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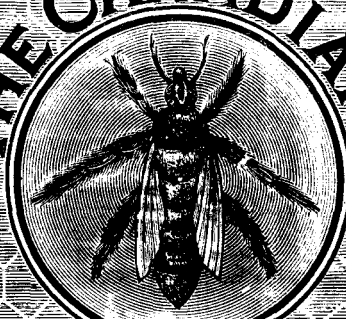
VOL. III NO. 50

1887

MARCH 7, '88.

PUBLISHED EXCLUSIVELY IN THE INTERESTS OF THE HONEY PRODUCER

THE CANADIAN



JOURNAL

THE FIRST \$

WEEKLY

IN THE WORLD

ONE DOLLAR PER YEAR

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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 val- ue. All questions will be answered by thorough practi- cal men. Questions solicited.

When sending in anything intended for the JOURNAL do not mix it up with a business communication. Use differ- ent 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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Will pay 30 cents in cash or 33 cents in trade for any quantity of pure Beeswax.
 Comb Foundation for sale, to suit any size frame or section. Wax worked on shares or for cash. All freight to Campbellville station C.P.R. If by mail to
ABNER PICKET,
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THE BEE-KEEPERS'

REVIEW.

For January is now out, and contains the following original articles: Disturbance not Necessarily Injurious, R. L. Taylor; Bees are "Summer Birds," B. M. Hayhurst; Disturbing Bees in Winter, James Heddon; A Niche that needs Filling, M. M. Baldrige; Daily Visits no Disturbance, J. H. Robertson; Bees Winter well in a Swinging Tree-top, F. Boomhower; Keep the Bees quiet in Early Winter, H. R. Bowdman; Continued Disturbance Injurious, J. H. Martin; Light not a Disturbance, Dr. A. B. Mason; Disturbance not Injurious if Other Conditions are Right, Eugene Secor; Bees Undisturbed by Light, H. D. Cutting.

Following the above come editorials upon: Price of the REVIEW; Wood or Tin for Separators; is the latter "colder" than the former? "Not according to Nature," Mr. Heddon and the REVIEW, Disturbing Bees in Winter Seldom Injurious, Temperature to be the Special Topic of the next issue. Unfinished Sections vs. Foundation, A Modern Bee-Farm.

After the editorials, room is given for the following extracts: Modern Bee Journalism, M.; Brine for Dipping-boards, M. M. Baldrige; Bees afraid of Disturbance, Dr. C. C. Miller; Injured by Passing Trains, G. M. Doolittle; Stamping on the Floor above a Bee-Cellar, Dr. A. B. Mason; Disturbing Bees Out of Doors G. M. Doolittle; Handling Bees in Winter, F. Boomhower.

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A neat little book of 45 pages, price 25 cents. The REVIEW and this book for 63 cents. Stamps taken either U.S. or Canadian. Address

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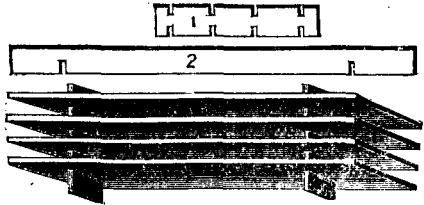
FEEDERS.



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.

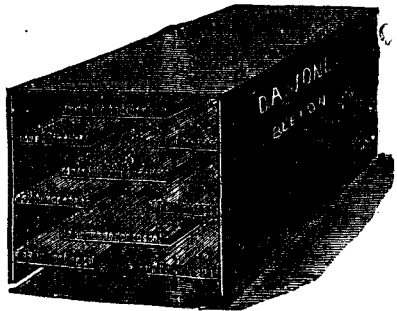
This is the Feeder spoken of on page 610 of the current volume of the JOURNAL. It is arranged with the float as shown in the engraving below. Holds 12 to 15 pounds of feed, and



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

VOL. III. No. 50 BEETON, ONT., MARCH 7, 1888. WHOLE No. 154

EDITORIAL.

WE observe that the Senate in the United States has brought in a bill creating a new cabinet office, that of Secretary of Agriculture. Our own Provincial Parliament has now this subject under discussion, and it is probable that before many weeks are past a similar department will be organised for the Province of Ontario. Our wonder has often been that this department was not created before—the agricultural classes being by far the majority in every community.

We have before us the first number of *Rural Life* which is to be issued bi-monthly from Marshallville, Iowa, by Christian Weekesser. The subscription price will be 20 cents per year. The special features of the new publication will be to tell its readers "what to do and how to do it to secure the best results." If the editors can carry out this program successfully they should secure an immense patronage, and they may justly consider that they have a claim to being great benefactors of the human race in general. We imagine the contract will be a pretty big one, however.

OUR OWN APIARY.

HIGH TEMPERATURE IN BEE HOUSES.

THE foreman of the bee yard has just returned from one of our apiaries where we have been keeping the temperature much higher

than ordinary, sometimes even 70°. This high temperature has been maintained pretty evenly throughout the winter, and we find a great many more dead bees in this bee-house. There are less than 125 colonies, but there must be two pails full of dead bees on the floor. In another bee house where the temperature has been kept about 45° or 50° most of the time we found about two quarts of dead bees from the same number of colonies. We do not seem to have the art of keeping a high temperature and yet prevent the bees from flying out and dying in the bee houses. In the former bee-house with a high temperature we have about as many dead bees as would make five or six colonies, while in the latter we have not enough to make one good colony. This difference is owing to the different temperatures. We would like some of our friends who are in the habit of keeping high temperature in their bee-houses to give us some light on the subject; high temperature would be desirable in many respects, if it had no disadvantages. We are frequently asked how to get the moisture out of the hives. The higher the temperature the less moisture will remain in the hives and less condense in the honey at about 70° honey would improve in quality. If we could keep the temperature up from 70° to 90° and winter successfully we would not be apt to have our bees affected with dysentery from unripe food. A high temperature might also prevent combs

from moulding as the damp would not accumulate. We do not remember ever having mouldy combs where the temperature was high enough or the colony sufficiently strong to generate such a degree of heat as to cause all the moisture to pass off, and although colonies oftentimes winter well with mouldy combs, and moisture in the hive, we think they cannot be as healthy (even though equal in numbers; as those that winter without. Mould and dampness seem to injure small colonies more than large and the former thrive better in a dry atmosphere.

A NEW WAY OF PUTTING LUMBER TOGETHER.

After using most of our broad lumber in stock we got a chance to buy a very large quantity of narrow at a reduced price, and as it was not quite broad enough for some of our work it was necessary to match, glue, dowel, or put together with metal tongues. Finally Jas. A. Johnston conceived the idea of running it over the dovetail saw, allowing it to come above the table far enough to make a half-inch groove. By this means narrow lumber could be put together and come out as strong and as water tight as if no joints existed. After testing this we found that if the outside edges happened to be very tight they were liable to split off, so Mr. Mitchell, the foreman, took a three-eighth inch saw, cut each side away the proper depth leaving the centre with two tongues, each about one-eighth of an inch thick. Thus a board seven-eighths of an inch thick instead of having the usual one tongue, had two. The other piece had simply two saw cuts near the centre to fit these two tongues, while the tongue between these saw cuts passed up between the other two. In other words it is double-tongue and groove work. The next thing was to find a speedy way of putting them together tightly without splitting or injuring; pounding did not seem to do it as well as we would desire, so a machine was invented. We just dropped the two boards on the table and by a peculiarly constructed lever power they were pressed together so tightly and firmly in a moment as to make the crack almost imperceptible. By this method it matters not how many pieces are to be joined, by simply giving the lever a

pull all are pressed firmly together in an instant and it is astonishing to see what a perfect job this makes. We consider this a decided improvement on any system of tonguing, grooving or matching lumber we have yet noticed.

