Moon's bee world : a guide to bee-keepers. Vol 3, No 2 January, 1876

Rome, Georgia: A. F. Moon and Company, January, 1876

MOON'S BEE WORLD,

—A GUIDE TO—

BEE-KEEPERS.

VOLUME 3. JANUARY. 1876. NUMBER 2

For the Bee World.

SCRAPS FROM ILLINOIS

WILL M. KELLOGG.

BEE DYSENTERY.

I think friend Knight is mistaken, in September number, where he infers that "honey dew" is the cause of the bee disease, or dysentery. In his part of the country it may cause the bees to have it a great deal harder, but could not have been the cause with us, any more than any other poor food, for we never have any honey dew, and never hear of any being found in this section of bee-dom. It made little difference with the result, whether the bees were kept in "gums," box hives, soap boxes, tobacco kegs, etc., or in the modern, so called, movable comb, moth proof, adjustable, improved bee hive, the bees ALL had the disease, and nine tenths of all in this part of the country "went up." Last winter a neighbor put twenty-four stocks, mostly light, in a small corn crib, packing them in straw and piled on top of each other, nearly filling the crib, and with very little ventilation of any kind. They came out in the spring wet, damp, or mouldy, and the bees had the dysentery bad. He lost twenty-one out of the twenty-four.

I do not think it was all poor food that killed them.

THE STING OF ITALIANS.

Friend Parker, I think your imagination HAS something to do with the idea that "the sting of an Italian bee is more painful, and swells more than that of the black bee." I have handled bees, blacks, hybrids, and Italians, in all kinds of ways and places, and at all times of the year. I generally get stung pretty freely during the season, so that I have a good chance to try the subject, and I find that it is according to the weather, time of the year, yield of honey, and WRATH in the bee, that determines the amount of pain and swelling that follows the stinging. The person, also, has a good deal to do with it, a bee sting affecting one person more than an

other. It did not seem to affect Mr. Grimm of Wisconsin, at all, while one sting on my hand, such as he got while I was there, would swell the hand to twice its natural size, with considerable pain.

With one or two of my neighbors it causes little or no swelling, but intense pain. I got a bottle of the German bee sting cure, late in the season, too late to give it a fair trial. What little I have tried of it seems to work well, taking hold with a VIM, but whether it will do all that is claimed for it, remains to be seen by another season's trial.

SALT AND WATER FOR BEES.

We, too, give our bees all the water they want, in an iron dish about two inches deep and about 12x14 the other way; in fact it is an old cook stove ash pan. We keep it filled with cobs, as a rest for the bees to alight upon, and within fifteen feet of the hives; it is almost constantly occupied with bees. I have tried clear salt for the bees, but never have tried dissolving it in water. They did not touch the clear salt.

THOSE INVITATIONS.

To friend McLean, and others, I would say, we frozen toed Northerners thank you for your kind invitations to go South and help gather the honey going to waste there, and some of us may take you at your word and try it next season; so many, mayhap, that you will wish you had not asked us. But you know we cannot always do as we would like, even at getting up "scraps."

THE SEASON.

The season for honey has been very light. We had a very pleasant visit on the third of December, from T. G. McGaw, Monmouth, Ill., and spent a half day taking him around to see my bee friends, etc. He reports it as the worst season he ever knew: not a drop of honey and no increase. We bragged a little over him, for we got 95 lbs extracted honey, though we were honest enough to tell him also that we FED IT ALL BACK, later, for fall breeding. I began in the spring with three good stocks, bought two four-frame nucleis from J. Oatman & Co., Dundee, Ill., (which were satisfactory in all respects) and three dollar queens from T. G. McGaw. Built our number up to twelve good stocks, with plenty of bees and honey for winter. One man had three stocks in the spring, got up to eleven by natural swarming, but three or four are very light. We also bought eighteen dollars and ten cents worth of empty comb, besides having some of our own. Packed the bees in their winter quarters, Nov., 15th, in boxes eight inches larger every way than the hive; space filled with clean dry straw; summer entrance covered with wire cloth, 11 frames in space of 12, four and half inch sticks on top of frames. double quilts on, division board in north end of hive, caps raised one half inch in front.

December 5th, cloudy and misty, but warm, let down front of boxes, (hinged at bottom) and let the bees fly which they improved right royally, all flying very strong. Have five stocks in one box, four in another and three in separate boxes. Friend McGaw thinks we have them fixed as good, if not better, than they would be if in a celler, saves trouble lugging them out to fly. When I wrote last our bees were working strong on the buckwheat, but at that time they had large amounts of brood on hand, (thanks to our feeding) and though they worked

early and late, only succeeded in filling their hives enough for winter. But we are thankful for that much, twelve stocks from three, all strong for winter. Have had very little cold weather so far.

Bees Dr. $56.06; Cr. 96.85.

Oneida, Ill., Dec., 12, 1875.

———o———

For the Bee World.

HOW I MANAGE BEES, No. 2.

REV. M. MAHIN.

It is sometimes necessary to transfer bees from log or box hives to movable comb hives, and it is important to those who have it to do to be able to do it neatly and with dispatch. I have had a good deal of experience in that line, and I think I can give instructions which will enable any one to do it a little better than it is generally done.

First of all you want a transfer board, this should be a little larger every way than the frame. It should have a couple of cleats on the underside, so that it may be readily lifted from the table or what ever it may lie on while being used. It should have small blocks nailed on the upper side around the edges to prevent the comb frame from slipping about, while the combs are being fitted in. It should also have two or more grooves, according to the width of the frames, so that when the frame lies on it the grooves will run from top to bottom of the frame; the grooves should be about one fourth of an inch deep, and about the same in width. The next requisite is a set of sticks for holding the combs in place. These should be a little more that one eighth of an inch square, and about one half an inch longer than the frame. Cut notches near the ends, and having cut pieces of annealed wire about three inches long wrap one end of the wires around the ends of one half of the sticks. When you are ready to put the combs into the frames lay two or three of the wired sticks, as the case may require, in the grooves in the transfer board, and lay the frames over them, so that the wires will be just above and just below the frame, lay the comb on the frame and trim off any portions that project over the edges, and then lay sticks that have no wires on them over the others, wrap the ends of the wires that are attached to the lower ones around them, lift up one end of the board so as to bring the frame to an upright position, and put the frame in the hive. Proceed in this until all the combs are transfered.

I have tried, and seen tried, all the methods recommended and unhesitatingly recommend the above as beyond comparison the best. In two or three days, the frames can be lifted out, and the sticks removed, and laid away until wanted again. They will last a long time.

But I have not yet told how to get the combs out of the hive, which I will proceed to do. If the weather is warm, and the hive populous, it is better to drive the bees out before cutting out the combs. For this purpose there must be a box the size of the hive, only not so tall, it should have a couple of sticks across the inside, about the middle, for the bees to cluster on. Being ready to proceed you blow smoke into the hive to cause the bees to fill themselves with honey, and carry the hive away to the place of operation, set it down bottom upwards, put your box over the mouth of it, tie a cloth around the point of junction to prevent the escape of the bees, and you are ready

to drive the bees out. To do this you drum on the sides of the hive with sticks, beginning near the ground, and gradually proceeding upward. In fifteen or twenty minutes nearly all of the bees will be clustered in the drum box, then carefuly lift it off and set it bottom upwards in a shady place, and spread a piece of carpet or a coffee sack over it to keep the bees in. To get the combs out it will generally be necessary to take off one side of the hive. This can be best done by cutting the nails with a cold chisel. In many cases I have transferred swarms without driving the bees. If they are first subdued with smoke the hive can be taken apart and the combs cut out with the bees in the hive. By begining on one side, and occasionly using smoke, the bees can be kept out of the way; and when the combs are all cut out they will be clustered on the remnant of the hive. The combs being all placed in the new hive, place a board in front, on a level with the fly hole, and shake the bees upon it and let them go in.

The drum box should have a hole in one side, covered with wire cloth, for ventilation.

Care should be taken to place the brood as compactly as possible, and to have the combs right end up, as the cells are a little higher at the outer, than at the inner end. Drone comb should be rejected as unprofitable. It may be used in frames from which the honey is to be extracted, indeed, it is better for that purpose than worker comb, but the less of it there is in the brood chamber the better.

Bees may be safely transferred from March until November,in this latitude. I have transferred swarms in both of the above named months and had them do well. Weak swarmes should not be transferred until flowers come, and breeding is well under way.

