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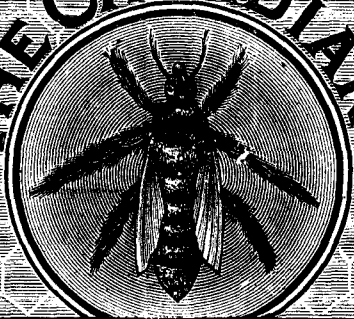
VOL. III, NO. 41

1887

JANUARY 4 '88.

PUBLISHED EXCLUSIVELY IN THE INTERESTS OF THE HONEY PRODUCER

THE CANADIAN



JOURNAL

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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. If any 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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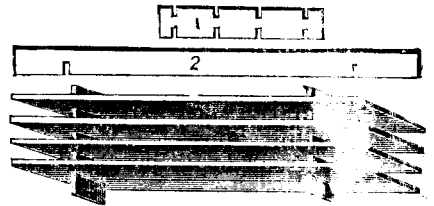
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IMPROVED CANADIAN FEEDER.

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 25, \$8.75. All orders can be filled by return freight or express.

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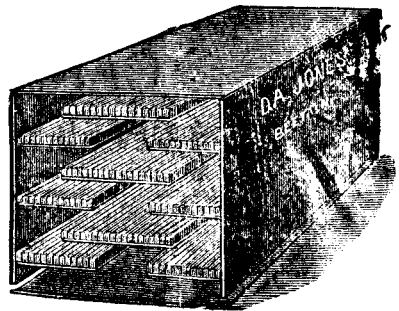
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In exchange for supplies at our Catalogue prices. The honey is to be delivered at our own station, charges paid, but where it is sent to us in our own style of sixty pound tins we will allow 30 cents each for them or we will return them to the shipper 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.

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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 Heddons'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

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

VOL. III. No. 41

BEETON, ONT JAN. 4, 1887.

WHOLE No. 15

EDITORIAL

WE must apologise to our readers for the figures 1887 appearing on the cover of this issue of the JOURNAL. We have sent our wood engraving to Toronto to have the necessary block made for the present year, but as yet it has not come to hand.

The Secretary advises us that quite a large number are applying for railroad certificates and this he takes as an evidence of a large attendance at the Convention which will be held on the 10th and 11th insts. One or both of the editors of the C.B.J. hope to be present. We believe the names which were mentioned at the meeting of the committee on program have all signified a willingness to furnish papers, though we have not been notified to that effect officially. We do not, of course, understand why.

We have had many letters from our friends, all expressing pleasure in the reading of the interesting articles on English hives which we have been receiving from "Amateur Expert." His next talk will be on sections, section crates, etc.

DO BEES SELECT A HOME BEFORE SWARMING.

IN our younger days when living at home father kept a large number of colonies in box hives and in the old-fashioned way. About a mile from the

homestead we had another farm which we worked, and between this and the home farm the land was owned by another party. On the last piece of property was a small bush which we had to pass and repass every time we went between the farms. In a field next to this wood were a number of splendid pine trees which had been left standing. While passing one day father called our attention to the fact that a number of bees were going out and in a knot-hole in the side of one of the dry pines about forty feet from the ground. We watched them for some time and, after several days, in passing we noticed that they still continued going in and out of the hole in the tree, usually at mid-day. They could be observed carrying out little pieces of rotten wood and we concluded that the swarm had entered their future home. We could not see any signs toward evening of the work which they were carrying on, but father remarked that it must be a colony preparing a tree in which to locate when they swarmed and suggested that we should watch the bees which we had at home a little more closely. The Sunday following a large swarm issued from one of the hives and clustered on an apple tree. A hive was at once prepared and we were in the act of shaking them down in front of it when the whole swarm suddenly took wing and absconded. As was customary in those days the necessary racket was made on tin pans, kettles, etc., and dirt and water was

thrown after them but all to no purpose. They made a bee-line for the tree in which we had noticed the preparations going on a day or two before. They flew straight to the knot-hole and in a shorter space of time than it takes a swarm to cluster on a limb they had all entered. We wanted to satisfy ourselves on the point we have mentioned and so we decided to cut the tree down in the fall. As soon as the honey harvest was over we went one evening taking the owner of the farm along with us that he might get his share of the honey on account of the tree being on his property and we felled the tree. In doing this we cut it so that in falling the combs would lie flat. Some of our readers may wonder how we could tell without climbing the tree and peering into the hole while others of our readers will understand at once that the bees naturally build their combs parallel with the entrance. In cutting the tree down we, therefore, cut at the sides. When we got into the combs we found that they were in a very nice condition, very little broken and all new. Those containing honey were equal to almost anything we have ever seen in the way of section honey. The brood combs were slightly colored where the brood had been hatched, just about as much as brood combs generally are after one season's use. This instance inclined us to the opinion that bees do sometimes select a locality before leaving the hive as a swarm.

At other times we have found them hunting a suitable place for their future home after they had swarmed and while they were clustered on some bush, limb, fence or other convenient place. Again we have had them abscond after they had been hived from twenty-four to forty-eight hours and after having built considerable comb. Why did they leave the hive? If their new home was satisfactory and there was no bad odor therein we do not understand why they should leave the hive and take to a tree in the woods unless it were because there was too much room given them and they despaired of being able to fill it up with comb. If the hive be not shaded it becomes too warm and there would also be danger of their leaving even though all the other conditions were favorable. When the bees left the hive and clustered outside they seemed

to send out scouts in search of a better home. North of our home apiary is a flat, moist valley on which the trees are mostly large, but they are seldom hollow, and a large number of swarms have been found to be clustered on logs, fences and limbs here, but very few have been found in the trees. To the south and west of us there are plenty of hollow trees and we seldom find clusters in that vicinity. Our experience, therefore, is that where hollow trees are to be found suitable for the purpose to which the bees put them to that the swarms seldom are found clustered in the open air after they have had sufficient time to search out and select a home.

FOR THE CANADIAN BEE JOURNAL.

CARNIOLANS.

WHY CROSSES ARE PREFERABLE TO THE PURE RACES.

IN your reply to the letter of Mr. H. E. Christie sometime since you make the statement that you prefer crosses to Carniolans. I should like to know very much your opinion as to the best races of bees with the reasons therefor.

ILA MICHNER.

Lowbanks, Ont.

