar-frame belonging to Mr. E. J. Jones, the specialty of which was that instead of the side and bottom bars being of one piece they were halved. In order to insert the foundation sheet, the metal ends were to be removed and the frames would open like a book.

During the remainder of the evening, the Chairman evoked much interest by exhibiting under the microscope various portions of the bee's structure, including the tongue, the semicircular comb used for cleaning the antennæ, a longitudinal section of the eye, the worker's claw and sting. He also showed some peculiarly shaped cells, which had been cut out of frames by himself in America.

QUERIES AND REPLIES.

UNDER THIS HEAD will appear Questions which have been asked, and replied to, by prominent and practical bee-keepers—also by the Editor. Only questions of importance should be asked in this Department, and such questions are requested from everyone. As these questions have to be put into type, sent out for answers, and the replies all awaited for, it will take some time in each case to have the answers appear.

DECAPITATING DRONES.

QUERY No. 162.—I have been accustomed to cut out all drone comb possible in transferring, but sometimes it cannot be done without great sacrifice of needed honey. What I want to know is this: Does it pay to shave off the heads of drones before they are hatched? I used to do it but long ago discarded the practice. I do not raise queens for sale.

G. M. DOOLITTLE.—I do not practice the decapitation of drones.

JAMES HEDDON.—No; it does not pay to make a practice of shaving off the heads of drones in order to get rid of them.

O. O. POPPLETON.—Certainly not, unless you have the combs out of the hive for other purposes, and have them free from bees and honey.

C. W. POST.—I don't think it does pay to shave off their heads. Neither does it pay to raise them. It is much better to replace drone comb with worker comb or good foundation.

DR. C. C. MILLER.—Unless your time is very valuable I think it pays you. At least you save the honey the drones would consume if allowed to hatch out.

HENRY COUSE—No. Convert your drone comb into foundation. Would not object to having about one-half of a frame of drone comb incolonies that raise good drones.

PROF. A. J. COOK.—I should prefer to prune out the drone comb, but if this were neglected I should behead the drones. It stands to reason that a crowd of drones is detrimental. The bees know this and hence the drone massacre every fall.

M. EMIGH.—I, too, used to do it, but do not now. Unless they are the right age it makes a nasty muss for the bees to clean out. I have no objection to a moderate quantity of drones in their proper season.

DR. DUNCAN.—If you have only drone comb in one or two frames, it won't injure them if you keep it outside next the wall of the hive. Better give them other comb or foundation and feed back the honey. Have no drone comb in the centre of the brood nest.

H. D. CUTTING.—In transferring if you find honey in drone combs cut out the comb and put it in the top of the hive and let the bees carry the honey below. When I find drone brood sealed over, that I don't want, I cut off the caps, heads and all, and let the bees carry them out.

J. E. POND.—I have made a practice of shaving off drones' heads, and found it economical. By using a drone trap this labor can be saved, but which will pay the better is an individual question. One thing is sure, it don't pay to rear drones unless wanted for queen fecundation.

MISS. H. F. BULLER.—I think it is a very bad practice to shave off the heads of drones before they are hatched out. Better let them hatch and if you think there are too many catch them at the entrance of the hive with Alley's queen or drone trap. If you have much drone comb cut it out as soon as you can and replace with full sheets of foundation made from the wax.

J. F. DUNN.—Do your transferring at the commencement of fruit bloom and if you must put any drone comb in the brood chamber place it in the side frames. As soon as honey is coming in freely exchange the drone combs for full sheets of worker foundation. Yes, it pays to shave off the heads of drones before they are hatched, it would be too tedious a job to do it afterwards. It would pay better to use queen zinc between your drone and worker comb.