For the Canadian Bee Journal.

AMATEUR EXPERT.

I WAS entertained and amused in reading about, and looking at the pictures of the surplus cases used in the home of Expert, the land of originality and mechanical invention. The land of resurrected Car Stewarton hives. I am quite favorably struck with the idea of screw pressure, for it is so handy for inverting, as well as other accomplishments. I learn that Mr. J. M. Shuck is wild with enthusiasm over the novel feature of the divisible case. All of these strike us as being more of a novelty than your $4\frac{1}{4} \times 4\frac{1}{4} \times 2$ pattern of sections. We are firmly impressed with the bee-smashing qualities of the "runners" shown in Fig. 2. We tried the wide frame, also brood-frame with bee-space projections on them, long ago, and don't like them at all. We notice that you have not yet discovered the advantages of honey-boards; know that you will by and by, and when you do, we fear you will forget how you opposed them in 1888, and claim them as a new and novel invention. We are sorry the queen excluding metal won't work over there for in our apiary it works like a charm. We were a little fearful at first, but repeated experiments on a comprehensive scale, demonstrated that our fears were ill-grounded. We are glad that we have only such queens as are too large to get through a slot which freely admits her workers. I am surprised at your 1886 "flash." We have in our honey-house perforated separators with feet on them, which have lain there as dead as the corpses which they are, for seven or eight years. I think we borrowed the perforated idea, but the feet were our invention. Both are worse than worthless, and you folks over the water are welcome to them so far as I am concerned.

Why Amateur Expert I am surprised that you should "claim" anything, good, bad, or indifferent, for the old "chestnuts," called "slotted dividers" by you, and "perforated separators" by Yankees, for lo, these many years. Hadn't you better come over here and see what we have, and not get so far behind us, as to be newly discovering our old, discarded implements, and well advertised inventions.

JAMES HEDDON.

Dowagiac, Mich.

FOR THE CANADIAN BEE JOURNAL.

That Rudimentary Food Gland.

ON page 932 of the CANADIAN BEE JOURNAL Mr. Allen Pringle takes Prof. Cook to task about not standing up for the evolution of the queen bee, and he also pays me some very sweeping and doubtful compliments. Mrs. Chaddock is one of many excellent people is she? and has a strong aversion to theories that clash with her early education and preconceived opinion? and the thing is perfectly natural is it? and as common as it is natural is it?

Well! now, listen a moment my dear Mr. Pringle. *I am an evolutionist.* I believe in it all through, hair, teeth, hide, and toe-nails. I believe in the *letter* of evolution, and in the *spirit* of evolution; I have believed in it for years. I believe in it a great deal more than Prof. Cook does, and I think more than you do. In the questions that I asked on the anatomy of the queen bee, I did not try to prove that the queen bee "did not in bygone ages feed her own young bees" as the queen bumble bee now does. I only said that there is no evolution about finding the food gland in the queen bee. I said in that letter, and I say in this, that as a queen bee is hatched from a worker egg it *is bound* to contain the something that would have developed into a food gland if the egg had not been tampered with. I challenge scientists, and bee-keepers everywhere to disprove this. You bring on your dead scientists, and your dead bee-keepers all you please, and if you prove to me that there is a worker egg without *the provision* for a food gland, then I will prove to you that a queen does not need to be hatched from a worker egg, and if every single worker egg that ever was laid has *the something* that afterward develops into a food gland, then every queen *is bound to have a rudimentary food gland*, and it does not *in the least* prove the evolution theory; it goes to disprove it. The rudimentary food gland is in the queen bee, because it is the egg, and cannot get away. Can it get away? if it can, you tell me how. You say "Prof. Cook is right, of course, about the rudimentary gland of the queen bee every competent authority will sustain him." If you mean by this that Prof. Cook is right in saying that the queen bee has the rudimentary food gland, I am with you then; and if "every competent authority" in the world sustains him in saying that "the rudimentary food gland in the queen bee proves the evolution theory," then every reliable authority in the world is wrong, as I have tried to show. Because all the scientific men of our age say a thing is true, does not make it true. Look for instance at Darwin's theory of how the coral reefs, atolls, and islands were

formed. He said they were formed by the *sinking* of the ocean bed, and his reasoning was so plain and so reasonable that "many excellent people" like myself could readily understand it, and we all believe it. I did I know. Did not you? We could see easily how the atolls were formed by the coral insect always working next to the waves, and how after an island should sink it would after countless years leave a circular reef with still water inside. But after the scientific world has believed this for fifty years, another party was sent out to explore these same works of the coral insects, and what does this investigator say. Why, he says that the atolls were formed by the *rising* of the ocean bed, and he goes on and explains how there is an upheaval of the ocean bed, and that brings the prominences near enough to the surface for the "deep sea" coral to build on, and when they build their own tombs for a while, it is ready for the coral that cannot live without being nearer the surface. And now the scientific world believes this man. The scientific world cannot but believe him. And the little thing that made Darwin start off on the wrong track was just the little matter of a solid foundation. Darwin held that the coral insect builds only on rock or something similar. While this other scientific man proves that they will build on foundations that are not so solid. Well, if all the scientists of both Europe and America believed and taught for fifty years that the coral islands were formed by rising perhaps in fifty years from now scientific bee-keepers will admit that it is impossible to produce a queen bee without a rudimentary food gland, because the gland is provided for in the egg and cannot get away. As to Prof. Cook answering a lady with timidity, and being over courteous, and all that, it is the merest nonsense. Would not the idea be the same whether presented by a man or a woman, and why should there be any humming and hawing in the one case any more than the other? I consider your remarks on that head as uncalled for and unkind, both to Prof. Cook and myself. As to the remarks that you quote from "Darwin's Descent of Man," I think I can give a better reason than any given by Darwin in the sentences quoted by you—in fact Darwin does not give any reason. He says, "The occurrence of rudiments is difficult to explain on the belief of the separate creation of each species as in the foregoing cases." Then he says that "these rudimentary mammæ have become well developed and have yielded a copious supply of milk." We all know that any and all such cases are abnormal, like two-headed girls, and are the exceptions that go to prove

the rule. And I call on medical men to say whether Darwin is right in regard to the measles. It has never been so in my experience. But men and women suffer (I think Darwin meant the mumps, instead of the measles,) from the mumps in the line of their manhood or their womanhood. And I think I can help Darwin out about the rudimentary mammæ glands in males. It is this: Evolution always goes back to the egg for everything. Well the egg of the mammæ are all female.

You, nor any other man, need ever send me to evolution to prove that snakes used to walk on legs. I find all the proof I need in the 3rd chap. and 14th verse of Genesis, where the Lord cursed the serpent and told it that it must crawl on the ground and eat dirt as long as it lived. You see, Old Serpent must have been walking upright, or else, crawling would have been no punishment at all, and the Lord would not have wasted his time cursing him in that direction.

MAHALA B. CHADDOCK.

For the Canadian Bee Journal.

Raising the Temperature in Cellar with the Lamp and Stovepipe Arrangement.