In reply to the above we are probably at fault in not more fully explaining our views from time to time as they change with respect to things in the apicultural world. Changes are brought about by practical experience, and though we do not forget what we have said in former times yet we seem to take it for granted that our readers understand that we do not change like a weather vane without reasons. We shall endeavor hereafter to explain the why and the wherefore of any changes which we may take in our views on these subjects. With reference to Carniolans we may say that we liked them very much at the start. They were good comb builders, were exceedingly gentle and seemed to gather as large a crop of honey, and for a time they seemed to be "just the bee." From extra good colonies we had a large number of queens and we felt positive that we were going to secure something in the way of bees better than we had ever had, taking all the points which we have mentioned above into consideration, and we found that the queens from this colony which were mated with Ital-

ian and Syrian drones gave much better results than those mated with pure Carniolan drones. We found too that the Syrians were much improved by their cross with the Carniolans. The progeny from this strain seemed to seal their honey nicer and when finished had a whiter appearance than combs sealed by pure Syrians and the fact of having a part Carniolan made them gentle and more easily handled, while their honey gathering qualities were not injured but rather improved. We experimented considerably with pure Carniolans and with the different crosses; we found invariably that the crosses proved to be the better bee. We found that while the Carniolans worked with considerable vim and stored lots of honey when it was coming in rapidly, in a poor season when the yield was short they seemed to feel less inclined to work and they would gradually slacken off. We did not observe this slackening to anything like the same extent with the Carniolans which were crossed with Italians or Syrians. The pure strains seemed to lose their energies. We consider a cross between Carniolans and Syrians better than a cross between the latter and Italians. With the last mentioned cross there does not seem to be sufficient of the stinging propensities removed, but when they are crossed with the Carniolans they are about as gentle as the Italians. We found that first crosses were more valuable than second, but by careful selection the latter gave excellent results. We feel satisfied that for all purposes we can get better results from careful selection and breeding of crosses than from any of the pure races that we have yet handled. We say this with more experience to back up the statement than perhaps any other bee-keeper has ever had with pure races. We believe that better results will be obtained by a more frequent exchange of queens amongst beekeepers at a distance infusing new blood into the apiaries. With bees as with other stock we are satisfied that in and breeding destroys the energy and vitality. We have found the plan of breeding queens in our own apiary and introducing them into colonies at our out apiaries. Our readers will understand that in taking up the different crosses we are perhaps talking against

our own interests financially as we have perhaps done a larger business in pure races than any other queen raiser in the country, but we prefer to recommend what we think will be found the best in the interests of the bee-keepers who desire to make money out of the business. That splendid results may be obtained from pure colonies is past question. This may be obtained from any race but the season and the strength of the colony has a great deal to do with it. Our recommendation is based on a general experience taking good seasons with poor ones and *vice versa*.

American Apiculturist.

IN-BREEDING.

THIS article which we copy from the *American Apiculturist* is a timely one and comes in very well in connection with our reply to Mr. Michner, which had been in type before the *Apiculturist* came to hand. Dr. Tinker is known to be a careful observer, and his success in the bee business in the past warrants us in saying that a good deal of confidence can be placed in his opinions, wherever he expresses them.

From the answers given to query No. 38 in the November issue of the *Apiculturist*, by a number of our ablest writers, it would seem that I stand almost alone in my views on this subject. However, it is evident that we have much to learn yet; that, as Mr. Alley so well states, it is "a question that upsets all hands." That its proper solution will have a vast influence in developing the best bees of the future I am fully persuaded, and everything bearing on this topic should be of interest.

In developing a new strain of bees I have for the past five years devoted special attention to the effects of in-breeding and have studied the matter in all its bearings. I have had many queens mated to brother drones of which I have been certain; so also I have had queen daughters mated to the parental drones (which latter is the worst possible cross) and in all cases have carefully noted results, and particularly the subsequent crosses in this line. Hence, I shall give my views with some degrees of confidence in my conclusions.

In the first place it is plain that the objects sought in breeding a superior bee are not of the same nature as those sought in improving cattle and horses and other farm stock. It is true we may develop larger bees with slight modifica-

tions in form and color; but after all the real objects sought are prolificness of queens, vital endurance and energetic working quality of the workers. The subject of prolificness, I believe, has not been so great a consideration in developing other farm stock, neither have vital endurance and activity been studied except in breeding the race horse. Here every point of advantage has been well studied. Still they are not applicable to the honey bee. We shall hardly be able to study muscular development in the honey bee in connection with form to any great extent as has been done with the race horse. We shall have to base all conclusions largely upon the comparative results noted in colonies and breed accordingly.

It has been said that so far as results are concerned, the bees of the present day are no better than those of a thousand years ago. This fact, if it be truly a fact, is rather discouraging, yet every other creature that man has made an effort to improve he has improved, and there is no question but that substantial improvement may be made in the honey bee. It is safe to assume that the reason we have failed is because we have had no control over the mating of queens and drones. It has not only been haphazard mating, but every form of in-breeding has gone on uninterrupted. The wonder is that the bee of the present time has not degenerated from the good old stock of a thousand years ago. Now I shall assert that what is true of the human race and of the higher animals is also true as applied to the honey bee. In-and-in breeding is productive of evil in the animal and vegetable kingdoms throughout and there are no exceptions to the general rules anywhere. A single cross of near relatives is productive of little mischief; it is the repeated crosses of near relatives that cause evil. In early times we have many recorded instances of the union of near relatives in marriage. Moses was a son of a brother and sister, but by him came the law doing away with the intermarrying of near relatives. Thus, the evils of the practice were early perceived and they were abated for the benefit of the race. Barrenness was one of the notable results.

In the vegetable kingdom, the universality of the law against the uniting of near relatives is made manifest in non-productiveness, and it has long been one of the most potent arguments of bee-keepers in the interest of the honey bee that it was one of the chief agents in effecting the cross-fertilisation of flowers, thus aiding directly in promoting the productiveness of all kinds of fruit trees. I shall make the point that everywhere in nature the highest order of fertility is

where cross-fertilisation is possible. In other words, hermaphrodite generation is opposed to great productiveness wherever found. The uniting of brother and sister is a form of hermaphrodite generation and the disposition as we have seen is toward barrenness.

My experience with queens mated to nearly related drones is that the prolificness is impaired, and continued in-breeding results in queens that are wholly worthless to the practical bee-keeper. On the contrary, every radical cross and every queen mated to an unrelated drone has been normally prolific and many of them remarkably so. In addition to this fact the working quality is perceptibly augmented. It has also appeared that the workers were longer lived, showing greater vitality. I think we shall find that the impairment of vitality from too close breeding will be manifest, not in sickly bees, but in comparatively short-lived bees. The farther we pursue this line of investigation, the more we shall find to convince us that the greatest success in our efforts to improve the honey-bee both as to the prolificness of queens and the vigor and working qualities of the workers will be where we make crosses of the best unrelated queens and drones. If, in addition to this, we make individual selection we shall be certain of success and the "coming bee" will soon be in the range of possibility.

A plan to this end has already been inaugurated by D. A. Jones, G. M. Doolittle, Abbott L. Swinson and myself in sending out virgin queens to be mated in distant apiaries. Surely, there will be no mistake in getting queens mated to unrelated drones by this method. Very satisfactory results the past season have already been noted by Mr. Doolittle from this practice.