A. PRINGLE.—If you must leave the drone comb honey in the hives in the spring, put the frames containing it towards the outside, distant from the brood nest, and by a little attention you can prevent brooding in them. Or should the weather be warm enough uncap the drone comb honey, and hang the frames in the top storey of the hive, leaving a little opening through the quilts for the bees to get up, and they will carry it below where it is needed in the worker combs. It certainly does pay to "shave off the heads of drones before they are hatched," provided you do not need the drones for mating purposes; but it pays far better not to allow them to be reared at all.

CAN HONEY BE TOO DENSE ?

QUERY No. 163.—Could honey be too dense to keep well. If so, what should be our guide in curing it ?

O. O. POPPLETON.—I don't think it can be.

G. M. DOOLITTLE.—No, not according to my experience.

J. F. DUNN.—I think not. I ripen on the hives.

DR. C. C. MILLER.—Probably the denser the better.

H. D. CUTTING.—Have had no experience in that line.

M. EMIGH.—I never had any too thick to suit me.

DR. DUNCAN.—The more dense, or otherwise the less water in honey, the better it will keep.

C. W. POST.—No. My guide is not to extract until it is well capped, and then I hear of no complaints.

A. PRINGLE.—No, I think not. Indeed, other things being equal, the "keeping" qualities will be in the ratio of the density.

MISS H. F. BULLER.—Not that I am aware of. Leave the curing to the bees to get the finest and best quality of honey.

PROF. A. J. COOK.—I never supposed it could. The thicker the better for all purposes, except for rapid feeding of bees.

JAMES HEDDON.—No, honey cannot be too heavy to keep well. I have seen it in rare cases too dense to handle easily unless it was quite warm.

HENRY COUSE.—I don't think so. Let the bees do the principal part of curing by having the honey well capped over before extracting, then allow it to stand in tanks exposed to a high temperature for a few days. I think this is sufficient.

J. E. POND.—If I understand the question it refers to candying. Some honey will candy quickly. Last year honey from golden rod candied in the comb in a fortnight. I don't know of any way to prevent it. Honey should be kept in a dry and fairly warm location and totally dark.

S. CORNEIL.—Yes. Otto Hehner, analyst to the B.B.K.A., says: "Were the amount of water smaller than I have stated (18 to 21 per cent.) honey would habitually crystallise and solidify in the comb, and in damp weather would attract moisture from the air. In honey the happy medium just prevails. It neither loses nor appreciably attracts moisture." Whether honey will attract moisture or not de-

pends upon the dampness of the air as well as upon the density of the honey. I never tried the experiment but I believe it will be found that if two samples of honey, one very dense and the other very thin, be placed side by side in ordinary air, after some days the dense honey will have attracted moisture and will weigh heavier, while the thin sample will have become lighter by evaporation. In order to keep without change, the density of honey should bear a relation to the humidity of the air in which it is to be kept. The *Paris Codex* states the specific gravity of honey as low as 1.261, pure water being 1.; the *Encyclopædia Britannica*, 1.41; *Chambers' Encyclopædia*, 1.41; *Todd's Series of Tables*, 1.456. Duncan, the latest and best authority, says it should be 1.333. The editor of the *B.B.J.* says that the specific gravity of clover honey collected and sealed during a dry season is found to be 1.370. It is a very easy matter to take the specific gravity of honey by means of a hydrometer, costing only 50 cents.

SUNDRY SELECTIONS.

FULL VALUE FOR THE MONEY.

JOHN GALVIN.—I enclose two year's subscription for the C.B.J., which I send cheerfully as I consider I have received full value for the money.
East Sherbrooke, Nov. 14th, 1887.

BEES IN WINTER QUARTERS, NOV. 1.

A. FYFE.—I observe in a late number of the C.B.J. that you request a number to try the experiment of putting a few colonies into winter quarters early. I put five stocks in the beehouse on Nov. 1st, and took a careful note of each. I will report on them from time to time. All are keeping splendidly thus far.
Harriston, Nov. 19th.

BEES FLYING IN MICHIGAN.