IN a foot-note to my article in a late issue of the JOURNAL you say that a Wanzer or Rochester lamp would be just the thing. No doubt they would answer nicely, but they burn too much oil. Just take one of those Jones five pound tins, cut a hole in the top cover, large enough to receive the collar of a large burner, then solder the screw top and the collar fast. Get one of those "Leader" burners, costing about 35c., screw it into the collar and you have it. This burner throws a strong flame and takes a flat, thick chimney. You can turn the wick up until the flame almost strikes the chimney and there will be no danger of breaking the glass.

Since I wrote that article I have been using two lengths of tin pipe and it works better than sheet iron, cut several A notches in bottom of pipe and set it (over the lamp) right on the cellar bottom. Now, with only two lengths (about 28 inches) of pipe the cellar would be quite light, but make a cone with about a 1¼ inch hole in the top and set it on top of the pipe and you have very little light but a match held over the top will catch fire in just about one second. With an ordinary burner a stiff paper or cardboard cone will do, but not with a "Leader."

I was much surprised on reading Amateur Expert's article in last week's C.B.J., to learn of queens getting through the perforated zinc. I do not think there would be much left of a fertile queen after she got through the p.z. we are using

here, but perhaps the queens over there are like eels, they get used to skinning and seem to like it.

J. F. DUNN.

Ridgeway, Ont.

For the Canadian Bee Journal

LIGHT FOR BEES.

SUCCESSFUL EXPERIMENTS BY FRIEND BRIDGE.

INOTICE in last week's JOURNAL an article on the subject of "Wintering Bees in a light Cellar" copied from the A.B.J.

My experience fully harmonises with the experience of the author of that article. I gave this subject a thorough test last winter. One half of my cellar wall on the south side is above ground; in this wall is a large six-pane window all above ground, and I had several hives placed in front of this window, the hives were raised from the bottom board by means of blocks, and every day the sun shone its rays were poured right into the hive and on the bees; and caused them no uneasiness. I know of no way of exposing them to any more light than I exposed them to. I also gave them a good test by lamp light at night. I placed a lamp with a large burner into a large wide-mouthed dishpan and put this lamp and pan in the centre of the cellar put on all the light it would carry, allowed it to burn the whole night and only one bee was found in the pan in the morning from fifty-eight colonies. I see no necessity of putting stovepipes over a lamp where lamps are used to heat the cellar, if the light of fifty lamps were shining in the cellar it would not disturb the bees if they are wintering well.

This winter my bees are acting differently, they are dying off fast, have been dying all winter, were dying before they were put in the cellar. Since my last letter I tried an experiment, I have a board floor in cellar; I cleaned the dead bees from this floor and shut off all the light from them for three days, I then let in the light and found the floor covered with dead bees; this was sufficient proof that keeping them in darkness would not prevent them from leaving the hives. The fact is they are old bees and have got to die, and I will let them die in the light; I am of opinion that they will come out in the spring all right. I know that they are brooding and have been all this month, young bees are taking the place of the old bees that are crawling out and dying. Here is a question for old experienced bee-keepers: Which one of two colonies will be of the most value the coming season, one that is carried out in the spring with the same bees that were put in the fall, or the one that is carried out with young bees that have been raised in the cellar?

A. BRIDGE.

Westbrook, Ont., Feb. 29th, 1888.

American Agriculturist.

BEE NOTES FOR MARCH.

EXAMINE every hive as far as practical, and should any be found in want of stores these should be replaced at once, either by laying bars of cream candy over the tops of frames, or by placing a feeder of hot liquid

feed over the frames under the cushion, so that the bees can reach it without leaving the cluster. Do not feed in the morning, as this will be apt to induce robbing, and when fed during the day the bees become restless, are tempted to fly out, and thus become chilled and die. When feeding for stimulation, we would advise the use of a good entrance feeder, which, when placed at the entrance the latter part of this month, should be removed until apple blossom time. Pour about a gill of hot feed, made of two parts water and one part of honey or sugar, into the feeder every evening. We cannot too strongly insist on the importance of regular daily feeding, when once begun. Confine each colony to only as many combs as the bees can conveniently cover, giving more combs as required. Be cautious and not expand more rapidly than the increasing bees will warrant, as they may not be able to keep the brood warm. Ventilation from above should now be stopped, by laying enameled cloth smooth side down over the frames. Stimulative feeding serves the same purpose, even if the brood nest is full of sealed honey. This may, however, be uncapped. Guard against robbing by leaving no combs or sweets exposed, and contracting the entrances. Should any hive be found queenless, either introduce a new queen or unite with some weak colony. In the far North rye meal should be fed as a substitute for pollen.

From the American Apiculturist.

QUEEN-EXCLUDING HONEY-BOARDS

MANY inquiries have been received of late pertaining to this subject, and I will endeavor to answer through the *Apiculturist*.

Two kinds of these boards have been in use— one made of a plain sheet of perforated zinc bound at the edges, and of a size to cover the brood-chamber, and the other made of wood slats and narrow strips of perforated zinc, the zinc being supported in saw kerfs in the edges of the slats. The former has met with some favor but has many objections, the worst being in my opinion, that these plain zinc boards are a hindrance to the workers, especially in a strong colony. The difficulty is not an inability to pass through the perforations but in the *time* it takes to get through. The zinc being smooth and the perforations far apart, the bees find no foothold to draw themselves up and through the perforations readily.

It seems to me if bee-keepers are to use these boards with profit they must be constructed in a way to overcome all hindrances to the workers in passing through them. Fortunately this can be successfully accomplished by the use of a

properly constructed wood and zinc honey-board. As generally constructed, even these are little, if any, better than the plain zinc boards, except that they are less trouble for the bee-keeper to use.

In the first boards constructed, I used strips of zinc having only one row of perforations but finding that such boards did not give enough spaces for the bees to pass freely, I began to use strips having two or three rows of perforations. They answered better but still were not satisfactory. I noticed that where the perforations in the zinc came near the wood that the bees were able to get a foothold on the wood and so pass up through the board as readily as if it was not in their way. Acting upon this hint, I constructed boards with narrow pieces of zinc ($\frac{3}{4}$ inch wide) having two rows of perforations and let the zinc into the wood, so the edge of the perforations came within one-thirty-second part of an inch of the wood. For an eight frame hive I used eight slats and seven of the strips having the two rows of perforations. This gave about 300 perforations, through each one of which three bees could easily pass at once. The operation of these boards was perfect and altogether satisfactory.

English bee-keepers used the zinc honey-boards before they were used in this country, but the general verdict was against them and they were finally discarded as being a hindrance to the workers. Now I venture that their boards were not properly constructed as they never used a wood and zinc honey-board. I do not regard their tests as affecting in any way the merits of perforated queen-excluding zinc.

Now as to the use of these boards. First, they are indispensable whenever we contract the brood-chamber in working for comb honey. This procedure, although it has often been carried to extremes, is without doubt a practical and profitable one. It is not best to contract an average colony to a space less than six Langstroth brood-frames or about 800 square inches of brood comb. With a space equal to only four or five L. frames, I find it impossible to get comb honey without more or less bee-bread in it and that renders it unfit for market.

The other use to which these boards have been put is in producing extracted honey. In storing brood-chambers the queen can be confined to the lower one and all extracting done from the upper ones; when, if a queen-excluding honey-board is not used, the queen often carries on her work through two or three brood-chambers. As it seems to be generally admitted that a first-class article of extracted honey cannot be taken from combs containing unsealed brood,

the value of queen-excluding honey-boards becomes fully apparent.