New Castle, Ind., Dec. 1875.

———o———

For the Bee World.

HATCHING BEES BY ARTIFICIAL HEAT.

Some severe criticisms appeared in the Journals a year or two since, upon the experiments of a bee keeper of some note, of Medina, Ohio, hatching the eggs of bees by means of artificial heat—steam I believe. He also sent the eggs of bees by mail to distant towns, which was not altogether a success. The egg of the bee, like that of birds, or of our domestic fowls will retain its vitality a certain length of time under certain conditions, and I can see no reason why they could not be shipped, or hatched by artificial heat as well as the eggs of fowls. There are, at the present time, incubating machines, but to what extent they are used, or the success attending them I am not able to say. I find in looking over Rollin's Ancient History, these things were not unknown to the Egyptians. He says:—"I once could not believe that Diodorus was in earnest, in what he relates concerning the Egyptian industry, viz: that this people had found out a way, by artificial heat, to hatch eggs without the sitting of the hen; but all modern travelers declare it to be a fact, which certainly is worthy of our investigation, and is said to be practiced also in Europe. Their relations inform us that the Egyptians stow eggs in ovens, which are heated to such a temperament, and with such just proportion to the natural warmth of the hen, that the chickens produced by these means

are as strong as those which are hatched the natural way. The season of the year proper for this operation is from the end of December to the end of April, the heat in Egypt being too violent in the other months. During these four months, upwards of three hundred thousand eggs are laid in these ovens, which, though they are not all successful, nevertheless produce vast numbers of fowls at an easy rate. The art lies in giving the ovens a due degree of heat, which must not exceed a fixed proportion. About ten days are bestowed in heating these ovens, and very near as much time in hatching the eggs. It is very entertaining, say these travelers, to observe the hatching of these chickens, some of which show at first nothing but their heads, others but half their bodies, and others again come quite out of the egg: these last, the moment they are hatched, make their way over the unhatched eggs, and form a diverting spectacle. Corneille de Bruyn, in his travels has collected the observations of other travelers on this subject. Pliny likewise mentions it; but it appears from him, that the Egyptians, anciently, employed warm dung, not ovens, to hatch eggs." *

———o———

For the Bee World.

LETTER FROM VERMONT.

JASPER HAZEN.

FRIEND MOON:—The date of your note, Dec. 2, 1875, reminds me of a fact, which I think I may offer as an apology for delay; or, if you insist upon so calling it, neglect in writing for the Journals for such a length of time. My recollection does not reach quite back to the year 1790, but it goes back some years in the 17th century, and I remember reading in that century, before its close, the record in my father's family Bible—the blessed Bible that lay on the stand—on one of its blank pages, "Jasper, born December 2, 1790." So my passage into the commencement of my four-score and sixth year I urge as excuse for delay.

I will venture a few remarks for the consideration of farmers, on the subject of bee-hives. I say for farmers; for if there are experts in bee-keeping, who read the WORLD, I should have no hope of benefitting them, for I have not yet found one who did not have a way of his own, so much better than that of anybody else, that efforts at instruction would be useless:

1, The fields of the farmers furnish the principal resources for honey.

2, Their location upon their farms place them in the right position to secure this, as well as the other products of the farm at the least expense of time or labor.

3, Each farm of 100 acres might give from 100 to 1,000 pounds of box honey per annum, at an original expense of ten to one hundred dollars. The expense in subsequent years, nothing but a little time and care, which becomes a safe and pleasant amusement, or experiment.

4, The great obstacle in the way, of fear of stings, may be effectively obviated by the use of the bee hat, gloves, and boots, rendering their attacks as harmless as the attack of flies.

5, The general adoption of our plan by farmers, would render honey the cheapest, as it is the pleasantest sweet in the community.

6, Hive.

There are several important objects

to be secured by the construction, form, and size of the hive. But the two most important are safety for wintering, and convenience for securing the largest amount of surplus honey, in the best shape for market.

1, The best shape for safe wintering, on the stand or in any other place is, a box twelve inches square, inside measurement, and of sufficient hight to give sufficient room for the colony and winter stores. Or it may be varied in form and be 8x18 inches in breadth, giving the same room for brood and winter stores in the same heighth of hive. This breadth and width gives 144 cubic inches to each inch in hight of the hive. This will give 2,880 cubic inches at 20 inches in hight. At 22 inches in hight it will give 3,138 cubic inches. If I give 16½ inches high only, I have 2,369 inches. With the arrangement of the breeding department—eight inches by eighteen—I have but five sheets of comb, with bars or frames at pleasure; but I secure room for surplus boxes placed at the sides, (of the outside sheets of comb), six inches square, five and a half inches high, four courses on each side of 22 inches high,or three courses of 16½ inches high. And additional room for a top course of boxes, resting upon the side boxes and the bars or top of the frames, of an aggregate capacity of 165 pounds of surplus in one case, and 135 pounds in the other. I understand this to be an improvement upon any hive I have ever seen. As such improvement I procured the patent right for its use in 1862, and send you with this a circular with a picture and description of it. I will send a description and picture to any of your subscribers who will send me their address and a three cent stamp, or scrip of fractional currency.

The improvement made in hives, the profits of the business may prove a larger increase than the mowing machine or reaper gives them in proportion to both labor and expense in the business.

Expense for hive, $5.00; for bees, $5.00; total $10.00. Profits for ten years, 100 pounds annually, $20.00; amounting in ten years to the sum of $200, for an outlay of $10 and a little care to place the hive in the cellar in the fall, and remove it to the stand in the spring. Place the boxes on early, when filled remove them, and dispose of your 100 or 160 pounds of honey from your bees:—Several hundred per cent. profits annually

Woodstock, Vt., Dec. 9, 1875.

—— o ——

For the Bee World.

FIRST CARES AFTER WINTER.

CH. DADANT.

As soon as the cold days are over, usually, in this latitude, a few days before the fifteenth of March, the bees awaken from their winter slumber and are eagerly engaged in cleaning their hives.

It is a good practice to help them in this work. With movable bottom hives this cleaning wants but a few seconds for each hive. An assistant lifts the front of the hive, while the bee-keeper, with a quill or goose wing, sweeps out the impurities.

If a bottom be mouldy, or wet, another is substituted, and the damp one, carefully rubbed, is given to another colony. Two persons can easily clean over one hundred hives in one afternoon.

While some bees are thus occupied in carrying out the bodies of dead bees, some others are in quest of hon-

ey. Of course they find nothing in the fields, and, hovering around the other hives, try to get inside to rob their honey. This propensity and the evils of robbing are diminished by furnishing the bees some flour to gather, in place of pollen.

The flour, besides the occupation given to the workers, excites the laying of the queen, and the colony is recovering fast from the losses of winter.

Every kind of flour is good. As some years the bees find pollen very early, we cannot estimate beforehand what quantity they will take, and as we do not want to put some inferior grade of flour in store for the following spring, we give our bees the same quality of flour that we use.

To help the bees in finding our substitute for pollen, we put upon the flour some broken combs, previously lightly besmeard with honey. We sprinkle some flour on these combs, and the flour is heaped inside of a flat box and pressed firmly with the hands, to prevent the bees from being drowned in the flour, when they alight on it. The bees, in sucking the honey, rub themselves in the flour, and finding that this dust is good, they load their legs with it. One single bee is seen at first rubbing her legs, to make the pellets, then two, three, and in a few hours some hundreds are working in the box.

Tea boxes are hardly sufficient for 100 colonies. We use inverted caps and put in every box two pounds of flour; sometimes this quantity is insufficient for a single day. If some colonies are slow in coming to the flour, it is nearly certain that they have no brood. It is by such colonies that the general visit of the combs ought to be commenced.

Let us look inside of these colonies:

1st, One has a queen—we saw her—but she does not lay yet. She is probably sick, or the number of workers is too small to make the hive comfortable. In both cases we have to examine if the hive is not too large proportionally to the number of its inhabitants. Then we diminish the room, by means of partition boards, so as to give the bees just as much room as they can well occupy. Let us remember that every colony ought to have honey and pollen in the combs. If we have chaff, old garments, moss, or leaves, we fill the dead spaces to protect the bees against the cold nights. If we have put some absorbant matter on the top of the combs, we take it away; for in spring, when bees have brood, they need water, and the drops formed by their perspiration in the cold days, will prevent them from going to the brook for water. Before quitting this hive we take care to write, upon its slate, in what condition we have found it at our first visit.