S. H. MALLORY.—Bees seem to be going into winter quarters in good shape, considering the season we have just passed through. They are flying quite lively to-day. I have had to do little feeding, and I do not see any reason why, with proper protection, they should not go through the winter all right.
Decatur, Mich., Oct. 30, 1887.

CHANGING THE STRAIN OF BEES.

H. E. CHRISTIE.—I have thirty hives of bees, and think of changing the breed. Would you advise me to run for Carniolans or Italians?
Oxford Mills, Oct. 26, 1887.

We do not advise you to get pure Carniolans—though a little mixture of Carniolan or Syrian with Italian will give you good, strong, industrious bees, handsome in appearance and as good honey gatherers as you could wish.

GEORGE LAING.—I put all my bees in the cellar on the 9th and 10th of Nov. It was so late that I did not think it worth while to experiment on a dozen at this time of the year.
Milton, Nov. 14th, 1887.

We put all our colonies into winter quarters a few days later than the date of the colonies referred to by Mr. Laing. This is considerably earlier than last year if we remember rightly and we feel satisfied that the statement which we have made will be found to have been correct when the spring comes.

HEATHER IN NEW BRUNSWICK.

JAMES BAPTIE.—In conversation with a party the other day, I was informed that a bee-keeper in York Co., N. B., has something like 300 acres of heather. I do not know whether it was planted or natural to the soil. This was five years ago. He is well-known throughout the country, so if any information is wanted it would be easy to find him.
Springville, Nov. 8, 1887.

Will some of our New Brunswick friends learn all the facts in connection

with this matter, and give us the fullest possible information? The number of acres grown? How long it has been growing? If it is perfectly strong and does well? If bees work on it largely? If it produces honey every year? What time it commences to bloom and how long does it remain in bloom? If the weather affects the secretion of honey in it, as much as it does in some other plants? If the honey from it is of a brighter or darker color than that in Scotland, and if the flavor is milder than the Scotch heather?

FEEDING BACK HONEY—THE BEES WILL NOT TAKE IT DOWN TO THE BROOD CHAMBER.

J. ROWAT.—Is there any way of extracting honey at this season—or later? I have tried to feed some weak colonies by giving them partly-filled combs of honey (some capped and others not). I cut a hole or two in the quilt to let the bees up, and then put on a half-storey with sections, or a full storey with frames, but the bees did not take the honey down into the brood chamber as fast as I expected; in fact I am doubtful about them taking it down at all.
West Winchester, Ont.

Bees are frequently negligent about taking honey down when it is capped, and you should cut them off. We would further suggest that the combs you want the bees to take the honey from should be set in a bottomless hive. Then take the hive in, and set it on the stove, putting four bricks on the stove and keeping a slow fire, using a thermometer so that you will not get the heat more than 120. The heat will thin the honey down and make it much more easy for the bees to remove. Combs hanging in a warm room for twenty-four or forty-eight hours before they are placed in the hives will greatly facilitate matters. If the weather is very cool it is sometimes a good plan to place two or three warm bricks in the top storey by the side of the frames. They may be rolled up in a number of thicknesses of paper, and will thus retain the heat for a long time. It would perhaps be better to use two quilts on the brood chamber, by doubling them, leaving an opening between the two, of two or three inches. Warm bricks placed on top of the frames will answer, but not very well. They should be covered so no heat can escape. By having the combs, and honey in them, sufficiently warm you may extract from the frames, even in mid-winter. Merely warming

the outside of a comb for a few minutes is not sufficient, as it requires a very warm temperature to get the honey in a proper state.

CONVENTION NOTICES.

The annual meeting of the Norfolk Bee-keepers' Association will be held at Lynnville on Saturday, Dec. 3rd, at 2 o'clock, for the election of officers and other business. All interested in bee-keeping are invited to attend. C. W. Culver, Sec.