From this time on, I think we shall see a great traffic in virgin queens, because queen breeders are loth to part with their best queen, and if daughters are mated in the home apiary it is not certain that they will meet unrelated drones. By the new methods of queen-rearing we can rear from one queen almost any number of daughters and I would much rather have a fine virgin queen from a queen-breeder's best stock than a fertile queen to improve my own stock.

The idea advanced by Mr. Demaree "that the drone is a son of his mother only and cannot be a full brother to a queen" will be found to be a great mistake as applied to fecundated queens. A drone can be "a son of his mother only," when she happens to be a virgin layer. To this extent only is Mr. D.'s statement true. I prefer to accept the views of Mr. Cheshire to those of Dr. Dzierzon in this matter. That there is an interchange of elements or properties of the sperm-

atic fluid in the spermatheca of a laying queen affecting materially her drone progeny I have long held. And of this fact the more I see of the drones of cross-bred queens the more I am confirmed in this view. Prepotency, however, is extended from the male over the female offspring and from the female over the male offspring and this is a general law in heredity, but subject to many exceptions from unknown modifying agencies. Yet this proves nothing for the Dzierzon theory and I deny its truth except in so far as it relates to virgin queens. Even if the theory be true we should have a form of in-and-in breeding in all apiaries where the drones are unrestricted by perforated zinc that should be averted if we would secure the highest results in the breeding of superior bees.

DR. G. L. TINKER.

New Philadelphia, Ohio.

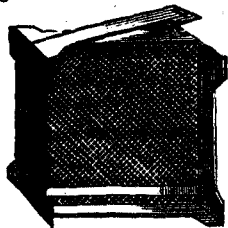
From our English Correspondent.

MEL SAPIT OMNIA.

THE C.B.J. for Nov. 23rd came to hand yesterday. I purpose offering you a few criticisms on the report of Mr. Cowan's tour in North America. I had the happiness of being present at the conversazione and hearing his "impressions" from his own lips. The report needs no defence or apology from me; it is very much condensed I need scarce say, and Mr. Cowan enlarged on many points that are only enumerated in the report, which was printed for English bee-keepers not for Canadian and American friends. Do I make myself plain? What is printed was considered to be of most interest to British bee-keepers, the social aspect of his visit was made to give place to the bee-keeping aspects. For your sakes I regret this, and as I read it again in the C.B.J. my regret is deepened. You may be pardoned if you think Mr. Cowan considers your ladies not so cleanly nor in many ways on a par with English ladies. On the contrary, Mr. Cowan gave us to understand quite the opposite. He said your ladies by mere force of circumstances incidental to your social habits, were far superior to ours for bee-keepers, as they were capable of doing many things ours were not; and moreover, he said if any of us intended to emigrate we had better wait and choose a wife over on your side, than take an English wife before we start! Hard on our ladies that! and a rude shock to our plans if some of us married folks thought of emigrating, unless we run away from our wives.

I can also imagine Mr. Alpaugh reading the last paragraph on page 716 with some amount of perplexity. The fact was, someone (I forget the name) had slit a section and fixed a whole sheet

of foundation in it similar to a section that was illustrated on page 7 of the C.B.J., present volume, thinking it a new thing, and that was pass-



ed around at the same time as Mr. Cowan was showing how to work Mr. Alpaugh's machine and so the short hand writer confused the two. Mr. Alpaugh's machine did its work well, only we use all one piece V grooved sections on this side; our thanks are due to Mr. Corneil for sending us the machine.

There are a few other minor discrepancies; I will only name one. You will note what "Mr. Sambels" is reported to have said on page 717; what he did say was more like this: "Miss Gayton had just left the room, we all knew her as one of the most successful bee-keepers in this country; he wished the Chairman could induce her to give her experiences in the B.B.J. for the benefit of American and British lady bee-keepers. The present season seems universally far below the average for honey yield, but it was very remarkable that Miss Gayton had succeeded in taking a far larger bulk from one hive this season than she had ever done before, which was also far larger than any of the American yields to which the Chairman had referred." The scissors are useful articles especially when some of us get hot headed or like "A. E." mixes "formic acid" with his ink, but they do not always improve the sense.

I want to "hark back" to the ladies again. A few days since I hunted out my volume of "Lubbock on ants, bees and wasps" thinking I would give it to the O.B.K.A. library, so sitting by the fire I took to reading it again preparatory to bidding it a last farewell, and this is what I read. (Will Canadian ladies please note.) After describing the method adopted by one species of ants to capture and make slaves of another species, Sir J. Lubbock thus moralizes:

Polyergus Rufescens present a striking lesson of the degrading tendency of slavery, for these ants have become entirely dependent on their slaves. Even their bodily structure has undergone a change; the mandibles have lost their teeth, and have become mere nippers, deadly weapons indeed, but useless except in war. They have lost the greater part of their instincts; their art, that is, the power of building; their domestic habits, for they show no care for their own young, all this being done by the slaves; their industry—they take no part in providing the daily supplies; if the colony changes the situation of its nest, the masters are all carried by the slaves, on their backs, to the new one; nay, they have even lost the habit of feeding. Huber placed thirty of them with some larvae

and pupæ and a supply of honey in a box. 'At first,' Huber says, they appeared to pay some little attention to the larvæ; they carried them here and there, but presently replaced them. More than one-half of the Amazons died of hunger in less than two days. They had not even traced out a dwelling, and the few ants still in existence were languid and without strength. I commiserated their condition, and gave them one of their black companions. This individual, unassisted, established order, formed a chamber in the earth, gathered together the larvæ, extracted several young ants that were ready to quit the condition of pupæ, and preserved the life of the remaining Amazons.

"However small the prison, however large the quantity of food, these stupid creatures will starve in the midst of plenty rather than feed themselves."

"I do not doubt that, as Huber tells us, specimens of *Polyergus* if kept by themselves in a box would soon die of starvation, even if supplied with food. I have, however, kept isolated specimens for three months by giving them a slave for an hour or two a day to clean and feed them; under these circumstances they remain in perfect health, while, but for the slaves, they would have perished in two or three days.

"In *P. rufescens*, the so-called workers, though thus helpless and idle, are numerous, and in some respects even brilliant."

(What do the ladies say to that, substitute "servants for "slaves" and a higher order of animals for "ants" and what do you make of it.)

But I have not quite done with Sir John's Look yet; in his introduction he says:

"The Anthropoid apes no doubt approach nearer to man in bodily structure than do any other animals; but when we consider the habits of ants, their social organization, their large communities and elaborate habitations, their roadways, their possession of domestic animals, and even, in some cases, of slaves, it must be admitted that they have a fair claim to rank next to man in the scale of intelligence."

If the origin of civilization was "progressive desire," and its goal is to make us more dependent on "servants" on the one hand, but more "brilliant" and fit to "rule" on the other, let us pause in our mad rush for a "higher civilization" and ask ourselves, where will it land us? But I must forbear or my chivalry for "ladies who labor" will make me rank as a *social* heretic.