2d, The following colony shows a miserable aspect: the bees are few in number; they look greasy; the combs are damp; some combs have uncapped honey, which is protruding out of the cells, ready to drop at the lightest jar; the frames are dirty, soiled by the fœces of the bees; no brood, but a good looking queen. This colony has been decimated by dysentery. It wants to be cared for at once.

We open a strong stock and borrow from it five combs, containing honey and bee bread, and, if possible, a little spot of brood—no more than the bees can cover. We establish these combs in a hive, between two partition boards; we put this hive in place of our sick colony, then, taking out all

the frames of this last, shake the bees between the two combs of the new hive. Then we shut up the hive and replace, in the strong colony, the borrowed combs, by two of the wet ones of our sick colony. A few minutes after we see our sick colony cleaning the mouldy combs, and ventilating the hive to evaporate the watery honey. Our sick colony is now in good condition, but too feeble. When all the bees are inside the combs we protect it against cold nights, as we did for the first visited stock, till we find some bees, or brood, or both, to give it.

3d, In another hive there is no brood. and we cannot find the queen. Yet we cannot say for certain that she is missing. The colony is strong in numbers yet. To ascertain if the queen is in the hive, we introduce in it a comb containing young brood. If the queen is present no queen cells will be built; we can ascertain the fact in five or six days. If at this time some queen cells are made, we are pretty sure that the queen is missing. Then we take out the comb with brood, giving it to some other feeble colony, after having destroyed the queen cells, and on the morrow we give the bees to our sick colony, shaking them in front of the hive a little before dark.

4th, This other colony has some brood, but it is irregularly deposited. A few capped cells are mixed with cells having eggs, and grubs of every age. All the capped cells are with round covers; i. e.; they contain drone pupæ. We are in presence of a queen less stock with laying workers.

It would be unsafe to unite this colony with a depopulated stock, for the queen would be killed by the laying workers. To restore this colony, which has a good population, we give it a comb with sealed or hatching brood. Often the bees with laying workers have become accustomed to their false mothers,and refuse to build queen-cells. But the newly-hatched bees (of the comb introduced) refuse to accept this state of things, and if we give a second comb a few days after the first, they hasten to raise queen cells, and they succeed in hatchin queens.

(To be continued·)

Hamilton, Id., Dec., 1875.

———o———

For the Bee World.

BEE-KEEPING BY THE MASSES.

E. KNIGHT.

Mr. Editor:—With your permission, I will offer a few suggestions for the benefit of that portion of your readers who have never kept bees. I would gladly induce them to make a fair trial of the business; not as men of experience or science, but as beginners; not on a large scale, but with one or two colonies only.

I do not expect that everyone will become a scientific bee-keeper, or even a successful one. Many have not the requisite traits of character; and perhaps even a larger number have little or no taste for the employment. Nevertheless I see no reason why every farmer should not keep a few hives and thus secure one of the greatest luxuries that God has placed within our reach. But I propose making a few suggestions for the benefit of those who are wholly unacquainted with apiculture.

Buy your bees in the spring. You will thereby run no risk in wintering. Do not buy any but a first class colo-

ony, however low it may be offered to you. Having purchased your stock of bees, place them upon a stand so situated that the family will be likely to hear and see them when swarms issue. You will save much time that would otherwise be spent in watching them. They may be set where there is much passing of the family in their ordinary avocations. They soon become accustomed to this, and it gives much less offense than to stand for a few minutes near the hive when they are passing to and from it.

Should there be any indications of fighting, the entrance should be lessend so that the bees will more easily defend their stores against marauders. The novice must be careful that he does not mistake the process of removing the mucus from the young bees for fighting. The young bees are smaller than robbers, and besides this, in fighting, dead bees are left upon the field of battle. If the colony is strong but little more attention will be required until about swarming time.

Drones usually appear from one to three weeks before the first swarm issues. The near approach of swarming is usually indicated by a large increase of bees about the hive, and they often cluster in large numbers upon the outside. But this is not an infallible sign.

If the hive has an observation glass, and you notice that the bees are uncapping and removing honey, it is an indication of immediate swarming, and only fails in consequence of unfavorable weather or some other casualty.

Bees in swarming usually occupy as a parade ground, the open space in front or near the hive. Bushes or other objects should be set around and near the open space for the bees to cluster upon. Should they begin to cluster where it would be difficult to hive them, they may be brushed off, and the place rubbed with yellow pith elder, or some other substance that is offensive to them, and they will soon cluster in some other place.

As soon as they become quiet place the hive, with the bottom-board in its place, upon a table. The front of the hive should be raised about two inches from the bottom-board. Spread two or three thicknesses of cloth upon the table in front of the hive to break the fall of the bees, and then shake the cluster upon the table immediately in front of the hive. For a moment they appear confused, but soon head toward the hive. In warm weather they will cluster from the inside and outside up the hive so as to close the entrance. In such a case gently break the cluster with a smooth stick in such a manner as to press the bees into the hive. They should also be carefully scraped from the outside of the hive upon the cloth in front. In this manner keep the entrance open, and the outside of the hive clear of bees, and all will soon enter the hive. The hive should be gradually and carefully let down upon the bottom-board and removed to a suitable stand.

The novice need have no fears that the bees will not cluster if disturbed in their first attempt. If they show any disposition to cluster it shows that they have no tree selected as a home; and they will not go far before clustering. If bees have a tree selected before swarming, after a few minutes' parade, they rise in the air and concentrate their numbers on the side

toward the selected tree, and gradually commence their flight.

Not one swarm in a hundred selects a home before swarming. In a long experience I have had but three cases. In one of these I succeeded in breaking their ranks by throwing water, and they were compelled to cluster. They were hived, and in an hour they were again in the air, and again they were hived. They continued to repeat the attempt until they had been hived six times. About the time they were last hived a neighbor who was felling trees cut one that had nearly a pint of bees in the hollow, which soon left in the direction of my house. This was undoubtedly the tree selected by my bees for a home, and had it not been felled I could not probably have saved them.

The universal error of tyros in bee-keeping is an attempt to save weak swarms.

All late swarms should be returned to the parent hive by removing the queen.

It may be done in the following manner:—Place a table in the shade and out of the wind, and spread a cloth upon it. Take the clustered bees and shake them upon the cloth. As soon as the bees become quiet commence your search for the queen. If you have never seen a queen, no matter, for when you see a bee that is longer than a worker you may be sure that is a queen. Pick her out with your fingers, or place a wine-glass or tumbler over her and slide it over a shingle or piece of pasteboard. While looking for the queen you will easily change the position of the bees by raising one side of the cloth at a time. This movement prevents the bees from organizing and rising into the air. It may sometimes hasten the operation to remove, upon a shingle, a few bees at a time from the mass.

In late swarms more than one queen is frequently found.

If this operation seems unsafe a vail may be worn for protection.

In handling bees do it gently. Avoid sudden jars; never breathe upon them; and never use a brush made of hair, fur, wool, or feathers. A smooth wooden spatula is a more suitable instrument in the apiary. Before the close of the first season the beginner will be able to form an opinion as to results.

To those who find a pleasant recreation in the care of bees, I would say Subscribe for a Bee Journal, and purchase some scientific work on the Honey Bee.

To those who are satisfied with results, but find no pleasure in this employment, let me say Send for The Apiary, or some other practical work, without delay. If there are any who have not succeeded in their first attempt, I would only say to them Be not discouraged.

In another number of the WORLD I purpose to make some remarks upon bee hives and supers suitable for the use of those who can spend but little time with bees. I hope no one will infer that I have any interest in a patent bee hive, for such is not the fact.

Maple Grove, Maine, Dec. 5, 1875.

For the Bee World.

SRCAPS FROM KENTUCKY.

R. M. ARGO.

MR. EDITOR:—I wish you and all the correspondents of the BEE WORLD a Happy New Year! and may the World's course be a bright and prosperous one this year.

I have just seated myself from the dinner table, this New Years day, which contained a large bronze turkey. No bees in the dining room, but plenty on the wing, all around the house. I am at a loss for a subject; and if what I write this time is not worth reading, the readers will please ascribe it to my being full of turkey.

The weather since the 13th has been extra warm for the season. No fires are needed, only to cook. Bees have had a flight almost every day during the time from five to six hours each day. Two days ago I examined a few stands, and to my surprise there were eggs, larvæ and sealed brood in all stages, a thing I had never seen at this time of year before, nor had I ever seen the like before sooner than March. I have lived here since 1851, and never have I known the month of January to pass without a cold spell sufficient to freeze the ice from two to eight inches thick, and should such a spell occur soon, it will destroy all this brood, larvæ and eggs, except such as is in the middle of the cluster of bees.