The wood and zinc honey-board may be made to take the place of Mr. Heddon's "break-joint" slatted honey-board, for the latter does not prevent the queen from starting brood in the supers and especially when running for extracted honey. Many suppose the queen stays near her brood and never surveys the supers to any great extent, but in my observation she does, and when she finds a nice lot of brood combs there it is very natural she should make use of them. In producing comb honey, the queen is not apt to start brood in the sections, if the brood-chamber is large, whether the "break-joint" honey-board is used or not. The use of such boards is to prevent the building of brace combs between the section super and the brood-chamber, thereby facilitating the handling of the supers and keeping unprotected sections from being soiled, as the bees build few brace combs above such honey-boards.

I desire to add that I was not only the first to construct the wood and zinc honey-board, but the first to conceive of the idea of supporting narrow pieces of perforated zinc in the manner here described.

DR. G. L. TINKER.

New Phila., O.

From the *Lewiston Journal*.

DIVISION BOARDS.

THEIR UTILITY AND VALUE IN BEE-KEEPING.

DIVISION boards should have a place in every well regulated apiary. In fact, every well managed apiary will include the division board as a necessary adjunct to successful handling of bees. The division board fits into a place in the handling of bees which no system of management can fill without them, hence they are a necessity. This necessity in their use has grown out of the system by which bees are kept, an understanding of their ways and workings calling into requisition many things as movable frames, the extractor, section cases, honey sections and the various appliances which render bee-keeping profitable and among them all the division board ranks as important a feature as either of the requisites named.

EARLY INTRODUCTION.

Although the use of division boards in the apiary as a factor of prominence dates back but a few years, it may be known to some of the more advanced apiarists that as long ago as 1852 a patent was taken out on division boards by Rev. L. L. Langstroth. This was 35 years ago,

but the division board, we think, did not very generally come into use till quite recently. Mr. Langstroth's board was made as follows, and will be found on page 376 of his book, "The hive and honey-bee."

"One piece $18\frac{1}{2} \times 9\frac{3}{4}$ inches, each side of each end made one-quarter inch beveling, for easy adjustment. One piece $8\frac{1}{2} \times 19\frac{1}{2}$ inches nailed on the first piece, like the top piece of the movable comb frames. By this divider, the size of hive can be determined at will."

This reveals the use the division board was first put to, to contract or enlarge the size of the hive. And this is an important matter when rightly considered. While there are various ways in which division boards are useful in handling bees, perhaps the two most important advantages derived from their use is in preparing stocks for winter and in adapting the size of the hive to the strength of the colony in spring.

PREPARING FOR WINTER.

In preparing for winter it is known to be best to allow the bees only space according to their numbers. That may be to occupy four, five or six frames. We all know it is easier to heat a small room in winter than a large one and so this principle applies to the bee-hive. And again we do not want to depart from established rules in building hives as to size; were to do so we might lumber our premises with a large number of different sized hives of no use only as occasion called for wintering and occasionally for nucleus swarms in summer.

If we use division boards the question of making hives to carry eight or ten frames is easily solved. It is an advantage to have some hives which will carry ten frames, as side storing can then be practiced if one likes that way, and in running for extracted honey it is an advantage to use ten frames in the lower story as a prolific queen will occupy that number and leave the upper story clear of brood. Then if such hives are desired to run for comb honey and five to six frames in the brood-chamber are found sufficient, the contraction is easily made by using division boards, or the same contraction made for wintering, and if deemed necessary the spaces between the walls of the hives and division boards can be filled with some material which is non-conducting to cold, as leaves, chaff, etc.

USE IN SPRING.

In rearing large numbers of bees early in the season, queens are induced to early breeding from two especial causes, viz.: heat and a supply of proper food. A requisite of spring care is to reduce the size of the brood nest to just as small compass as the bees can comfort-

ably fill. Having done this in the fall previous while the bees were more numerous, crowding them upon six frames, we will say, April may find the bees only able to cover two frames comfortably. The division board upon each side has been the means of contracting their domicile, enabling the bees to more easily warm up their house, and the consequence is the queen will commence laying earlier by some weeks than if the whole space of eight or ten frames had been given the colony in the fall. Often winter and spring dwindling will be such that two frames will be adequate to the requirements of the colony. It is, then, of the importance that the division boards be used so that the heat may be utilized and by that means a few bees be enabled to do in small, contracted quarters, in the way of rearing brood, what double the number could not do in three or four times the space.

IN SURPLUS CHAMBERS.

In case of extracting, division boards are indispensable, to place over the brood-chamber and grade the number of frames as they are put in from time to time. It is a fact known by all practical bee-keepers that bees in order to build combs, must keep a high temperature where they are working so to keep the wax in a proper consistency to admit of being manipulated into combs. Hence if the surplus room is much larger than the bees can occupy because these conditions of necessary heat are wanting, comb building will often be delayed for the necessary amount of bees to engender sufficient heat. By the use of division boards, combs or sheets of foundation can be supplied as the bees require them and are able to occupy them.

CONSTRUCTION.

How to properly construct division boards is of some importance. Solid boards answer very well, but such are liable to warp and make their use not quite so handy as those that are true. Those made of thin material and interior filled with chaff, have advantages. Whatever kind are used, it is of importance that the ends have some material of a yielding nature tacked to them, so as to allow the board slight friction to hold it when crowded into place.

BEES--SELECTING BREEDERS.

QUEENS for breeding should be selected with much care. This is overlooked by too many breeders, and the result is inferior stock which will not breed as well as that of better selections. Some breed mainly for color, others for the best workers regardless of color. Some think that an imported queen is the only one fit to breed from, while others are

willing to use any queen that produces bees showing the three yellow bands characteristic of the Italian. This is a mistake. While a selected imported queen is doubtless the best to breed from, we have found by experience that not all imported queens are good breeders. We would not by any means discourage breeding from imported queens, but we are certain that by careful selection from home-bred stock as good results have been obtained as from any imported. There is no certainty in selecting a queen by her looks for breeding purposes. An inferior-looking queen may prove to be the best breeder. Neither can we tell to a certainty the superiority of a queen by testing her a single season. Colonies even with not the best of queens often have such advantage in condition as to come out ahead. We have often been greatly disappointed by queens apparently proving superior the first season, and afterwards turning out very poorly. A yearly record should be kept of such queens as are in view for breeders, and, by close observations, in a few years a strain may be found having the desired qualities. It is not necessary to wholly disregard color in order to get working qualities. Those two points can be readily combined. The three golden bands encircling the body of the Italian bee should never be lost sight of.—*Ex.*

Statistics of the Honey Crop.

AT the Chicago Convention Dr. Mason, Prof. Cook, and the editor of the *American Bee Journal* were appointed a committee to correspond with the Department of Agriculture relative to securing reliable statistics concerning honey and beeswax production, the number of colonies of bees, etc., in the United States. Dr. Mason has received the following from the United States Statistician, which will be read with interest:

U. S. DEPARTMENT OF AGRICULTURE,

WASHINGTON, D. C., Feb. 21st, 1888.

Dr. A. B. Mason, President of the North American Bee-Keepers' Society, Aurburndale, Toledo, Ohio.

Sir: Your favor of the 15th inst., addressed to the Commissioner of Agriculture, and by him referred to me, is received.