AMATEUR EXPERT.

England, 14th Dec., 1887.

For the Canadian Bee Journal.

A STRAY VIRGIN QUEEN.

AS you express a desire to hear from those in Canada who combine bee-keeping with other pursuits, I herewith give you mine.

I am a store-keeper and keep about 60 colonies of bees, and with the aid of my small boy, aged fourteen years I attend to my store and bees. The last season has been a very poor one in my locality, the season being dry. They gathered a little on clover but nothing on basswood. My average yield was about 35 lbs. extracted honey and a small amount of comb honey, and then the bees required some feeding back in the fall. I put my bees in the cellar on Nov. 5th in good condition. They seem to be wintering well, the thermometer standing at 45°. I have one ventilation pipe running from a back wood-shed, and one running from cellar to kitchen stove. I winter without much loss,

generally without any; I winter with covers off and cushions on, entrance opened. I keep my queen clipped; I keep mostly Italians; this past summer I had three colonies come off at one time; all lit on the same bush. I caged the queens and changed the hives and waited for the return of the bees about the usual time, but soon found they were all starting for the woods, but with the aid of water I succeeded in stopping them and they returned to the same bush. I cut the limb and brought it in to the yard, wet them up nicely, shook them on the ground in front of an empty hive and I secured a virgin queen as they were running in, that had got with them. She was making all the mischief with them. The bees then all returned to their several homes. I then uncaged the queens, and all was quiet, three colonies of bees and one estrayed queen to spare. I give this to show that bee-keepers are not always sure of their bees when their queens are clipped, but I think it best to have all laying queens clipped if possible. I do really believe that bees do supercede their queens oftener when clipped, but so much the better. We want young queens; especially those that are not good we should get rid of as soon as possible. I make a business of always keeping lots of young queens on hand during the summer so in case I find poor queens I change them and always raised them from a very strong colony of bees. They are always better and live longer.

JAMES LEFLEUR.

Thanks for your report. We are satisfied that queens are better when raised from very strong colonies under the most favorable circumstances. Bees sometimes supercede queens with clipped wings sooner, perhaps, than if they were not clipped, but we have had clipped queens live to be very old. Are you satisfied where the young queen came from? It is not an uncommon thing when a swarm is issuing and virgin queens are out in the air for them to alight with the swarm.

From The British Bee Journal.

Bees in Natal--Their Companions and Parasites.

I AM posting to you to-day some specimens of an insect which is common in hives here, and of which I cannot ascertain the name, or whether it is hurtful to the bees. These insects are certainly more numerous in weak stocks than strong ones; bees seem to pay no attention to them, whether running on combs or frames, or holding on to a hind leg by their disproportionately long nippers. If bees are thrown from a frame on to the ground in any

quantity, one or two of these insects will be seen hurrying to catch hold of the bees' hind-legs to be lifted into the hive again. They also are to be seen on swarms when knit on bushes, etc. So far as I can observe they do not penetrate deeply into the hive usually, but prefer being at the top, especially hiding under cover of the frames, between the cover and the frames the cocoon is most frequently to be found. The cocoon is white, circular, and a little more than one-eighth of an inch across, nearly flat at the top, and when the insect within is nearly perfect it can be dimly seen through the covering.

Another insect I have seen on bees here is apparently a kind of tick, but I have no glass strong enough to let me see them well. They are grey in color, about the size of a small pin's head, roundish and look well filled out. They soon dry up when removed from the bees.

Lately in a friend's hive I saw the largest 'death's head' moth I ever saw; it was a little way down the third frame from the end, and was entirely covered with bees, except just its head and shoulders and top of the back between the insertion of the wings. Both bees and moth were very quiet. This upsets what I have always believed that bees avoid these moths in terror. When I stuck a penknife into the moth's back to remove it the loudness of its shrieks (I notice other moths shriek here) quite astonished me, but the bees took very little notice, and apparently only got off its wings because they felt it was being moved off the comb.

Bees are said not to like bad smells, but I saw a huge swarm of bees which had taken possession of an unsavory rabbit hutch, much to the distress of the children who owned the rabbit. They were afraid to remove him for a long time and watched him through the bars. From the time the bees began to enter till they were perfectly quiet and knitted into a mass the rabbit lay as still as if dead with his ears tight to his back.

I send two or three of these insects which been in spirits of wine, and two or three which have been in cotton wool since I took them. I hope they will arrive safely.

If I can I will put in a specimen or two of our bees, though I believe you have seen them. They are not so pretty as Ligurians though much like them. Amongst them are a few smaller bees, and without the band. These are much blacker than the ordinary ones. I do not see why this difference exists, but it is noticed by several bee-keepers.—J. R. WARD, St. Mary's Parsonage, Richmond, Natal, Nov. 15, 1887.

The insects sent are Chelifers (claw bearers).

Chelifers constitute a group of animals allied to the spiders and mites. From their resemblance to scorpions without tails they are called Pseudo-scorpions, or false scorpions. Their palpi are elongated and armed with pincers. The species live under the loose bark of trees, in chinks of old furniture, etc. They are also to be found under the elytra of beetles, but their object in occupying this position is unknown. There is, however, little known respecting them and any observations regarding their habits would be most useful. Kirby makes mention of the peculiar mode of progression of the book-crab (*Chelifer Cancroides*). All must admire the peculiar instinct in the insects making the special use of their pincers, and thus getting into the hives. It appears to us that they enter hives for much the same purpose as earwigs in this country, which are not desirable companions to bees, but which do little harm—especially to strong stocks. 2. From the description we would say that the parasite on the bees is the *Braula cæca*, or some species of mite. 3. The Death's Head moth (*Acherontia atropos*) is remarkable also in this country for the shrieking or squeaking sound which it emits. This sound, together with its dark color and its skull like mark on its thorax, has led to its being regarded with superstitious dislike. How the noise it emits is produced is not satisfactorily known, for the authorities differ very widely as to its cause. Schroeter says that it utters the cry when it rubs its tongue against its head; Rosel, that it is produced by the friction of the thorax and abdomen; while Reaumur believes the cry comes from the mouth, or rather from the tongue, and that it is produced by the friction of the palpi against that organ. Huber denies this, as also does Passerini, who say that the sound is due to the alternative inspiration and expiration of air from the central canal of the proboscis into a peculiar cavity of the head destined for giving it the required resonance. But a number of French savans who instituted a series of experiments to ascertain the actual cause of the noise, came to the conclusion that it was not attributable to any of those above given but that it remains to be discovered.

From the British Bee Journal.

OUR WAX IMPORTS AND EXPORTS.