I have walked through many fields, pastures and woods this week, and never have I seen the white clover coming up so thick, and should not this get hurt by subsequent cold spells I think we may look for a good bee year, at least I hope so, for no doubt most of us are tired getting three or four bad bee seasons to one good one. But I have said enough about bad seasons.

Are you and most of your correspondents aware that there is a great difference in honey, in the color, taste and flavor, in different locations in the country? I knew there was some difference, owing to the different sources from which it was gathered. But I had no idea that it was so great as I have found it this fall and winter. I have had specimens sent to me from different States—Ohio, Michigan, Missouri, Tennessee, &c.,—and of all the various samples from different bee men only two were as white as my honey, and none of as good taste and flavor. The two I refer to were Linden from Michigan, and Sourwood from the south part of Tennessee. Both might have been as good as mine had they been white clover as mine is. Another sample from Michigan was the Yellowest I ever saw taste tolerable good. It was full bloom. I also received one from the middle of Missouri nearly as yellow as that of Michigan, and of so bad a taste as to be almost unfit to eat. I was both pleased and surprised to see my honey whiter, clearer and of a better taste, flavor and smell than any of these samples sent me. But it may be that none of them were white clover honey. Would it not be a good idea to send specimens of honey to our State fairs from different parts of the country?

As the color of honey comes from the source from which it is gathered, it is not in the power of the bee keeper to get nice, clear honey, but it is in his power to get good honey—that is, extracted honey—as, for instance, wait until the cells are thoroughly sealed before extracting, and you will get good honey. For a darker honey, not very good, extract before the cells are sealed over. I am aware that this will be disputed, but it is my experience and not theory. You will say, heat the honey that was extracted before sealing and thicken it. Well, I have tried this too, but it drives away a considerable part of the flavor. So there is no other way to get real good

nice, thick, rich honey than to wait until the cells are well sealed over.

One of the samples was the adulterated honey, sent by a friend in Cincinnati. I can not see how a bee-man would not be able to detect the difference between that and real honey in an instant. But, most unfortunately for the people, most of them can not tell the difference, and this is against us bee-men, for it is what brings the price of real honey down so low. When we educate the people to know real honey from counterfeit we will then, and not till then, get our price for honey. As long as we have the adulterated article to contend with we will have to throw our honey away.

Will all the old writers return to the BEE WORLD this year?

Lowell, Ky., January 1, 1876.

———o———

For the Bee World.

THE DRONE BEE.

J. W. HOWELL.

MR. EDITOR:—Owing to circumstances that need not be explained, I did not write a communication for your valuable periodical for December. There is nothing new in bee culture among us at this time, except the following which I think is a strange occurrence. One of my neighbors concluded to examine his hive, and on opening a Langstroth, which contained a late and small swarm, to his astonishment he found nothing but dry comb and a large quantity of moth-worms alive and kicking, and that, too, on the 13th day of December, after having several frosts and freezes.

Every work that I have seen on bee culture makes the same statement in regard to the origin and production of the drones. They all state that the queen previous to her bridal trip, or impregnation, will lay eggs that will hatch out drones. If this be true, it is contrary to the belief and teaching of the most learned physiological writers on the subject. Now, the feathered tribes will lay eggs under similar circumstances, but they will not hatch and produce a living animal, and so throughout the animal kingdom and throughout the vegetable world—a universal law, as I believe, without an exception, unless you would make the queen bee the exception—for it is universally believed and taught that, without sexual intercourse, there can be no offspring or increase, and, hence, I have come to the conclusion that the various writers on bee culture must be mistaken in regard to the rearing of drones, and the whole subject, it seems to me, ought to be rehashed and gotten up on more scientific principles.

Now, I expect nothing else but that some of your numerous corresponcents will pounce upon this criticism, and if they do, I would suggest to them to be sure and start in the right direction and not pick up old and hackneyed sayings without proof as to their correctness.

My bees are doing well so far. We have had but very little cold weather since the middle of Dechmber. There has not been more than two days in succession since the middle of December that bees did not get a fly-out. To-day they fly finely.

Kenton, Tenn., January 5, 1876.

———o———

Hives, with bees in them, being transported, should be carried mouth upwards, except frame hives where the crown board can be removed, and perforated zinc substituted.

nice, thick, rich honey than to wait until the cells are well sealed over.

One of the samples was the adulterated honey, sent by a friend in Cincinnati. I can not see how a bee-man would not be able to detect the difference between that and real honey in an instant. But, most unfortunately for the people, most of them can not tell the difference, and this is against us bee-men, for it is what brings the price of real honey down so low. When we educate the people to know real honey from counterfeit we will then, and not till then, get our price for honey. As long as we have the adulterated article to contend with we will have to throw our honey away.

Will all the old writers return to the BEE WORLD this year?

Lowell, Ky., January 1, 1876.

———o———

For the Bee World.

THE DRONE BEE.

J. W. HOWELL.

MR. EDITOR:—Owing to circumstances that need not be explained, I did not write a communication for your valuable periodical for December. There is nothing new in bee culture among us at this time, except the following which I think is a strange occurrence. One of my neighbors concluded to examine his hive, and on opening a Langstroth, which contained a late and small swarm, to his astonishment he found nothing but dry comb and a large quantity of moth-worms alive and kicking, and that, too, on the 13th day of December, after having several frosts and freezes.

Every work that I have seen on bee culture makes the same statement in regard to the origin and production of the drones. They all state that the queen previous to her bridal trip, or impregnation, will lay eggs that will hatch out drones. If this be true, it is contrary to the belief and teaching of the most learned physiological writers on the subject. Now, the feathered tribes will lay eggs under similar circumstances, but they will not hatch and produce a living animal, and so throughout the animal kingdom and throughout the vegetable world—a universal law, as I believe, without an exception, unless you would make the queen bee the exception—for it is universally believed and taught that, without sexual intercourse, there can be no offspring or increase, and, hence, I have come to the conclusion that the various writers on bee culture must be mistaken in regard to the rearing of drones, and the whole subject, it seems to me, ought to be rehashed and gotten up on more scientific principles.

Now, I expect nothing else but that some of your numerous corresponcents will pounce upon this criticism, and if they do, I would suggest to them to be sure and start in the right direction and not pick up old and hackneyed sayings without proof as to their correctness.

My bees are doing well so far. We have had but very little cold weather since the middle of Dechmber. There has not been more than two days in succession since the middle of December that bees did not get a fly-out. To-day they fly finely.

Kenton, Tenn., January 5, 1876.

———o———

Hives, with bees in them, being transported, should be carried mouth upwards, except frame hives where the crown board can be removed, and perforated zinc substituted.

But if, in the spring, you wish to stimulate your queens to greater activity or your bees to the building of new combs, you will need to follow an entirely different process. It is known by all good apiarians that when honey is coming into the hive regularly the queen is stimulated to lay a vast amount more eggs than when there is no honey coming in, although there may be an abundance of sealed honey in the hive. Hence, the philosophy of feeding a little honey every day in early spring; also, if your bees are destitute of a sufficiency of bee bread, you can feed a little rye flour or corn meal, put in the sunshine and out of the way of the wind, with a good effect, in order to have a strong stock of workers on hand on the early appearance of the harvest, that they may wade in and take of the first fruits of the land; and should the harvest linger you need not fear the laborers will tire, for when there is work to do the little busy bee is always ready.

If you wish your bees to use your feed for the purpose of raising bees or the building of new combs, you will need to dilute your honey or syrup with water, but not so much that it will not be sufficiently sweet for the bees to partake of it freely, and in order that they may not store it in the the combs it will be necessary to acidify it a little by using acetic acid, cider vinegar, or lemon juice, for the bees very well know that if they store such in their combs it will be an injury, therefore they will not do it, but being an avaricious little fellow they will eat of it and feed it to their young until all become fat with a secretion of wax, when, if you place an empty frame in the center of the brood nest, you will be surprised with what rapidity it will be filled with new combs.

If you wish nice, white combs, you must use white sugar or honey, or you may color your feed yellow, red or blue, and the combs will partake of the color of your feed.