After correspondence with Mr. Eugene Secor, of the Iowa Horticultural Society, Mr. Geo. E. Hilton, President of the Michigan Bee-Keepers' Association, Mr. Franklin Wilcox, Secretary of Wisconsin Bee-Keepers' Society, and other prominent apiculturists, I have decided to make an effort to gather statistics relative to bee-keeping to be published in our regular crop report at least once a year, provided those engaged in the

industry take sufficient interest in the matter to furnish us with the necessary data. In the first place it will be necessary to have a special corps of correspondents made up entirely from those actually engaged in bee-keeping. To secure such a list of reliable men, we should have to depend upon the officers of various Bee-Keepers' Associations. Our regular correspondents who furnish us with monthly crops reports are made up in the main of ordinary farmers, and but few would be able to give reliable information relative to the present condition of apiculture; therefore, what we desire, and must have, if a reliable report is to be made, is a list of intelligent bee-keepers one in every county where the industry is of any comparative importance. So far we have been able to secure such a list from the State of Iowa only, with the promise of a list from Wisconsin. Can you, from among the members of your society, furnish me such a corps, or give me the names of prominent men in each State who could do so?

I would also be under obligations if you and the fellow members of your committee would kindly give me the points, which, in your opinion, such an investigation should cover, and the queries which you would consider it advisable to put.

Trusting that you will give me all the assistance in your power in order that a full and correct report on the progress of this growing industry may be made, I am,

Very respectfully,

J. R. DODGE, Statistician.

This committee, as representatives of the "North American Bee-Keepers' Society," are now corresponding with one another for the purpose of formulating a plan to be followed by the different societies, in order to comply with the above request of the United States Statistician. They will endeavor to give him "the points," the "queries," etc., but many difficulties present themselves.

For the Canadian Bee Journal.

Welland County Bee-Keepers.

THE Welland County Bee-Keepers' Association was organized in the Town Hall, Ridgeway, on Monday, Feb. 20th.

Owing to the heavy rains during the day and the flooded state of the roads, many who had signified their intention of being present were prevented from doing so and the attendance was very much smaller than it would otherwise have been under more favorable conditions.

The following persons were enrolled as members:

Messrs. H. J. Herber, F. Miller, N. Miller, Chippawa; Joseph Sherk, Netherby; D. A. McKinney, Brookfield; R. Richardson, Pt. Colborne; H. Johnstone, Stone Quarry; Mrs. J. N. Fullmer, Messrs. C. H. Mathews, N. Brewster, M.D., J. F. Dunn, Ridgeway.

A courteous letter regretting inability to be present was read from Prof. Snider.

Mr. H. J. Herber was elected President, C. H. Mathews Vice-President, J. F. Dunn Secretary.

The different methods of wintering bees were pretty thoroughly discussed by those present.

Mr. Herber winters in a clamp packed in sawdust in a barn with entrances so arranged that bees can fly.

Mr. C. H. Mathews winters his bees in a clamp out doors. Hives packed in sawdust and forest leaves. Honey boards off. Bees are in good condition.

Messrs. McFinney, Sherk and Miller winter on summer stand.

Mr. H. Johnston winters in double-walled sawdust packed hives, places sawdust cushions over brood nest, fills super with corncobs. His bees winter well.

A member asked the question "Do bees seek out a home before swarming?"

Jos. Sherk thought not.

R. Richardson thought they did.

H. J. Herber thought they did not and gave some excellent reasons why he thought so. A member said that Mr. B. Troup, of Bertie township, had observed a few bees cleaning out a cavity in a decayed tree and the next day a swarm issued from a neighboring yard and took possession. The Secretary thought that no proof that bees seek a home previous to swarming. A small colony may have taken possession of the cavity on the day the few bees were seen cleaning it out and the swarm which issued the following day united with them.

Several members described their method of preventing increase. Hiving swarms and emptying supers filled with comb honey. Discussion on minor topics occupied the balance of the time after which it was decided to hold the next meeting in the town of Welland on Monday, May 7th, 1888.

From the British Bee Journal.

BEE-KEEPING IN MALTA.

YOU ask me in your number of 5th January for any particulars of bee-keeping in Malta. At present I believe I am the only frame hive owner in the island, unless the Rev. Fathers at the Jesuit College have

them. The natives keep bees largely in earthenware pots, about a foot in diameter and $1\frac{1}{2}$ long, shaped like a stump-necked bottle, the mouth being filled by a stone bung with four channels for the bees to pass through, but this they invariably refuse to do, and prefer to use the big end, which is simply covered loosely with a board, the pot being on its side, and generally on the ground, and under a tree. Consequently you can imagine the assortment of creatures to be found inside. They take the honey and wax once a year, and leave little or no stores, and are astonished at the loss in numbers during the autumn.

My brother started three or four frame-hives late last year. One, the first, is in very good order; the other very weak, but breeding fast, and they are getting in pollen in greater quantities already. I have made myself two hives, but on account of the great heat in summer and the temperate winter, I have not stuck to the English form quite.

My hive proper is single-walled, three-quarter inch stuff, and this I place in a large box on legs, giving quite 3 inches room all round, with roof to lift or hinge, raintight but not airtight. To allow of a current of air in the summer, I intend boring holes in the outer case low down, and covering with perforated zinc, and leaving the tops slightly open during the day, and if I find the sun's rays too powerful, propose having a hood like a child's perambulator to draw over to shade the south side. The natives simply cover with grass mats, but these I do not fancy, as the ants and insects are in legions, and will harbor in them. Ants are a pest, but they are get-at-able. Hornets, however, are the enemies. Last year nearly four hundred were killed round the hives. I am trying to devise a plan to lessen the evil, and offer a reward for each nest, or for each dozen of dead hornets. I do not like the Palestine dodge of smoke.

The bees themselves appear to be docile, but I am told that at certain seasons they get vicious. I fancy orange blossoms and karob bloom affect them. They have, as far as my inexperience goes, all the appearance of Cyprian bees, yellow bands, etc., and fly in any weather almost. I sent some dead ones to Mr. Baldwin lately to look at, and if I visit England in the summer, shall try and bring a hive with me for examination by experts. The natives, as usual, are superstitious, and object, as a rule, to their hives being looked at, and I have difficulty in getting information. They laugh at my hives, and the trouble I take, and also the feeding, but I hope by the time the Agricultural show takes place to have some frames and sections to show, and

some extracted honey and perhaps a hive; but wax as yet beats me, I cannot get it clean. Certainly I have only smelted down old black combs and scraps hitherto, and if any one could give me a few hints I should be grateful.

There is no question about it being a splendid place for a bee-farm. The winter is so mild that no wintering, other than feeding, and perhaps a stopping-up of draughts, is necessary, and already the honey is being gathered, white broom, mignonette, and other flowers being out. Later on the *sulla*, or crimson clover, will give a harvest, and orange and other plants until the end of August. From September I expect to have to feed a little, and during the heat water is the difficulty.

I am so afraid that the heat will cause heavy combs to drop, that in fixing foundation, I make the sides of top-bars moveable, then fix the sheet with glue on both sides, and screw the movable piece back. Some I have tried without glue, and am waiting for results. I find screws are necessary, as the wood is so liable to warp that nails and tacks do not hold.

I have planted white clover and limnanthes, but I do not think they will do. In some parts of the island wild thyme grows freely, and some keepers move their bees to this, which comes much later.