IN our last issue we presented our readers with the statistics of the imports and exports of honeys, as given in the Annual Statement of the trade of the United Kingdom for the year 1887. We now proceed to extract from the same publication the amount and value of wax for the same year. The following tabular ac-

count specifies the countries from which wax is imported and the amount and value of the same.

	cwts.	£.
From Germany.....	5,937	14,527
" France.....	919	4,831
" Portugal.....	1,270	6,872
" Italy.....	404	2,324
" Morocco.....	2,163	10,699
" Japan.....	3,576	10,299
" United States of America	6,074	27,107
" Chili.....	505	3,543
" Brazil.....	2,375	6,616
" Other Foreign Countries..	987	4,186
Total from Foreign countries..	24,210	90,734
From West African settlements..	568	3,423
" British Pos. in S. Africa..	912	4,750
" Mauritius.....	1,836	8,663
" British East Indies.....	945	5,719
" Australasia.....	678	3,851
" British West Indies.....	1,160	7,106
" Other British possessions	517	2,131
Total from British possesssons	6,616	35,643
Total.....	30,826	126,377

There is considerable difficulty in affirming the quality of wax brought to this country. It requires great experience in detecting adulterated waxes; even among analysts there are fine gradations and nice distinctions between absolutely pure and commercially pure wax. Then there are many kinds of wax, vegetable mineral and insect, but we may generally deduce the quality of the wax from the value given. The mean of the value imported is £4 2s. per cwt. The wax from Chili fetches the highest price, £7 per cwt., while that from Germany is only about £2 8s.

The following amounts are re-exported:—

To Russia.....	2,224	8,665
" Germany.....	2,577	8,337
" Holland.....	994	4,964
" France.....	1,840	7,950
" Other Foreign Countries....	2,845	9,283
Total to Foreign Countries.....	10,480	39,199
To British possessions.....	238	532
Total.....	10,718	39,731

This will leave for home consumption 20,108 cwts.; value £86,646.

The total quantities of wax, with their values for the years 1884, 1885 and 1886 are.—

1884.	1885.	1886.
10,378 cwts.	10,328 cwts.	10,718 cwts.
£36,467	£36,706	£39,731

The amount re-exported for the same years, and the value thereof, are:—

1884	1885	1886
28,258 cwts.	38,295 cwts.	30,826 cwts.
£105,813	£149,253	£126,377

There appears from the above to be a wide field for the production of wax. This article enters into the manufacture of numerous articles; at the Zurich exhibition there were shown twenty-two different articles in which wax was a constituent. There would therefore appear to be abundance of scope for energetic and enterprising private bee-keepers and honey companies to endeavor to overtake the importations of wax into this country.

For the Canadian Bee Journal

THE HAPPY COLONY OF BEES.

BY THOS. STOKES.

"We all know, in some way; obscure to me,
Fate has changed our lot. Yesterday we felt
A jarring. As of some fiend planning our
destruction.

Enclosed we were, securely confined,
Exit impossible, with our weak bodies,
Strong, though, compared in size to others
But weak against the ingenuity of man.
However we are here placed. Another master
To oversee us no doubt, and with him
I move we be content; that in the morning
Our daily labors we resume, unmindful
Of our new destination; and with new zeal
Endeavor, our lost time to redeem,
Recuperate our depopulated numbers
By feeding our most gracious Queen.
Incite in her new energy, for the stock's
prosperity.

She ended, and with a feeling of reverence
Sat down, calmed herself and awaited
The uprising of another. Without ado
Julia arose amidst a hum or praise,
And with contentment written on her brow
Without any exordium thus began:
"Sisters, I with pleasure second Sister Letty—
Her movement is without doubt the most
sensible.

The most scrupulous of all arguments
For what will we gain by idling away our time.
Time misspent will never return. And
Age coming on many of us. Perceive
Then the necessity of immediate resolution.
We have lived and helped on the stock's
prosperity

Through winter's cold icy reign. And now
Are we removed to a new home. Yet nature
Has here richly lavished upon the land
In great profusion, her choicest flowers
Replete with nectar. Which yesterday I
visited

And in short time my sac was filled.
Homeward I flew 'twas but a short distance.
What profit if we parley more, loss 'twill be
Therefore say I, Go at work to-morrow

And energy and zeal will be rewarded.
 Having said my say I'll now retire."
 After which Mr. Chairman reviewed it o'er.
 "My friends you have heard the able addresses
 Of our compeers and, I verily believe
 Concur in all their statements. As
 For myself I am happy to state, that
 In conjunction with them I appreciate
 Very much their lengthy discourses.
 Therefore very heartily commend it to your
 voice

But before I put it to vote, I will give
 To any, a chance of her opinion."
 "Youthful and inexperienced sisters
 You will invariably find it best
 To yield to the government of the older ones
 Experienced bees are the better to govern,
 United in heart has been our colony
 And I am proud to say no other
 Has so well rewarded their owner
 Than we the last year did. To give
 Is more blessed than to receive.
 Ourselves are more satisfied when honey
 Abundantly flows, also more cheerful
 I am old and will soon have to leave you
 Others as good I perceive are growing up
 Which I hope will take my place
 When I expire. And carry on the good work
 The prosperity of the colony is sure
 Strength and unity is the only safeguard
 Wherewith to dispel an enemy. But
 Beware! and not cause anger unnecessarily
 On the part of our keeper. Power has he
 To save us, or cast us into oblivion
 By means of sulphurous combustion."
 With feeble voice she ceased. Then a
 Tumult of applause burst forth from all.
 Good Queen with majesty profound responds
 "Most faithful of faithful subjects,
 I am o'erpowered by thankfulness to you,
 And therewith a few remarks I offer
 As long as I have been your royal sovereign,
 Never have I found one un dutiful subject
 But work was your unceasing cry.
 Yet work will not, in every case,
 Produce good results without judicious govern-
 ment.
 Faithfulness to your Queen, is avowed by all
 To be the best resource of prosperity and con-
 tentment.
 I therefore would commend to you as subjects
 A just and prudent submission to our laws.
 Love your colony and honor your queen."
 Having so ended she awaited a reply
 At once Mr. Chairman replied in their behalf
 "Most gracious queen. We adore thee,
 And as our progenitor we acknowledge thee,
 To you, in some measure our success attribute,
 And are confident that you will henceforth
 Continue so to be. With these remarks
 I put to vote the question now before the house."
 Immediately both antennæ of each bee raised
 Carried unanimously by the whole assembly
 Shouted the chairman which was repeated
 And all sat up and sang a sweet song,
 Even Mother Queen joined in the chorus
 Never was a happier colony than they.