As there are many kinds of feeders now in use, I will now describe only one, as I may tread on some one's corns. The one I use is one of my own getting up, and I do not know that there is a patent on it. I make a regular frame to suit my hive, (I use the close-fitting top), and, instead of putting the bevel comb-guide close to the top, I put it two inches below, then tack a piece of close domestic on one side of the top, then pass it under the bevel piece and tack it to the other side of the top, thus making a trough. I then bore a hole through the top piece, through which I can pass my feed. I then make a trough by plowing a groove in a piece of wood one inch square and fasten it three eighths of an inch below, in order to catch any drippings that might otherwise fall on the bottom board.

Columbia, Tenn., January 1, 1876.

———o———

THE MICHIGAN BEE-KEEPERS' ASSOCIATION.

NINTH ANNUAL MEETING—A GOOD ATTENDANCE—AN ENTHUSIASTIC AND WIDE AWAKE BODY—THEORY AND SCIENCE—PLEASURE AND PROFIT COMBINED—FULL REPORT OF THE PROCEEDINGS.

KALAMAZOO, MICH., Dec. 1st, 1875.

The Ninth Annual Session of the Michigan Bee-Keepers' Association convened in Corporation Hall, at 2 o'clock P. M. Vice-President A. C. Balch in the chair. A large number of the leading apiculturists of this

and adjoining States, were present; and but for untoward circumstances, the number would have been much greater. The annual session of the National Society at Toledo, Ohio, which commenced to-day, prevented many from meeting with us, while business engagements compelled the absence of several of our most active workers, among the number being President Bidwell, Prof. Cook and Mr. F. F. Bingham. But the enthusiasm of those present compensated for the lack of numbers, resulting in one of the most valuable apistical gatherings ever held in America, as will be seen by a careful perusal of the subjoined report.

President Balch stated that as this was an annual meeting, the regular business of the Association would be transacted before taking up the programme of the convention. The Secretary read the minutes of the May convention, which were approved. The Treasurer's report exhibited a handsome balance in the treasury, evidencing a healthful monetary condition. The Secretary then read a detailed report of his work for the Association for the past year. He stated that our Association enjoyed the reputation of being the oldest existing organization in America, and that he had received evidence from various sections of the country that our proceedings were looked for with even greater interest by the masses of apiculturists, than those of the National Society.

Notices of the meeting were widely circulated, and an extensive correspondence instituted with a view of obtaining as many essays on practical and scientific topics of interest to bee-culturists as possible; many good promises were obtained, but very few papers were received. He also stated that many complaints had been received because the convention was held at the same time as the Toledo meeting. In explanation he cited the convention to the fact that when we adjourned last May, it was the general impression of those in attendance that the Toledo meeting would occur the week previous to our own, as their reports stated it would be held in November. From this it would readily be seen that we entertained no desire to interfere with that body, and that if any charge of interference was to be sustained, it lay at the door of the management of the National Society. After the transaction of other business, the programme of the convention was taken up by the reading of a paper from J. P. Moore, Binghamton, N. Y., entitled "The House Apiary," by the Secretary; in introducing the first topic: "Will the introduction and general use of the 'House Apiary' be advisable?"

Mr. Moore stated that after three years experience with the House Apiary he could say but little in its praise; that it gave no better results in honey; the bees would swarm even worse than out-of doors; and that it was ever so much more work to manage bees in the House Apiary than out of it.

The subject being comparatively new, it elicited but little discussion, though it was the general impression among those present, that it was unsafe to invest in House Apiaries from our present knowledge of them.

Pres. Balch—I think that most of us will agree that, in this, as in all other delusions, it is better to let well enough alone.

James Heddon thought it exceedingly imprudent in this Association to

question the practicability of the House Apiary, since A. I. Root had built a House Apiary, had talked, run, and photographed it. Thus it will be seen that we are most effectually forestalled in the discussion of this question.

H. A. Burch stated that the problem was a new one, but thought it advisable to consider it, inasmuch as it was attracting much attention among bee-keepers. If it be altogether impracticable as now seems probable, the sooner we know it the better.

The next topic, "Winter Bee-Keeping," was introduced by a paper on that subject from Rev. A. Salisbury, Camargo, Ill. Mr. S. considered the philosophy of hibernation at considerable length, the discoveries and teachings of science and their application to the subject so as to secure uniform and complete success in this particularly hazardous field of modern api culture.

Pres. Balch—Though I may ride a hobby in the frequent repetitions of my views on this subject, yet I will again repeat them by saying that my experience has been—the less ventilation of the hive during the winter months, the better. Nature guides the bees to seal up the hive perfectly tight as the fall months approach. This is the result of instinct implanted in the bee by their Creator, who is wiser than we. Upward and lower ventilation produces a draft through the hive. This disturbs the bees; those on the outside are constantly trying to get inside the cluster. This causes them to eat, and the result is dysentery. 'Tis true that a little moisture may accumulate in the hive but no mould will collect that will not vanish during the first week of warm weather in spring. I never disturb bees so late in the season that they cannot again seal the hive up tight.

H. A. Burch—Mr. Salisbury's success is certainly a point in favor of his theory and practice. Success is the measure of the value of any method.

Pres. Balch—While this is quite true, they might have wintered even better with no ventilation at all. Try it and see.

James Heddon—Has any one made a careful series of experiments with a view of testing this ventilation business?

Dr. W. B. Southard—I have done so; but it wasn't last winter when my bees all died. Some years ago I gave nearly all of my bees an abundance of both upward and lower ventilation; they wintered well but consumed lots of honey. This winter I removed all honey boards, placed a piece of sacking on top of the frames and covered it with two inches of bran. By using a double thickness, found the lower one 10° the warmer. Wheat bran is an excellent non-conductor, and absorbent of moisture. Very little moisture has accumulated in my hives thus far. With upward ventilation, large amounts of honey are consumed—three times as much as with none at all. 'Tis impossible to keep an even temperature in the winter repository; but we should approximate it as nearly as we can. Bees winter more safely in box hives than in movable combs.

James Heddon—In the winter of '71 and '72, two of my neighbors had sixty-five and eighty five stocks respectively. In the following spring they had but one apiece left. All the other bees kept in the vicinity died. These bees had increased from small beginnings and had been wintered

with no less in previous years, under precisely the same treatment. All were wintered on their summer stands in box hives. Where this bee-disease prevails our bees will die—saltpeter won't save them—which renders the business extremely precarious.

Dr. Southard—By keeping the hives tight at the top you keep the bees warmer.

H. A. Burch—And foul air accumulates in the hive.

Pres. Balch—Will our medical brethren please state whether the air is more foul in a tight room at the ceiling than at the floor.

Dr. Southard—In the absence of a direct experiment, could not say, though doubtless at the floor. Ventilation at the bottom of the hive will eliminate the foul air.

A. S. Ranny—The air at the bottom of a perfectly tight living room, is the most destructive of life.

Dr. A. S. Haskins—The above is in accordance with the teaching of science, and is doubtless true.

James Heddon—In younger years I supposed there were certain fixed facts applicable to everything, but have found it is a mistake. For generations back it has been supposed that loading a gun heavily will scatter shot; but such is not the case, even though our grandfathers did believe it, and many of the people of to-day believe it still. Years ago everybody recommended upward ventilation; it was all the go from Langstroth down. Mr. Langstroth relates an instance in his book of a friend wintering seventeen stocks on their summer stands, only one having upward ventilation. The mercury went fourteen clapboards below zero, and the bees all died save the one that was all ventilation. During the past two winters I have given my winter repository both upward and lower ventilation; have ventilated some hives, while others had none, but it makes no difference. Neither does the kind of food they have to eat; some of mine had all basswood, others all fall flowers, never saw any difference in results. What kills our bees IS A DISEASE which I know little of save that it is intestinal. Can save more bees when they are diseased by keeping them at a uniform temperature. Keep the temperature at the point the bees call for—the degree of heat in which they are almost perfectly quiet. Two years ago my bees were satisfied with 42°; last winter they insisted on 32°. The past season I saved swarms that had been sick for two months—not in good condition though—by using combs that were employed last year in raising nine cent extracted honey. I increased fifty stocks to one hundred and five to raise twenty five cent box honey with another season. When the bees are a little sick, good care will save them; but if badly affected saltpeter won't do it.

Pres. Balch—Prof. Cook carefully tested the ventilation theory some years ago. A hive was hermetically sealed up in the fall and allowed to remain so all winter. When spring came the bees were all in good condition except Balch's that couldn't be resurrected. But the bees were not dead, only in a semi-dormant condition, and proved to be worth more than any three of the others. What PRODUCES the disease is upward ventilation; it makes bees eat—they can't void their fœces—they die of dysentery.