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

A joint annual meeting of the Michigan Horticultural Society and Michigan Bee-keepers' Association will be held at East Saginaw on the 6th, 7th, 8th, 9th and 10th December, 1887, at which everybody is earnestly invited to attend. The bee-keepers' share of the Convention does not commence until the 7th, as will be seen by the following program:—Wednesday, Dec. 7th, 1.30 p.m. Joint convention with Horticulturists. Do bees injure maturing fruits? What trees are valuable for honey and also useful for decorative purposes about a homestead? How great are the benefits of honey-bees in promoting the setting of fruits? How does bee-keeping supplement Horticulture commercially? 7.30 p.m.—Report of last Convention by the Secretary. Financial statement. The President's annual address. Appointment of committees. Thursday, Dec. 8th, 9.30 a.m.—Opening of the question box. Comb vs. extracted honey, by R. L. Taylor. Lessons from the past season. 1.30 p.m.—Observations upon the intelligence of bees. Anatomy of bees, by Prof. A. J. Cook. Question box. 7.30 p.m.—How to improve our bees, by T. F. Bingham. Marketing honey, by John Rey. Reports of committees. Adjournment.

THE CANADIAN BEE JOURNAL.

THE D. A. JONES Co., Ltd.

— PUBLISHERS. —

D. A. JONES,
Editor
and President.

F. H. MACPHERSON,
Ass. Editor
and Business Manager.

WEEKLY, \$1.00 per Year, Postpaid

BERTON, ONTARIO, NOVEMBER 23, 1887.

BUSINESS DEPARTMENT.

We offer Vol. 1, nicely bound in cloth, Vol. 2 unbound, and Vol. 3, now running, all for \$2.75. Who wants them? t f.

The discount off prices as found in our catalogue for hives, sections and all goods which will not be wanted for use till next season will be 10 per cent till further notice. t f.

THE CANADIAN BEE JOURNAL will not make a special club offer with the *Beekeepers' Magazine* for the ensuing year. We mention this that our subscribers may not think that it is at our instance, should they continue to receive the journal mentioned. Our clubbing price will be \$1.40.

We can supply 250 envelopes and 250 note heads, each with your name and business neatly printed on the corner for one dollar. The paper is of good quality, the envelopes are in boxes of 250 and we pay the postage. At this writing we have executed nearly three hundred orders, and have in many cases been favored with repeat orders for friends. Cash should accompany order and copy be plainly written.

HONEY MARKETS.

DETROIT HONEY MARKET.

Best White Comb Honey in good demand and sells at from 17 to 19 cents. Some lots in commission houses are being held at 20c. Beeswax, 23 cents.

M. H. HUNT.

PHILADELPHIA HONEY MARKET.

Fancy new white honey in good demand. Inquiry is for 1-lb sections, New white clover, 18 to 20c. Buckwheat, 14 to 15c.

PANCOAST & GRIFFITHS.

CINCINNATI HONEY MARKET.

The demand from manufacturers is very good of late for extracted Southern honey and fair for clover honey in small packages for table use. Our stock of Southern honey has been reduced considerably and we shall be in the market again this fall. There were few arrivals lately and prices may be quoted at 3 to 7 cents a pound on arrival, according to quality.

Comb honey has been sold out, perhaps, better than ever before at this time of the year; only remnants of dark honey being left over. Choice white comb honey would bring readily 15 cents a pound in the jobbing way. No arrivals of new comb honey reached our city yet that we know of.

Beeswax is in fair demand and brings 20 to 22 cents a pound for good to choice yellow on arrival.

CHAS. F. MUTH & SON.

PRICES CURRENT

BEEWAX

Beeton Nov 23, 1887.
We pay 30c in trade for good pure Beeswax, delivered at Beeton, at this date, sediment, (if any), deducted. American customers must remember that there is a duty of 25 per cent on Wax coming into Canada.