O. B. K. A. CONVENTION.

SEE by yesterday's issue, that there does
 not seem to be much interest taken in the
 O. B. K. A. Convention. I am sorry for
 that, but let us all get there and make it as in-
 teresting as possible. I shall go to have a good
 social time more than anything else. Bid home
 good-bye for two days. Try to get your mind
 off business. It is going to be very difficult for
 me to get away but you will find me, God will-
 ing, at Woodstock, one o'clock on Tuesday, Jan-
 10th. I shall not be able to be away more than
 two days. Let all those who are coming com-
 mence at once to write down in their mamor-
 anda questions that they wish to have discussed.
 I know that this has not been a very good season
 with many, but HOPE moves us all.

I have just read Wm. McEvoy's letter on
 Honey. I endorse every word of it. I have
 never yet had to go begging customers to sell
 my honey. It generally sells itself.

WILL ELLIS.

St. David's, Dec. 29, 1887.

SUNDRY SELECTIONS.

A. W. OSBORN.—I am about to leave Cuba
 and return to California. It would be better not
 to send the C.B.J. to me any longer than the 1st
 of January. There is little satisfaction in taking
 a bee journal or any newspapers here as they
 seldom reach me. I have sent you three articles
 for publication and as yet have never seen them
 in print. Of course, I cannot tell whether they
 have reached you or not—probably not. The
 C.B.J. is one of the *best* journals devoted to mod-
 ern apiculture and I am glad to see it as I think
 you richly deserve all the popularity you enjoy.
 Our bees are doing well now and when I get to
 California I will send you our Cuban winter re-
 port. I will then feel quite sure of its reaching
 you.

Havana, Cuba, W.I., Dec. 21st, 1887.

We must thank Mr. Osborn for the
 kind words which he has spoken and
 we are sorry that we cannot feel that
 we deserve them. We endeavor to
 make the JOURNAL as readable as possi-
 ble, but many times we are so crowded
 with other work that it is impossible to
 do it justice. We know that all the ar-
 ticles that we received from Mr. Osborn
 appeared in the JOURNAL. We shall be
 glad to have further items of interest
 from him from time to time as there
 may be occasion.

J. BRETHOUR.—I have been a reader of the
 C.B.J. for some time and I look for it as regu-
 larly as the week comes. I am very fond of bees
 though as yet I am only a beginner and I have
 not had very good luck thus far. Since I became
 a reader of the JOURNAL I have concluded there
 is a great deal that I do not know about bees. I
 lost all that I had last winter but I am trying it
 once more with three colonies. I built a bee
 shanty and put one foot of fine straw around

them and have made a passage so that the bees can come out on fine days and fly before the snow blocks up the entrance. I should like to know if I should keep the entrance clear of snow or will there be sufficient ventilation through it. I want to save them if I can, and to do this I wish to leave nothing undone that I should do. I put them in early in October and had I not seen the notice in August in your valuable JOURNAL with reference to feeding bees I should never have dreamt of such a thing. I fed my colonies all through that month, a little every day. When I examined them in September, thinking they would have lots of stores I found that I would require to feed about just as much again, just as you stated in the JOURNAL.

Wroxeter, December, 28th, 1887.

We are glad to know that you put so much faith in the JOURNAL, and we will endeavor to see nothing in its columns nor allow anything to be said which will lead you astray. There are many who advocate leaving the snow just as it falls on and around the hive, but unless the entrance be crowded it is perhaps better to do that than to leave the entrance so that the cold blasts of winter may reach the bees and chill them.

DAVID GASCHO.—I wish you would be kind enough to give me a little more instruction about feeding bees in winter as I am a beginner. Supposing that I feed the bees as described in the C.B.J., for December 7th, page 759, will they not be disturbed too much and get some of the food into their second stomachs by carrying it down and then besmearing the hive, or will they go up into the feeder and eat the food from time to time as they require it? Are the quantities you mention in that article the amount that is required to fill one feeder? and would the one feeder filled and placed over the colony and left there all winter be sufficient to keep the bees alive? I have three colonies which I expect will require feed, though I think they have sufficient honey to keep them perhaps half the winter.

Musselburg, December 22nd, 1887.

If the food is properly made and boiled long enough it will not run down and smear things in the hive as you say. If you use pulverized sugar you could mix that and the honey in the proportions of about three pounds of sugar to one of honey, stirred to a thick dough. Place the mixture into the water until they are thoroughly incorporated and if you find that it is not sufficiently thick to prevent running add enough sugar to make it so. If you use granulated instead of pulverised you had better boil the mixture placing the vessel containing it in a pot or pan filled with water. Continue the boiling until the ingredients are thoroughly mixed. In this

case as in the former if the mixture be too thin keep adding sufficient sugar until it be of the proper consistency. It must not be boiled too much else it would become so hard that the bees cannot use it. It will not be necessary for you to place the feeder on the hive until the stores, which the bees now have are consumed or nearly so. Remove the top from the frames immediately over the cluster and place the feeder in that position so that the bees can get the food as easily as possible then pack quilts or matting round the feeder so that no heat may escape. This, of course, requires to be done quickly so that the bees may not become chilled. It would perhaps be better to choose some warm day for the purpose. It is not necessary that the feeder should be filled. We cannot say just exactly what the amount would be of sugar and honey that would be required to fill the feeder but a total of about ten to twelve pounds should be sufficient for one time. Any of the food which may be left in the feeder in spring can be melted up into syrup and used for stimulative feeding or kept over till fall.

W. F. McNAIRN.—Enclosed I hand you my subscription to the C.B.J. for another year. Please excuse the delay in remitting as I have been absent from home. I have been to Remo, Nevada, on a trip. While there I called on a bee-keeper in the Truckee Valley by the name of Callawayhash, who had about 100 colonies nearly all in the California hive. He did not seem to be able to manage them very well as they were robbing and were very cross and ready to sting a man's eyes out. They had free access to the honey house and they were pretty well filled with honey which accounts for this. He said he averaged about ninety pounds per colony and the honey was mostly from alfalfa clover and it is as fine honey as I ever tasted or saw. The bees can fly there every week in the year. Honey in sections is sold at from 17 to 20 cents. Why can we not raise alfalfa here? Is it easily killed by frost? I have been deer hunting for a few days and have killed four fine ones. I would like to hear Mr. Jones' report.

Mill Roach.

No wonder they were cross if they were all robbing each other. Scarcity of honey has a tendency to make bees cross and then when they get to robbing in the apiary, even our gentlest become very cross. Usually when handling bees the visitor at once thinks that it is the colony which he is handling that does all the stinging, such, however is

not the case. In times of scarcity of honey we place the bee tent over the hive and work inside. While we have remained outside of the tent watching those within working we have been frequently stung with robber bees which were trying to get in. Again when hives are being robbed we have frequently placed the bee tent over the hive to prevent it and it would not take a person long to become satisfied which did the stinging. As soon as they found that they could not enter they would fly about frequently stinging any person near. We have sometimes wondered if bees could not be educated to be cross by allowing colonies to rob each other year after year and give them no special attention as they are managed by some of our bee-keepers in Cyprus, Palestine, Syria and other places in the east. May that not have a tendency to cause them to be crosser than they otherwise would be. Alfafa clover, we believe, can be grown in this country. Will some of our bee friends who have had large crops of honey from this clover give us all the information on this subject they can.