James Heddon—'Tis an epidemic and not contagious. Four years ago

when my bees all died, I brought in a box hive from the country in midwinter and placed it in the center of the cellar, surrounded by other swarms; all the others died while this one came out in splendid condition even though it was badly stirred up in getting it home.

T. S. Bull—Have wintered my bees in my house cellar for many years with splendid success, never having lost any bees, while my neighbors have lost all. My plan is to remove honey board in the fall and cover tops of frames with a piece of factory; as the spring months approach cover the cloth with sawdust. The cellar is dark though a light is carried in often to procure vegetables; temperature unifrrmly 50° Fahrenheit.

James Heddon—It is generally supposed that brood-rearing in a winter repository will lead to disastrous results; will Mr. Bull relate his experience in this direction?

T. S. Bull—Two years ago a hive accidently fell from a shelf on which it had been placed, to the bottom of my cellar, smashing the combs. I cleaned up the muss as well as I could, and succeeded in patching up a couple of combs. These were placed in the centre of the hive with an empty frame between them. Those bees filled that empty frame with comb, the queen deposited eggs therein, the eggs produced perfect bees, and the swarm came out splendid. The honey that was daubed on the hive and bottom board stimulated them to breed. I take no precautions against noise; they soon become accustomed to it, and remain quiet.

Dr. Southard—Noise will not disturb bees at 35° when it will at 50°.

James Heddon—At our May convention, Mr. Bingham gave a detailed account of his system of ventilating his winter repository, which is admirable, as he can keep the temperature at any given point. Still he has lost heavily, and is now in the South with his bees, because he KNOWS THAT NOTHING WILL SAVE DISEASED BEES in a cold climate. When bees are diseased don't disturb them. If anything ails a babe it wants to eat. (Had I realized that our medical brethren were present, I wouldn't have said it). 'Tis just so with a dyspetic man. Nature's prime want is hunger. An abnormal condition of the system—physical weakness—calls for food, for relief, which at best is only palliative, but more frequently an aggravation. Disturb bees and they will eat.

Pres. Balch—'Tis instinct to eat. They carry honey with them when they swarm, which is natural.

James Heddon—This is true of summer, but not winter. Has anyone present ever wintered bees so they would not speck the snow in spring? This is what I would term perfect success.

Pres. Balch—Have heard of such instances, but they have never come under my personal observation.

James Heddon—I want neither too old nor too young bees to winter well. Bees should not rear brood so late that the young cannot fly freely.

Dr. Southard—No doubt some have had admirable success in wintering with upward ventilation; but they will eat more. My experience says that this has nothing to do with the result however. Heat and cold is at the bottom.

The Secretary then read a paper from J. H. Nellis, Canajoharie, N. Y., on "Success in Bee-Keeping." Mr. N.

gave a correct and comprehensive epitome of the requisites of the art, which was well received and discussed as follows:

James Heddon—This is one of the best papers ever read before a bee convention. I do not wish to criticise for the sake of picking flaws, but will discuss one or two points contained in Mr. Nellis' paper. When bees were plentiful in box hives and cheap withal, capital was of "secondary importance;" but the low price of honey and high price of bees makes capital inseparable from success. To succeed we MUST have capital in the shape of a large apiary, all the needful appliances for rapid manipulation, and an eye of business for "the main chance." Avoid having too many irons in the fire, and give your business your undivided attention. Bee-culture don't agree with farming nor any other business. There will be a clash and one or the other neglected and of course unprofitable. The average bee-keeper must have strong stocks to make a success of "honey gathering rapidly." A good mechanic can make a good job out of poor stock, but a poor mechanic will make a poor job out of the best stock. The same is true of bees: a skillful apiarian can secure good yields of honey from weak stocks. An extractor is a convenience, not a necessity. Occasionally it will come in play for extracting broken combs so as to patch them up. Will you raise 9 cent extracted honey for a dull market, or 25 cent box honey for a ready market? My advice is to keep larger apiaries and raise honey in small glass boxes.

T. S. Bull—How would you dispose of our dark fall honey? Will THAT sell in boxes?

James Heddon—Most assuredly it will. My father is a traveling agent for a manufacturing firm of our town, and is thoroughly posted in regard to the best honey markets of the country. He recently advised me to quit using the extractor altogether, as the price of extracted honey is constantly receding. He says that box honey only will be profitable in future; and that the darker grades will sell well in a 2½ pound box.

Dr. Southard — Will not the bees crowd the brood chamber with honey, when the extractor is not used?

James Heddon—My opinion is, that an extractor is NEVER necessary for this purpose. Seven years of practical experience in the apiary is the basis of this belief. Mr. Burch has succeeded admirably in securing box honey, with no aid from the extractor, while Mr. Bingham regards its use as of no advantage whatever. Don't use large hives, but small ones: the bees WILL breed below and stow honey above in boxes.

Julius Tomlinson read a paper on "The Diffusion of Apicultural Science." He advocated the idea of a friendly interchange of ideas and experiences, with a view to mutual benefit and the advancement of apistical science. The discussion of the subject was introduced by

Pres. Balch—Heddon, that calls for you.

James Heddon—Mr. Tomlinson's paper contains many facts. The principles are good. Who can say aught against the glorious PRINCIPLE of communism? But such is not the system under which we live. All conventions in the different branches of business are held for the express purpose of furthering THEIR interests. Why are we as honey produerrs so anxious to

allure all classes of people into this "most fascinating(?) pursuit?" Is it not a fact that many of us have failed to realize any profit in real production, and changing our tactics, now toot our horns to others about the wealth that lies beneath it, hoping to be able to furnish them with apiarian supplies? ("Send stamp for circular.") Who are the editors of our bee journals? Are they retired honey producers, and as such, capable of teaching us who are ON THEIR road to wealth? Or have they failed as producers and are now chiefly interested in hunting up those who are "in any way interested in BEES OR HONEY"? Does swelling the ranks of apiculturists, and the consequent increase of production, have a tendency to further the interests of those who are already struggling in the business? And is it a blessing to the new recruits to be allured itno as precarious and uncertain pursuit as ours? Where are the fortunes that Langstroth and Quinby should have made, possessing the BEST ideas of to day twenty years ago, with no bee disease to annually decimate the ranks of "bee-dom"?

The interests of the publishers of the bee-journals are in direct antagonism to our own as honey producers, as is evidenced by Novice's refusal to publish my article which was only a fair and candid consideration of this subject, and written for the purpose of correcting a few of his misstatements. I intended to have read said article here to-day, but inadvertently left it at home.

[The article Mr. Heddon alluded to is as follows.—Sec.]

THE OTHER SIDE OF BEE-CULTURE.

FRIEND NOVICE:—I was not a little surprised at finding my refused article had crept into Gleanings after all. If you take the privilege of copying my article from other papers, and commenting upon them, you will no doubt allow me room in your columns for a candid honest reply. Please remember the shield that was red on one side and white on the other, and at least give us credit for honesty even if we do differ from you. Let us see if the article referred to is such an exaggeration or not.

Novice, you quote the price of good extracted honey at 16c. to 18c. and 20c. per pound. Why does one of our best posted apiarians peddle out 3,000 lbs. of extracted honey at $1 per gallon? The party I have in mind is a "traveling man" a part of the year and knows more about honey markets than the next one hundred bee-keepers you will meet. Why does Mr. C. O. Perrine reply to offers that he "does not want to buy honey at any price" because it is such a drug on the market that there is not half the usual sale for it? If this is a "honey-buyer's" dodge, why did this same "honey-buyer" advertise for honey but a few years ago? What have we got to-day to warrant better success in the future than in the past? Hope? How much money or bees would any of us have if we had sold all of our honey in past years at the prices given by Mr. McMaster in "Honey Column" in your October number? I infer from some of your past insinuations that you class me with the "honey-buyers." If so, what of my offer in "Honey Column" for October? If you don't believe me a "honey-seller," just send me down an order for this small lot.

What a foolish man Adam Grimm must be to sell his bees, when these "swamps of Michigan" are open to

him and he knows the bees here will pay all he asks for them in "just four months." Who hived the swarms from those bees that were "visited only once in one or two weeks"? My bees will sometimes swarm in less than "one or two" days. If bees and honey are worth so much, pray tell us why I cannot sell the bees and honey you have advertised for me? I never sold a pound of honey to any party who had ever heard of your "honey column." "MORAL."