Should I find out anything interesting or queer as I get along I will let you know. MALTA.

For the Canadian Bee Journal

CORRECTIONS.

MESSRS. Editors.—Will you kindly permit me to correct some typographical errors which I notice in my reply to "Critic on the Path" in the last *JOURNAL*, for should your critical correspondent strike the warpath again I will thus save him the trouble of striking at what I did not write. In the second sentence it is printed "in the business as well as other things," while it should read "in the bee-business as well as other things." In the last line of the second paragraph is "only vindicated" instead of "duly vindicated." In the last line of the third paragraph instead of "selfish egotist" read "selfish egoist," which is something quite different. But the reader of this who also read my reply to "Critic" will please bear in mind (and "Critic" will also bear in mind) that I did not call him a "selfish egoist" or "bloated monopolist," albeit I have a strong private opinion that most readers of his letter would have these and other such adjectives suggested to their minds.

It is not much to be wondered at that some selfish bee-keepers should catch the monopoly contagion which is now infecting and infesting the whole commercial atmosphere. The disease is spreading so rapidly that parliament is about to look into the "combinations" and set itself down upon them, that is the outraged people are call-

ing upon it to do so, and Ottawa will hardly venture to ignore the call. These corporate "combiners" (and corporations of all kinds are said to have "no souls") oppress and rob the people without the slightest compunction apparently. Away with such selfishness! We want none of it amongst bee-keepers. Let the dominant egoism of humanity which looks only to *self* give place to a wholesome altruism which will have at least a little care for *others*.

ALLEN PRINGLE.

Selby, Ont., March 3rd, '88.

SUNDRY SELECTIONS.

MOVING BEES.

R. W. McDONNELL.—This spring I expect to have to move my bees about one-quarter of a mile from where they are in winter quarters in cellar, and I would like to know when it can best be done. Will it harm to give them their first flight, setting them out-doors just where they are and remove them down same evening to new location? I hope to have about seventy colonies to handle.

Galt, Feb. 25, 1888.

It would be better to move your bees before giving them a flight, as the distance is so short the probability is many of them would return to their old stand, having marked the location the first day. You need not take any precaution to keep them from marking the place, a little wire cloth would be sufficient. Take them out in a light spring wagon and they will not be much disturbed.

OUR COMBINATION HIVE.

P. NICOL.—You have not advertised your Combination hive—the one you showed at Toronto Exhibition. I want to try a few of them. Do you not wish to place them on the market or how is it they are not advertised? I called on a friend at Eden's Mills last week and found his bees not in the best condition, too cold I think.

Of course you will see full particulars in our new price list of the hive you mention. We don't know why you should think we did not want to put it on the market. We want to do whatever is in the interest of our bee-keeping friends as far as possible. Mr. Burton, a young man of great promise, who has been with us for two years and is just starting for himself, has ordered 200 of these hives, having tested them thoroughly here. The friend you called on and found his cellar too cold will have to watch closely from now until the bees are set out, as cold is more injurious late in the season. The temperature should not be allowed to go too low. Page 874 of JOURNAL will give him

some further hints in regard to this matter.

WILL BEES BREED MORE QUICKLY IF SET OUT EARLY.

JAMES BAPTIE.—In the Jones and Galbot hives will it be advisable to set out bees in March? I have a small nucleus hive that will go inside of the large hives and will hold six or seven frames and admit of packing by using a top story. Will the bees be liable to spring dwindle when well packed, if put out so early? and will they breed more quickly and better than those set out later in the season?

Springville, February, 1888.

We should not advise you to set your bees out before the first appearance of pollen as it is liable to cause them to spring dwindle more or less. We see no reason why packing should not give plenty of protection in spring. Better raise the temperature of bee-house to cause the queen to deposit eggs. Even this should not be done too early, not more than two weeks before the bees are set out. No doubt plenty of young bees are desirable, yet if commenced too early there might not be enough old bees to carry food, nurse them, and keep up the temperature of the hive, hence the result would be the total loss of the colony.

POLLEN FEB. 20TH.

SUBSCRIBER.—My bees are bringing in pollen from hazel, yesterday, the 20th, was the first I noticed it. Some of them seem to be greatly confused. These are the ones that I have just moved, they seem to be robbing. What can I do with combs that are so badly crooked that I can get but six of them in the eight and ten frame hives? Are they of any use?

Bois D'arc, Mo., Feb. 21st, 1888.

Well, Well! bringing in pollen in February! while our bees expect to be in their winter quarters nearly, or quite three months yet. Bees are apt to become confused after being moved and placed in a new location, especially if the weather is very warm, but the pollen will assist them to get down to business much sooner and mark their location more accurately. Now, as to the crooked combs we have had some very bad ones, but we succeeded in straightening them so they were to all appearance as good as if drawn out from foundation. Take them out and where the septum does not fit in the centre of the rack cut them loose and press them to their proper place and when other parts of the comb are bulged press it back till it is

perfectly straight. We have sometimes had to cut out a little strip, say the width of one row of cells in certain sections, to let it press back to its place, then in order to keep it from springing back again we have frequently had to spring it a little more than it ought to be, making the opening on each side slightly wider, then slipping in one or two rows of cells just enough to let the comb spring back to its place. In this way we have taken the most crooked, in fact, combs that were thrown aside to be made into wax, and shown the students how to fix them so that after the bees repaired them they looked at them with pride and even kept them to show what might be done by careful management. A little practice is all that is necessary to enable you to do this rapidly.

THE CANADIAN BEE JOURNAL.

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

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BEETON, ONTARIO, MARCH 7, 1888.

BUSINESS DEPARTMENT.

Observe our special offer of sections, in large lots, as given in our advt. columns.

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.

Our plan of sending out notices to those whose subscriptions expire from time to time, a week, in advance, is a splendid thing and we find meets with general favor. Most all of them renew, and in cases, where the subscriber wishes his JOURNAL discontinued, we have only to receive a card to give effect to his wishes. We have said that "most all of them renew" but still there are some who do not, neither do they order a discontinuance. This is all right, but in such cases, wouldn't it be much nicer for us to receive a card something like this: "Please send on the BEE JOURNAL, I know my time is up, but I'll remit pretty soon." How much better it would make us feel, and at what a small cost to yourselves.

BEE-KEEPERS' CIRCULARS.

During last season we printed quite a large number of catalogues and price lists for bee-keepers, 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.

BEEES BY THE POUND.

Just as soon as we can raise them in the spring, we will have for sale bees by the pound at the following prices:—Up to July 1st, \$1.25 per pound; after that date, 90c. per pound. Orders must be accompanied by the cash, and they will be entered and filled in rotation as received. We are booking orders now.

HONEY MARKETS.

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.

DETROIT HONEY MARKET.

Market a little dull with slight depreciation in prices. Stocks not large, however. Best white, in one pound sections, 17 to 19 cts. Extracted 9 to 10 cts for light colored; few sales. Beeswax 22 to 23 cts.

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 Clove extracted in kegs and bbls. 7 to 8c. Beeswax 21 to 22c.

McCAUL & HILDRETH BROS.

PRICES CURRENT

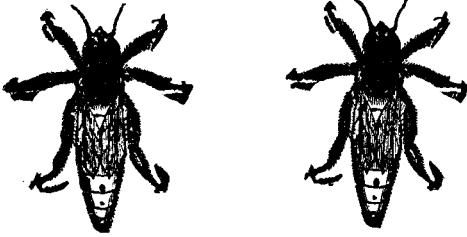
BEESWAX

Beeton, March 7, 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 3x4 and 4x4, per lb.60c
Brood Foundation starters, being wide enough for
Frames but only three to ten inches deep....45c

QUEENS.