In reference to our deer hunting trip we may say that we were in a section of the country where the deer were very plentiful. We got nineteen, some of which were very fine. We brought five of them home and divided them around among our friends and they seemed to be appreciated. We have four pairs of horns, two of which are spike bucks and would be hard to beat. Next season, now that we know the country, the run ways, etc., we think a good party could secure fifty in the season without much trouble. An hour's ride from this hunting ground on the train would bring us into a section of the country where moose is also very plentiful.

Convention Notices.

The Eastern Townships Bee-Keepers' Association will hold a convention on Monday, Jan. 15th, 1888, in hall over printing office, Cowansville, at 10 a.m. All bee-keepers are requested to be present as there is important business to attend to.

Dunham, P. Q.

R. P. SMALL, Sec.

The Ohio State Bee-keepers' Association will hold their 5th annual convention in the United States Hotel, cor. High and Town sts., Columbus, Ohio, Jan. 10 and 11, 1888. An interesting program will be arranged. Reduced rates at the above hotel. FRANK A. EATON, Sec.

THE CANADIAN BEE JOURNAL

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

PUBLISHERS,

BEEON, ONTARIO, JANUARY 4, 1888

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.

CANADIAN LIVE-STOCK AND FARM JOURNAL.

We have just received the *Canadian Live Stock and Farm Journal* for January, and as usual it contains much valuable information for the general farmer. It is now in its fifth year of publication, and though started as a 20-page monthly it has gone on steadily increasing in matter and interest, as well as in size, until now it appears as a 32-page monthly. It claims to have no superior in any of its departments—viz: Stock Raising, The Veterinary, The Farm, The Dairy, The Poultry, The Apiary, Horticulture and The Home.

We do not hesitate to recommend it to our patrons as the leading farm paper of its class in Canada. The subscription price is \$1 per annum in advance. Farmers not subscribers are requested to call at our office and see it, or to send for sample copies to the publishers, at Hamilton, Ont. We can furnish it and our paper together for 1888 for \$1.60.

PARCELS TO THE UNITED STATES.

On the 1st day of February we shall have communication with our friends across the border by parcel post so that very many of the articles which we cannot send now will be admitted then. After that date it is likely that there will be no more trouble with queens going through the mails as they can be sent as parcels instead of at letter rates as now. We cannot just say what the limit of weight will be but we presume it will be about five pounds. This will be of considerable service to ourselves and we expect that our friends across the line will reap an equal advantage.

Beginning with the first number of the new year we have made a slight advance in our advertising rates which will be found on the second page of the cover each week. Our rates have heretofore been extremely low and were not such as our large circulation would warrant us in charging. We preferred, however, that our customers should first have an opportunity of obtaining whether it was a benefit to place their advertisements in the columns of the BEE JOURNAL. They have found this to be the case we believe and we feel satisfied that the small advance which we have made will not deter any from continuing their advertisement with us during the coming season. We may say that the yearly advertisers whose contracts do not expire until the end of volume 3 will be charged at the low rate until that date when the new price will come into force.

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.

BEE-KEEPERS' CIRCULARS.

During last season we printed quite a large number of catalogues and price lists for beekeepers, and we believe that in every instance the work as well as the price gave satisfaction. We have much better facilities now than we had at that time for turning out work, and we shall be happy to quote prices to any who may be requiring circulars. All we want is the privilege of estimating, and we will then leave the matter with the customer. We generally get up a sample circular (in blank form) showing the style and quality of paper which we quote price for, and we always allow the free use of any cuts or illustrations which have ever appeared in either the C.B.J. or our catalogue. Give us an idea of what you want and we will try and send a sample of it with prices. tf.

A SPECIAL OFFER.

We have a special offer to make to our present subscribers. It is one which we should advise all who want to take advantage of it to take the chance while it is offered. You all know how nice it is to have a nicely printed note head and envelope for your correspondence. It gives you a business standing, which blank paper and envelopes never can. Now, then, to all those who send in their renewals for the JOURNAL for another year we will forward by mail, post paid, 250 note heads and 250 envelopes—good paper and nice large envelopes—for 75c. That is \$1.75 will procure your renewal for another year and the paper and envelopes printed as advertised. If sent for by themselves the latter are worth \$1.00

HONEY MARKETS.

DETROIT HONEY MARKET.

Best White Comb Honey in one pound sections 17 to 19c. Extracted 9 and 10c. Beeswax 21 to 25c.

M. H. HUNT.

NEW YORK HONEY MARKET.

Our market for honey is opening up earlier than usual, and at higher prices. We quote as follows until further notice:—Fair White, one lb. sec's., 16 to 18c.; Fair White, two lb. sec's., 13 to 14c.; Fair to Good, 1 lb. sec's., 13 to 15c.; Fair to Good; two lb. sec's., 10 to 12c. White Clover extracted in kegs and bbls. 7 to 8c. Beeswax 21 to 22c.

McCAUL & HILDRETH BROS.

CINCINNATI HONEY MARKET.

There is a quiet but fair demand for honey of all kinds. Extracted honey brings 4 to 9c. a lb. on arrival; demand exceeds the arrivals. The demand for comb honey is rather tame. It brings 16 to 20c. per lb. for best in the jobbing way. Demand is good for beeswax which brings 20 to 22c. per pound for good to choice yellow on arrival.

CHAS. F. MUTH & SON.

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.

PRICES CURRENT

BEESWAX

Beeton, Jan. 4, 1888
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 1/4 x 4 1/4 and 4 1/4 x 4 1/4, per lb. 60c
Brood Foundation, starters, being wide enough for Frames but only three to ten inches deep... 45c

BEES

ITALIAN BEES and Queens, 3 frames nuclei, full colonies at the very lowest rates and safe delivery guaranteed. Send for catalogue to E. T. Flanagan, Belleville, Ill.

Patent Flat-Bottomed Comb Foundation!



High Side Walls, 4 to 14 square feet to the pound. Wholesale and Retail Circulars and samples free.

J. VAN DEUSEN & SONS,

(SOLE MANUFACTURERS),

41-3m SPROUT BROOK, Mont Co., N. Y.

10 Per Cent Discount

On sections until March 1st. Send for free price list of everything needed in the apary. Foundation wholesale and retail. Alsike clover seed cheap. Sample section on application.

M. H. HUNT,

Bell Branch, Mich.

Near Detroit.

THE BEE-KEEPERS'

REVIEW

About January 10th, 1888, we shall begin the publication of a 16 page monthly with the above title.

As indicated by its name, one of its distinctive features will be the REVIEWING of current apicultural literature. Errors and fallacious ideas will be faithfully but courteously pointed out, while nothing valuable will be allowed to pass unnoticed. But few articles will be copied entire, but the ideas will be extracted, given in the fewest words possible, and commented upon when thought advisable.