About fifteen years ago, near Vandalia, Mich., out of over five hundred colonies of bees that came out strong in the spring, forty-five out of every fifty starved during the summer and fall, and that, too, in spite of feeding and keeping them alive for nearly sixty days in some cases. One careful apiarian fed until he could afford it no longer and then lost all but two out of about one hundred colonies.

The comb honey I offered in your "honey column" for October is in these same "section frames" weighing about three hundred pounds each, and why don't they "sell at sight"? The northern part of our State (Michigan) has yielded beyond a precedent the past season, and of course all eyes are turned toward that locality. Can't see New York now. People were looking there a year ago. To conclude, I will make this prediction, and time will show who is right and who is wrong. In the future not much extracted honey will be taken, at least for eating purposes, I mean for table use. Comb honey in fancy shape will be the bulk of the production. The price will range from 15c. to 18c. per pound, nett, for choice comb, and from 6c. to 8c. for extracted. Very little extracted honey will be produced when apiarians learn how to get just about as much surplus comb honey from their bees, as can be taken in liquid form, and also when they learn that in an apiary properly arranged and manipulated there is no need of an extractor whatsoever; and that extracted honey will not sell to experienced purchasers unless capped over and well "ripened" before taken from the combs. The prices given above are subject to war, inflation and panics.

I have written the above in all candor and good feeling toward all my fellow bee-keepers and invite all criticisms of the same nature, and request that you, Mr. Editor, print or return this to me. JAMES HEDDON.

Mr. Hiram Roop's reply in Gleanings stated that bee keeping is much more profitable than farming, citing his own experience as "proof stronger than Holy Writ" in support of his assertion. But why don't Roop's farm pay? Because he neglects it in the care of bees. A farmer in my neighborhood is paying the principal and interest of a $6,000 mortgage on a farm whose area is only twenty acres in excess of Mr. Roop's. But he attends to his business.

Of course, it will never do to dampen the ardor of the new converts, the bee journals must have new subscribers, even if it be at the expense of candor, thereby working for their interest, instead of ours who support them. Apiculturists, like other business men, will only accumulate by strict economy, great energy and skill. Capital only will save those of us who are making the business a specialty. We must run larger apiaries and raise box honey, if we expect any profit. The raw, uncapped, slung honey that

infests our markets, is not as tooth some as 80c. syrup. These views are the result of my experience and ob servation, but am at all times open to conviction.

In response to many inquiriss from those present, the Secretary gave a detailed account of his method of securing box honey, an epitome of which we subjoin, as follows :

I can see but one way to make bee-culture at all profitable, and that is to raise our surplus honey for market in small glass boxes. It then not only commands a ready sale, but a fair price also, which can not be said of honey in any other shape. The boxes should have, at least, two glass sides, comb-guides, and abundance of room at the bottom for ingress and egress of the bees. Get your bees strong in numbers by the time of the linden harvest, and then put on three boxes over centre of brood nest. When these are nearly full put on three more and keep adding until the set is complete. When the first three boxes are capped over, remove them, putting on empty boxes in the place of the full ones removed. Keep this up as long as the honey season lasts, and if the flow of nectar has been at all good, you will have no cause of complaint that bees will not store honey in glass boxes.

Dr. Southard — Would not small frames be preferable to boxes ?

H. A. Burch—Small frames possess no advantage whatever over the little boxes. Just as much honey can be procured in the boxes as in frames, while the boxes sell more readily at a better figure. Honey must be put up in fancy shape to sell at all well in the city markets in the future. It is also less work to manipulate the boxes, but requires some skill to get the bees to fill them rapidly, as in fact is the case with any surplus receptacle.

Pres. Balch—I understand you consider the extractor is an unnecessary adjunct of an apiary during the storing season, when run to box honey. Please tell us how you keep the Italians from clogging the brood chamber with honey.

H. A. Burch—I do consider that extracting the brood combs during a honey harvest is a most useless operation. As well might we call such an apiarian skillful as the general who had made no preparations for an attack until the enemy was upon him. To obviate all trouble in this respect, I want a queen of the capacity and disposition to lay 3,000 eggs per day during the entire working season in a hive of 1,400 cubic inches, so that she can deposit only 1,500 eggs as a daily average. The only time I would ever use the extractor would be to remove all over twenty pounds of honey that such hives might contain on the first day of May, then get your hive full of brood before the honey harvest comes and your queen will keep it so. In such hives thus manipulated, the bees will have an abundance of brood below and will store the honey above in the little boxes.

As the time alloted to the afternoon session had expired, the convention adjourned until evening.

———o———

For the Bee World.

LETTER FROM GOLDSBORO, N. C.

T. B. PARKER.

Mr. A. F. Moon :—Dear Sir :—The November number of the Bee World came safely to hand on the 3d of December, freighted with "good things" for the apiarian and family circle—to

the former, because it is full of valuable instructions to them; to the latter, because it is entertaining and instructive, ever exerting a good moral influence by advocating industry, and a branch that will, if taken hold of and pursued according to its teachings, be both a pleasure and a profit. It is to be hoped that all your correspondents, which should embrace every intelligent bee-keeper in the country, will see the necessity of sending in their communications early, so that the BEE WORLD will not get behind time. I think there is one feature that we are not particular enough in, that is answering promptly all questions asked through your medium. It is the duty of every reader who can, to answer wholly or partially any question or advice asked for. I think, in that way, you would find your columns filled with practical bee-culture in the shape of questions and answers. It is well known that bee-keepers are not all men of wealth, and that they have to turn their hands to everything connected with the business—such as making hives, surplus boxes, frames, &c.,—and I think that every one should understand that part of the work as well as the dividing of colonies, rearing of queens, and the comparatively lighter work connected with the apiary. It will not only be of service to those with limited means, but will materially help those who hire their work done, from the fact that they will understand how to instruct the workman just how and what they want done. As the time of year is approaching for hives to be made, some practical hive-maker could, with profit to your readers, give instructions through the BEE WORLD, so that any of them could make a hive or surplus box that would do them credit. I, for one, intend making my own hives, &c., next year, although I have never made one, yet I believe I can and will succeed. Now, who will be the first to give instructions as to what is required to make good hives and surplus boxes, describing any convenient arrangements they may know, whereby they can be made cheaply and neatly? Perhaps, some one else has concluded to try a similar project, and you may benefit two of us. Don't let one communication nor one man's suffice, but let all give their best methods.

Goldsboro, N. C., December 15, 1875.

———o———

EDITORS BEE WORLD, Rome, Ga.:—Gents:—I commenced late last spring to raise bees with three colonies of Italians in Langstroth hives — one strong in November and rich with honey, the other two comparatively weak. I knew nothing of the management of bees until your Mr. Moon spent one day with me. With his instructions I made a start. I have now, from the three colonies, eighteen strong colonies, with ample supplies for the winter, besides extracting about one hundred pounds honey. The winter has been unusually mild. My bees are gathering and bringing in pollen nicely now—can not tell where they get it, but presume from the alder. I have three or four nice, bright queens raising hybrids. Will the drones from these queens be hybrids or good Italians? I have had no natural swarms, my increase is due entirely to artificial swarming. My hybrids are good workers, but pretty ill-natured and hard to control. I think I shall Italianize them as soon as possible in the spring. ELI A. SMITH.

Monroe, Ga., January 3, 1876.

For the Bee World.

SUNDRIES FROM SUNNYSIDE, SOUTHERN MISSISSIPPI.

ANNA SAUNDERS.

Unfortunately, I do not know anything of the habits of these stingless bees, except that they make their homes underground. All whom I have heard speak of them concur in saying that they are small, of a gray color, and perfectly inoffensive. Three years ago, one of my friends, in plowing a piece of new ground, unearthed a great many of them. Two years since, the same thing occurred to another gentleman of my acquaintance, who was plowing old sedge land, I think. The bees seemed much confused and frightened, they said, but showed no signs of anger. Neither of them saw their place of deposit, so I did not learn anything of the quality or quantity of honey they had or how it was stored. When I first learned that these bees were so near me—only two or three miles distant—I determined that I would investigate their habits, and try if I could not domesticate some of them, but the leisure and opportunity have not yet arrived.