Our trade in queens grows greater each succeeding year, and we seem to be giving better satisfaction as well. We endeavor to raise queens which will produce good honey-gatherers irrespective of breed or race.

We pay more attention to the class of drones with which our queens come in contact.

The annexed table shows the prices at different seasons, of different varieties. These are, of course, subject to change depending upon the supply and demand. All changes will be noted in the CANADIAN BEE JOURNAL :

MONTH.	Untested	Tested	Selected	Virgin
May	1 50	2 50	3 00	
June	1 00	2 00	3 00	0 60
July	1 00	2 00	2 50	50
August	1 00	2 00	2 50	50
September	1 50	2 00	2 75	
October		2 50	3 00	

Three at one time, deduct 10 per cent ; six at one time, deduct 20 per cent.

EXPLANATIONS.

We are not, owing to our high latitude, able to sell queens before May, nor later than October.

Untested queens will be ready for sale as soon as mated, and before they have had a chance to prove themselves.

Tested queens are those which have been proven as to race and honey-gathering qualities.

Selected queens are chosen because of color, size and honey-gathering qualities.

Queens cannot be shipped unless the weather is warm enough, except at risk of purchaser—otherwise safe delivery is guaranteed.

NUCLEI.

A two-frame nucleus will consist of one-pound of bees, two frames partly filled with brood and honey, and an extra queen, price \$4. Two at one time, \$3.75 each—up to July 1st.

After that date the prices will be \$3 singly ; two at one time, \$2.75 each.

We can send frames that will suit either the Jones or Combination hive. Please specify which you wish. Should you prefer the nucleus in either Jones or Combination hive, add price of the hive, made up, to the cost of nucleus.

Bees by the pound and nuclei must always be sent by express. Orders for nuclei filled in rotation the same as bees by the pound.

BEEES.

Bees should always go by express, unless they are personally cared for *en route*.

We do not hold ourselves responsible for breakage or delay in transit of colonies of bees. They always leave our hands in good shape ; we will send out only such colonies as we are sure will give satisfaction. Our bees will be such as the queens we offer will produce.

	Italian	Italian Crosses	Carrion Crosses
May	\$8.00	\$ 8.00	\$ 9.00
June	7.00	7.00	8.00
July	7.00	7.00	8.00
August	6.50	6.50	7.00
September	6.00	6.00	6.50
October	6.50	6.50	7.00

The above prices are for up to four colonies ; five colonies up to nine, take off 3 per cent. ; ten colonies up to twenty-four, 5 per cent. ; twenty-five colonies and over, 10 per cent—*always cash*. Bees at these prices will always be sent out in the Combination Hive, and each colony will contain a good queen, some honey, and brood according to the season.

Barnes' Foot Power Machinery !

See advertisement on another page. We have just arranged for the sale of these machines, and we can quote a price F.O.B. cars at Toronto (duty and freight paid thereto). On application we will forward catalogue and pricelist free.

49-tf

THE D. A. JONES Co., LTD.
Beeton, Ont.

SECTIONS FOR THE MILLION.

We are turning out sections at the rate of 10,000 per day right along, in addition to our regular hive and supply trade, and we are prepared to furnish them in any regular size and style in large quantities at very low rates.

Our prices are as follows :-

1000	\$ 4 50
3000	13 00
5000	20 00
10,000	37 50

All orders entered as received, and shipped with promptness. Order early to avoid the rush. These prices are spot cash.

THE D. A. JONES Co., LTD.

49-tf

BEETON, ONT.

Headquarters in the West

for the manufacture and sale of
BEE-KEEPERS' SUPPLIES.
CHAFF AND SIMPLICITY HIVES, SECTIONS, FDN., SMOKERS, ETC.

furnished at a great reduction in price, A full line of supplies always on hand. I also have on hand for sale at all times, Pure Italian Queens, Bees by the pound, Nuclei and Full colonies at very low prices.

Send for Catalogue.

A. F. STAUFFER,
Sterling, Ill.

USEFUL GOODS.

The following is a partial list of small wares, tools and stationery, which we carry in stock. Additions are constantly being made. We buy in very large quantities, and are therefore able to quote rock bottom prices. There is always something in these lines you want and they can be enclosed with other goods or sent by mail. The amount of postage is marked opposite each article, except those excluded from the mail.

5 CENT ARTICLES.

Postage.	Per 10 lots.	Per 25 lots.
3 Awls, brad, three assorted without handles.....	\$ 75	\$1 00
1 Blotting paper, 10 sheets note size.....	40	88
3 Bag for school books.....	45	1 05
2 Brush, round, for paint, paste or varnish.....	40	95
1 Chisel handle.....	45	1 10
8 Crayons, colored drawing.....	45	1 00
1 Eraser combined ink and pencil	45	
1 Letter openers, nickle plated, very handy.....	40	
1 Memo books, 32 pages, stiff cover.....	40	90
Note paper, 1 quire, extra quality, ruled or plain.....	40	80
2 Pad 100 sheets scribbling paper	45	
1 Pass books 3 "Railroad" 16 p. paper cover.....	45	1 00
1 Pass books, 2 Steamboat 32 p p.	45	1 00
1 Penholders 2, cherry, swell.....	40	
1 Ruler, hardwood, flat, graduated to $\frac{1}{2}$, bevelled.....	45	1 05
1 Ruler, for school children, three for 5c.....	40	90
2 Scribbling books, 200 pages.....	45	
Tacks, cut, 2 papers 1, 2 or 3 oz.	45	

8 CENT ARTICLES.

Butter stamps 3 or 4 inches....	\$ 75	\$1 75
File, 3 corner, 3 or 4 inches....	75	1 75
Ink-well, glass, safety, cannot spill.....	65	
Mucilage, good sized bottle....	70	
Oil cans, zinc.....	65	
1 Pencil, automatic indelible....	75	1 75
1 Time books for week or month.	75	

10 CENT GOODS.

Bill fyles, harp shape.....	\$ 90	2 10
2 Book of 50 blank receipts with stub.....	85	2 00
2 Book of 50 blank notes.....	85	2 00
2 Brush, flat, for paint, paste or varnish.....	80	1 90
3 Butter spades 9c. each.....	80	1 90
2 Boxwood pocket 1 foot rule....	90	2 10
Chisel, firmer $\frac{1}{2}$ inch.....	90	

Postage.

	Per 10 lots.	Per 25 lots.
2 Clips for holding letters, etc....	90	2 00
Due bills, 100 in book with stub	85	1 80
2 Envelopes, 3 packages, white, good, business.....	95	
2 Files, 3 cornered, 5 inch.....	90	2 10
3 Lead pencils, 1 doz. plain cedar Fabers 581.....	90	
2 Lead pencils 3 red and blue....	90	
2 Note heads, pads of 100 sheets..	90	
Paint brush, No. 7.....		
2 Pocket note book, 3x5 in., 125 pages, stiff cover with band grand value.....	90	
1 Rubber bands, five, large.....	80	
1 Ruler, brass edged, flat, hardwood, bevelled, graduated to $\frac{1}{8}$ inch.....	95	2 25
4 School bag, medium size.....	90	2 10
Tacks, cut, 3 packages, 4 oz.....		