Another feature will be that of making each number to a certain extent what might be termed a SPECIAL number. For instance, a large share of the correspondence, extracts and editorials of the first number will be devoted to the subject of "Disturbing bees in Winter."

Our own apary will hereafter be largely experimental, and of this our readers will have the benefit.

The price of the REVIEW will be 50 cents per year; and while we have not the slightest objection to receiving subscriptions in advance, our only request is that each one interested will send his address and allow Uncle Sam to hand him a copy of the first issue as soon as it is printed.

THE PRODUCTION OF COMB HONEY.

A neat little book of 45 pages, price 25 cents. The REVIEW and this book for 65 cents. Stamps taken either U.S. or Canadian. Address

W. Z. HUTCHINSON,

Flint, Mich.

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 hives 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. & J. BARNES, 171 Ruby St., Rockford, Ill.**

BEE-KEEPERS' ADVANCE

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,

ROGERSVILLE, GENESEE, CO., MICH.

Published a neat little book of 45 pages, entitled

"THE PRODUCTION OF COMB HONEY."

The distinctive feature is the thorough manner in which details of the use and non-use of Foundation. Many other points are, however, touched upon. For instance 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 25 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	Aug st	Sept.
Bees, per $\frac{1}{2}$ pound	1.75	1.50	1.00	1.00	.90
" " pound	3.00	2.50	1.85	1.75	1.70
Frame of Brood	1.75	1.50	1.00	1.00	.90
2-frame nucleus..	4.00	3.50	3.00	2.75	2.50
3 " "	6.00	5.50	4.75	4.50	4.50

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

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

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

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

The above must go by express.

QUEENS.

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

FULL COLONIES.

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

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

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

PRINTING

PRINTING

Supply Men, Foundation Dealers,
and Bee-Keepers,

SEND FOR ESTIMATES FOR WHATEVER
YOU REQUIRE IN THE WAY OF

CATALOGUES,

PRICE LISTS,

CIRCULARS,

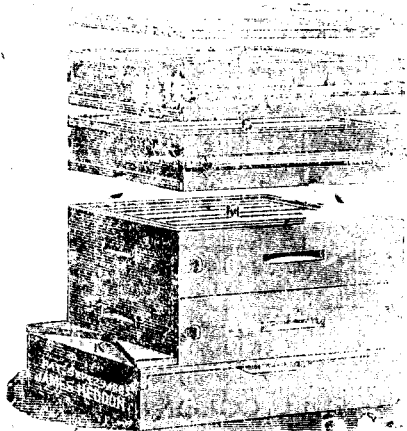
LABELS,

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 $4\frac{1}{2} \times 4\frac{1}{2}$ 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 00
Bottom-boards.....	15 11
Entrance blocks (two).....	03 00
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 60
Cover, half bee-space.....	15 12
Sections, full set of 28 in flat.....	15 15
Tin Separators, seven to each.....	10 10

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

DISCOUNTS IN QUANTITIES.

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

INDIVIDUAL RIGHTS.

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

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

Heddon's 1887 Circular.

NOW READY.

ALL ABOUT THE NEW HIVE.

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

Address,

JAMES HEDDON,
DOWAGIAC, MICH.

TOOLS For BEE-KEEPERS

HAMMERS.

We shall hereafter keep in stock a full line of tools suitable for bee-keepers. For ordinary use, where a person has only a few hives, etc., we 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—cheap 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.

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

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

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

D. A. JONES, Pres. F. H. MACPHERSON, Sec. Treas.

The D. A. Jones Company, Ltd.
BEETON, ONT.,

MANUFACTURERS OF AND DEALERS IN

APIARIAN * SUPPLIES.

Our Circular sent free on application.

PUBLISHERS

THE CANADIAN BEE JOURNAL
FINE BOOK & JOB PRINTERS.

Sample copies free on receipt of name and address. 11

DADANTS FOUNDATION

is attested by hundreds of the most practical and disinterested bee-keepers to be the cleanest, brightest, quick est 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.

F. G. NEWMAN & SON, Chicago, Ill.
C. F. MUTH, Cincinnati, O.
JAMES HEDDON, Dowagiac, Mich.
F. L. DOUGHERTY, Indianapolis, Ind.
CHAS. H. GREEN, Berlin, Wis.
CHAS. HERTEL, Jr., Freeburg, Ill.
E. L. ARMSTRONG, Jerseyville, Ill.
ARTHUR TODD, 1910 Germantown Ave., Philadelphia
G. B. LEWIS & CO., Watertown, Wis.
E. KRETCHMER, Coburg, Iowa.
E. F. SMITH, Smyrna, N.Y.
EZRA BAER, Dixon, Lee Co., Ill.
I. B. MASON & SONS, Mechanic Falls, Me.
M. J. DICKASON, Hiawatha, Kans.
ED. R. NEWCOMB, Pleasant Valley, N.Y.
J. W. PORTER, Charlottesville, Va.
ASPINWALL & TREADWELL, Barrytown, N.Y.
BARTON FORSGARD & BARNES, Waco, Tex.
W. E. CLARK, Oriskany, N.Y.
PAUL L. VIALON, Bayou Goula, La.
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 50c.; 250, \$1.25 500, \$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 **Simpli-city 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.

BEE-KEEPERS' GUIDE,

—OR—

MANUAL OF THE APIARY

15,000 SOLD SINCE 1876.

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.

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

A. J. COOK, Author & Publisher,

State Agricultural College, Lansing Mich

250 ENVELOPES

—AND—

250 NOTE HEADS

FOR

\$1.

On good paper, printed with name and address, post paid.

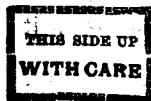
CANADIAN BEE JOURNAL OFFICE,

BEETON ONT.

SHIPPING LABELS.

These are for pasting on the tops of cases.

Price, per 10, 5c. by mail, 6c.
 " 100, 25, by mail, 27
 " 1000, 1.50 by mail, 1.60



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

NO BEE-KEEPER SHOULD BE WITHOUT

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

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

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

BEEES AND HONEY

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

M. RICHARDSON & SON,

Port Colborne, Ont

THE

CANADIAN *POULTRY* REVIEW

IS THE ONLY PAPER PUBLISHED IN CANADA IN THE INTERESTS OF THE

Poultry, Pigeon and Pet Stock Fraternity.

Circulation always on the increase. Subscription only \$1.00 a year. Address,

H. B. DONOVAN,
20 Front St. East, Toronto.

FRIENDS. IF YOU ARE IN ANY WAY INTERESTED IN

BEEES AND HONEY

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

FOLDING BOXES

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 1/2 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.....	42 00

"Charcoal" tin used in these. As a rule "coko" tins used.

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