FOUNDATION

Brood Foundation, cut to "Jones' size" per pound.....48c
" " " " over 50 lbs. " " " "45c
Section " " in sheets per pound.....55c
Section Foundation cut to fit 3 $\frac{3}{4}$ "x4 and 4 $\frac{1}{4}$ "x4, per lb.....60c
Brood Foundation, starters, being wide enough for
Frames but only three to ten inches deep.....45c

EXCHANGE AND MART.

Advertisements for this Department will be inserted at the uniform rate of **25 CENTS** each insertion—not to exceed five lines—and 5 cents each additional line each insertion. If you desire your advt. in this column, be particular to mention the fact, else they will be inserted in our regular advertising columns. This column is **specially** intended for those who have bees or other goods for exchange for something else, and for the purpose of advertising bees, honey, etc. for sale. Cash must accompany advt.

\$1 00 Will secure you by mail, post paid, 250 Noteheads and 250 Envelopes with your name, business and address printed on the corner of each. Send in your order now. **THE D. A. JONES CO., Beeton, Ont.**

HONEY.—We can take all that offers in exchange for supplies, at prices found in another advertisement in this issue. **THE D. A. JONES CO., Beeton, Ont.**

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

ADVERTISEMENTS.

BARNES' FOOT-POWER MACHINERY



Read what J. J. PARENT, of Charlton, N. Y., says—"We cut with one of your Combined Machines last winter 50 chaff lives with 7 inch cap, 100 honey racks, 500 broad frames, 2,000 honey boxes and a great deal of other work. This winter we have double the number of bee-hives, etc. to make, and we expect to do it all with this saw. It will do all you say it will." Catalogue and Price List free. Address W. F. & JOHN BARNES, 57 1/2 Ruby St., Rockford, Ill. 21

BEE-KEEPERS ADVANCE

Is a Monthly Journal of 16 Pages. 25 CENTS PER YEAR. Clubbed with the **CANADIAN BEE JOURNAL** for \$1.10. Sample copy sent free with our catalogue of supplies. Don't forget to send name and address on a postal to

J. B. MASON & SONS,
Mechanics' Falls, Me.

W. Z. HUTCHINSON

ROCKSVILLE, GENESEE, CO., MICH.

Has published a neat little book of 43 pages, titled

"THE PRODUCTION OF COMB HONEY."

Its distinctive feature is the thorough manner in which it treats of the use and non-use of Foundation. Many other points are, however, touched upon. For instance it tells how to make the most out of unfinished sections, and how to winter bees with the least expense, and bring them through to the honey harvest in the best possible shape.

Price 5 cts. Stamps taken; either U.S. or Canadian

CANADIANS

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

BEEES BY THE POUND.

	May	June	July	August	Sept.
Bees, per 1/4 pound	1.75	1.50	1.00	1.00	.90
" " pound	3.00	2.50	1.85	1.75	1.70
Frame of Brood	1.75	1.50	1.00	1.00	.90
2-frame nucleus..	4.00	3.50	3.00	2.75	2.50
3 " "	6.00	5.50	4.75	4.50	4.50

Frames of brood cannot be sent alone.

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

Two frame nucleus consists of 1/4 pound bees, two frames partly filled with brood and honey, and a nucleus hive. If wanted in either "Jones" or "Combination" hive, add price made up, and deduct 40c. for nucleus hive.

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

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

The above must go by express.

QUEENS.

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

FULL COLONIES.

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

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

The D. A. Jones Co., Lp., Beeton.

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PRINTING

Supply Men, Foundation Dealers,
and Bee-Keepers,

SEND FOR ESTIMATES FOR WHATEVER
YOU REQUIRE IN THE WAY OF

CATALOGUES,

PRICE LISTS,

CIRCULARS,

LABELS,

OR GENERAL PRINTING.

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

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

HEDDON HIVES !



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

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

Sample hives we make with the brood-frames wired and the surplus cases supplied with fifty-six 4 1/2 x 4 1/2 7 to the foot sections. These are designed for testing the complete working hive.