13 CENT ARTICLES.

2 Belt punches, Nos. 2, 3, 4, and 5	1 25	\$3 00
File, 6 inches long, flat.....	1 25	2 90
" 5 " " round.....	1 25	2 90
Shce knives, 4 inch blade.....	1 20	2 75

15 CENT ARTICLES.

Chisel, firmer, $\frac{1}{2}$ and $\frac{3}{4}$ in.....	1 45	
12 Dextrine, $\frac{1}{2}$ lb. pkge. for pasting		
Hammer, iron, adze eye.....	1 45	
3 Lead pencils, 1 doz., good quality, Faber's 971.....		
5 Note paper, 5 quires, 3 lbs., extra value.....	1 40	3 35
Paint brush, No. 5.....		
6 Rubber bands in gross boxes. For queen nursery.....	1 30	
4 Rule, 2 foot, a splendid line....	1 40	3 40
Screw driver, 5 inch, round bit, hardwood handle.....	1 40	
2 Statement heads in pads of 100	1 20	
Tack hammers, magnetic.....	1 40	3 30

18 CENT ARTICLES.

Bit, best make, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$	1 65	4 00
Glue, Le Page's liquid, with brush.....	1 65	
Oilers, automatic.....	1 60	

20 CENT ARTICLES.

Postage.	Per 10 lots.	Per 25 lots.
Bit, best make, $\frac{3}{8}$, 7/16, $\frac{1}{2}$, 9/16..	1 90	4 00
Brass traps.....	1 85	4 50
Brushes, flat, 2nd quality, $1\frac{1}{2}$ in. paste or varnish.....	1 80	4 25
Chisel, firmer, inch.....	1 90	
Ebony ruler, bevelled for book-keeper.....	1 90	4 50
File, 8 inch, flat, round or 3 corner.....	1 90	
3 Lead pencils, 1 doz. 201 good value, rubber tipped.....	1 80	
Paint brush, No. 3.....		
12 Papeterie, "Jubilee" containing 24 sheets, ivory notes, 24 square envelopes.....	1 80	
6 Pens, gross box "292 school"....	1 80	
1 Pocket memo book, indexed....	1 90	
Screw-driver, steel, 6 inch rd bit	1 90	
Square, iron, grad. to $\frac{1}{8}$ one side	1 90	
Thermometer.....		

25 CENT ARTICLES.

6 Cards, 50, ladies' or gents' visiting. Piries' super ivory....	2 00	4 50
2 Duplicate order books, with black leaf.....	2 00	4 50
File, 10 inch, flat.....	2 25	
3 Lead pencils, 1 doz. Faber's H, H. B., B, or B. B.....	2 30	
Paint brush No 1.....		
Rule, 2 foot, boxwood.....	2 30	

30 CENT ARTICLES.

3 Bills payable and receivable....	2 85	6 90
Bits, best make, 10/16, $\frac{3}{8}$, $\frac{1}{2}$	2 85	6 90
5 Foolscap, 2 quires, extra quality	2 80	
4 " legal, in pads of 100 sheets.....	2 75	6 00
Inkwell, square, glass, bevelled edges.....	2 75	

35 CENT ARTICLES.

Bit, best make, inch.....	3 40	8 20
Hammer, steel face, for light work.....	3 30	
Square, grad. to 1/16 both sides	3 30	

40 CENT ARTICLES.

Postage.	Per 10 lots.	Per 25 lots.
Foolscap, 5 quires, good quality	3 75	
Hammer, No. 50, steel head, adze eye.....	3 60	
6 Pens, gross box, 'Bank of Eng.'	3 80	
" " Blackstone or J.	3 80	
Ruler, 2 foot, boxwood, brass bound.....	3 60	

50 CENT ARTICLES.

5 Binders, CANADIAN BEE JOURNAL	4 80	
Blank books—.....		
Day book, 200 p. p. good paper, well bound.....	4 25	
Cash " " ".....	4 25	
Ledger " " ".....	4 25	
Minute " " ".....	4 25	
Complete set, Cash, Day and Ledger, \$1.25.....		
Carpenter's brace, pat. grip, 8 in	4 85	12 00
Envelopes, good, business size, 250 in box.....	4 00	
Hand saws, 18 and 20 in., best make.....	4 50	
Hammer, No. 51, steel head, adze eye.....	4 50	
Hammer, smaller, frame nail'g	4 50	

SUNDRIES.

	Each
Copying press, "The Simplex," the most rapid and the easiest handled. Folds like a book and weighs but 10 lbs. With lock, \$5, without....	\$4 50
Hammer, No. 47, steel head, adze eye a most substantial implement.....	60
Hand saw, 26 inch, finest quality.....	55
Hatchet, steel, with hammer and nail puller.....	65
Letter books, with index, bound in canvas, 500 pages.....	1 10
Letter books, with index, bound in canvass, 1000 prges.....	2 00
Plane, iron block.....	75
" wood smoothing.....	80
Post cards printed to order, 50 \$1, 100	1 40
Square, steel, grad. both sides, usual price, \$1.75. Ours.....	1 35

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.

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.

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.

\$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.

READ THIS.

25 PAPERS GARDEN SEEDS AND THE BEE-KEEPERS' ADVANCE.

One year for only \$1. These seeds are just such seeds as everyone having a garden wants and buys, paying 5c. to 10c. per package, the retail price of the seeds is \$1.75. We give away our paper and sell you the seeds at about half price to introduce both to Canadians. Seeds will be sent post paid and we guarantee satisfaction. Address,

J. B. MASON & SONS,
Mechanic Falls, Maine.

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.

SEW 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 a try 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.

BARNES' FOOT-POWER MACHINERY



OHN BARNES,

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. & 4 Ruby St., Rockford, Ill. 21

- CANADIANS -

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the only independent publication on bee culture in America, by sending 50 cents to the CANADIAN

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Barrytown, N.Y.

D. A. JONES, Pres.

F. H. MACPHERSON, Sec-Treas

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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. tt

DADANTS FOUNDATION

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

T. G. NEWMAN, & SON, Chicago, Ill.

C. F. MUTH, Cincinnati, O.

JAMES HEDDON, Dowagiac, Mich.

F. L. DOUGHERTY, Indianapolis, Ind.

CHAS. H. GREEN, Berlin, Wis.

CHAS. HERTEL, Jr., Freeburg, Ill.

E. L. ARMSTRONG, Jerseyville, Ill.

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G. B. LEWIS & CO., Watertown, Wis.

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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.

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 1888. Free.

W. T. FALCONER.

BEE-KEEPERS' GUIDE,

—OR—

MANUAL OF THE APIARY

15,000 SOLD SINCE 1876.

The fourteenth thousand just out with thousand sold in just four months. More than 50 pages and more than 40 costly illustrations were added to the 6th 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

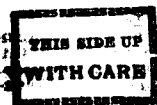
FOR \$1.

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

CANADIAN BEE JOURNAL OFFICE,

BEEOTON 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 Stook 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. ROOF, Medina, Ohio.

Patent Flat-Bottomed Comb Foundation!

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

J. VAN DEUSEN & SONS,

(SOLE MANUFACTURERS),

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

5 Per Cent Discount

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

Bell Branch, Mich.

M. H. HUNT,
Near Detroit.

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.....	43 00

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

THE D. A. JONES Co., Ld., Beeton.