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

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

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

PRICES OF PARTS.

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

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

DISCOUNTS IN QUANTITIES.

For 5 hives or more, 5 per cent. ; 10 or more, 7 1/2 per cent. ; 25 or more, 10 per cent. ; 50 or more, 15 per cent. These discounts are off the prices quoted above, either nailed or in flat.

INDIVIDUAL RIGHTS.

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

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

Heddon's 1887 Circular.

NOW READY.

ALL ABOUT THE NEW HIVE.

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

Address,

JAMES HEDDON,

DOWAGIAC, MICH^{IGAN}

TOOLS For BEE-KEEPERS

HAMMERS.

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

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

Small hammers—steel face with adze eyes, just what are needed for frame nailing, etc., No. 55, 35c.; No. 52, 50c.

SCREW DRIVERS.

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

TWO-FOOT SQUARES.

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

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

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

TWO FOOT RULES.

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

HAND SAWS

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

PANEL SAWS.

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

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

PLANES.

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

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

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

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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.

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PUBLISHERS

THE CANADIAN BEE JOURNAL

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ASPINWALL & TREADWELL, Bairytown, N.Y.
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and numbers of other dealers. Write for SAMPLES FREE and Price List of Supplies, with 150 COMPLIMENTARY and UNSOLICITED TESTIMONIALS from as many bee-keepers in 1885. We guarantee every inch of our Foundation equal to sample in every respect.

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

Promote a Home Market!

By a judicious distribution of the Leaflet,

"HONEY: Some Reasons why it Should be Eaten."

never fails to bring results. Samples sent on application. Prices printed with your name and address. 10c 80c.; 25c, \$1.25 50c, \$2.00; 1,000, \$3.25.

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

APIARIAN SUPPLIES

MANUFACTURED BY

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

Are unsurpassed for **Quality** and fine **Workmanship**. A specialty made of all sizes of the **Simplicity Hive**. The **Falcon Chaff Hive**, with movable upper story continues to receive the highest recommendations as regards its superior advantages for **wintering** and handling bees at all seasons. Also manufacturer of **FALCON BRAND FOUNDATION**. Dealer in a full line of **Bee-Keepers' Supplies**.

Send for Illustrated Catalogue for 1887. Free.

W. T. FALCONER.

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—OR—

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The fourteenth thousand just out. 10th thousand sold in just four months. More than 50 pages and more than 40 costly illustrations were added to the 8th edition. It has been thoroughly revised and contains the very latest in respect to Bee-Keeping.

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A. J. COOK, Author & Publisher,

State Agricultural College, Lansing Mich

250 ENVELOPES

—AND—

250 NOTE HEADS

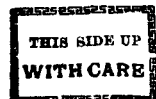
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BEE TON ONT.

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 " 100, 25, by mail, 27
 " 1000, 1.50 by mail, 1.60

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Clarke's Bird's Eye View of Bee-keeping

68 pages, bound in cloth; profusely illustrated; price 25 cents.

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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.

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Our Cartons for enclosing Section Honey are the best and lowest priced in the market. Made in one piece. With or without tape handles, with Mica fronts or without. In the flat or set up. Printed or not, any way to suit. We are bound to satisfy you. We have just put in special machinery for their manufacture and are prepared to fill orders promptly. Price list **Free**. Samples 5c.

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

	500	1000	5000
Advance Printed.....	\$4 50	\$ 7 75	\$32 50
Same with Mica Front.....	5 50	9 25	40 00
Same with Tape Handle.....	5 25	9 00	38 75
Same with M F and T H.....	6 50	10 50	46 25

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

A. O. CRAWFORD, S. Weymouth, Mass.

OUR 60 LB. TINS.

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

Each.....	\$ 0 50
Per 10.....	4 80
Per 25.....	11 25
Per 100.....	4 00

"Charcoal" tin used in these. As a rule "coke" tin is used.

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