Speaking of these bees, tempts me to tell of some very beautiful bees I saw two years ago. They were gathering honey from plum blossoms, and there seemed to be almost a swarm of them. They were small and striped with gold, not the orange of our Italians or the yellow of the yellow jacket, but real gold. I am almost afraid to tell you of them, lest some of you should think my fancy helped my eyes.

I have been trying to get a work on the habits of insects, but all the entomologists I have met with are devoted entirely to their structure, &c.

Every one remarked the astonishing number of humble or bumble-bees here last spring. I often found them dead at the entrance of my hives, and occasionally witnessed an encounter with one of my bees. Then the yellow-jackets came later, but not in such numbers as last year.

The first year I kept bees, I had to make most of my hives and frames myself, and, not being very quick, the bees would often be too smart for me, and I would have to transfer combs, honey and brood from the tops or walls of the hives to the frames. If they were at all heavy, I invariably inserted them, as they are more easily fastened in the frames in that way, and I never discovered that it made any difference whatever in the health or happiness of the embryo bees so treated. One colony treated me to the most beautiful heart-shaped comb imaginable. It was fastened to the wall of the hive by a piece of wax and propolis about as large around as a dollar, which was the only point of contact. It was as large as it could be without touching the hive anywhere else or marring the beauty of its shape. Indeed, you could not have wished an improvement in it in any respect. The comb was of snowy whiteness, the honey the most exquisite pale amber, capped and very heavy, and the flavor was superb. When I cut it out, I had no frames to insert, and before I could open the hive again the bees had replaced it with another exactly like it. I think that if I had kept allowing them the empty space they would have perhaps continued making hearts until the flow of honey ceased.

So far from the bees fanning themselves, of which I spoke in my last paragraph in your November number,

not a wing was moved until the little hum or buzz gave notice that the performance was ended. If any of you should witness a similar performance, I would advise you to look inside and see if the bees are not very near the point of starvation—those were and I thought I had mentioned it in describing their conduct.

In your remarks about my bees rushing out of their hives, you seem to be speaking of "hanging out," as it is called, which occurs when the hives are closed and is different entirely from the stampedes I tried to describe. In the case of the melting propolis I suppose it was terror and disgust combined which caused it. Then, the bees I kept open so long wanted to teach me that "there is a point beyond which patience ceases to be a virtue." These are the only cases where I was certain what caused this behavior—though I think it was always terror, disgust, anger, indignation, or some kindred emotion in a stock very strong and well off every way.

The yellow jasmine is blooming beautifully. The weather has been very warm for about two weeks.

Corrections of the few mistakes in my last article:—"'raising' queens from mothers observed," &c., "I think they always set up a peculiar 'note' which I have learned to detect," "I have sometimes 'succeeded' in closing," for "'brushing' bees from the combs," the performance would be ended.

Woodville, Miss., Dec. 29, 1875.

———o———

The present number of the BEE WORLD is sent to a great many whose subscription expired with volume 2, in the hope that they will renew. Volume 3 will be better than ever!

For the Bee World.

THE WINTER AND JOURNAL.

JEWELL DAVIS.

MR. EDITOR:—So far our winter in this part of Illinois has been quite mild, with the exception of two days about the 10th of December, when the thermometer indicated zero; but most of the time for the last two or three weeks the bees have been on the wing during the middle of the day, and some days busied themselves in carrying in rye flour. They all appear well, or healthy, up to this date. We have not moved any of them from their summer stands into winter quarters yet, and think we shall not, unless the weather turns colder than it has been so far this winter.

Well, Mr. Editor, we have been acquainted with the BEE WORLD for two years, and we are happy to say that we admire it very much; not only for its varied and interesting apicultural matter, but also for the good taste, and kind feeling that always pervades every number. One of its noble features is that it never hides its correspondent's postoffice address, like some other Bee Journals. We never could see anything but a selfish motive in such a course, and we trust the BEE WORLD will never condescend to things so selfish, thus preventing apiarians, all over this wide world of ours, from learning many things they may desire information concerning, and could learn if they were permitted to have the postoffice address of every correspondent in each of the Bee Journals. There is no use in having Bee Journals, if they are not a source of light and knowledge in everything pertaining to bee culture. They are but little better than none if they only

open one door to this information, and strictly close the other.

Again, Mr. Editor, we admire your manliness in giving the postoffice address of your correspondents—not being afraid that some other Bee Journal will, by means of that course, find their way into the correspondent's hands, and you lose a dollar or two for such temerity.

We always did like to have the privilege of knowing where the correspondents of the Bee Journals live, so that if they write anything that we want to know something more about we can address them, but if their postoffice address is not given we are cut off from this privilege. The door is closed against us. Is that right, in the Journals proposing to enlighten bee-keepers? Let all our Bee Journals be more independent, and not fear losing subscribers by publishing the postoffice address of every subscriber. We commend the BEE WORLD as right in this matter. We hope for the year 1876 the correspondents of the BEE WORLD will be more punctual, so that it will visit us earlier in the month.

Charleston, Ill., January 6, 1876.

———o———

For the Bee World.

LETTER FROM CORNERSVILLE, MARSHALL COUNTY, TENN.

J. F. LOVE.

A. F. MOON:—DEAR SIR:—I see in your last number for December that your correspondent, "H. J. P.," had a good deal to say in favor of Bibb county, Georgia, and I think the spirit of his communication is very near the right thing. We are all apt to look too far for the "honey pond and flitter tree," where there is plenty of honey near to us if we only understood the best way to obtain the same. There are plenty of places in Tennessee better than where my apiary is situated and they don't utilize the same. All that is needed is the head to understand and the will to do. I can make more extracted honey than I can sell, and I am going to try if I can not make some in small frames another season, and I will let the readers of the BEE WORLD know how I succeed. I will try a portion of my apiary for comb honey. My dread in one particular is being able to keep the worms from spoiling the looks of the comb before it gets cool enough weather to ship to market. Now, will some of the Solomons please inform me through the BEE WORLD how I shall be able to keep the worms out, after they are taken off the hives, until the time to ship the honey? Would the fumes of sulphur, repeated every week or two, answer the purpose or not? Can any of your southern readers say from experience or not, and what is your experience, Mr. Editor? Or do you think that Dr. J. P. H. Brown's plan for preserving old dry combs would answer and not injure the flavor of the honey so as to injure the sale of the same?

As to wintering bees I have never fed a hive to winter since I commenced using the frame hives. I leave my top stories on all winter with nine frames of comb, and find that they winter better and come out stronger in the spring than the single stories. My top stories are of the same size as the bottom, in fact they just look like a continuation of the bottom, being of the same size outside and inside. I always leave them plenty of honey, and if they don't use it all I get it out with the extractor the following season. And there is another new thing under

the sun, and that is "Novice" is trying to get comb honey also. I hope he will succeed, as he always tells what he has done.

Cornersville, Marshall Co., Tenn., Jan. '76.

—o—

For the Bee World.

NOTES FROM SHELBYVILLE, ILL.

J. W. JOHNSON.

DEAR BEE WORLD:—The month just passed has no parallel in the history of this country as a winter month. Two days of winter is all we have had during December. Bees have been on the wing nearly every day more or less, and some days as lively as in May or June. To day has been a real May day. Men are on the streets and about their business without coats and vests on them. No need to go south to escape cold weather.

Bees consume more honey in such winters than in colder. Mine are breeding finely, but if a real cold spell should occur and destroy a quantity of larvæ, I fear disease. Again, bees will be to feed, or May colonies may be lost for the want of food, especially those that were robbed closely.

I have been able thus far to sell all my honey, both comb and extracted at 25c. per pound, while some others have sold theirs at 15c. You will want to know why this difference in price. It is this—I have never been accused of manufacturing or adulterating my honey, nor will I ever be so accused with truth to sustain the accusation. And I think I could sell much more at the same price. Let bee-keepers be strictly honest; let them always tell the plain truth, and they will get good fair prices for their honey. I think that, considering the stringency of the money market and our facilities for handling bees and securing their honey, it could be sold at from 15c. to 20c.; but never should pure honey be sold at the same price of the manufactured stuff sold under the name of honey.

I think, perhaps, that when pure honey is sold at 15c., that those who put a spurious article on the market will be compelled to cease their vile traffic on the ground that it will not pay. I hope this may be a prosperous year for the BEE WORLD.

Shelbyville, Illinois. January 1, 1876.

Notes and Queries.

Subscribers are especially requested to write short notes on the honey prospects, weather time and duration of the bloom of different honey-producing plants, price per pound for honey, &c., &c., for this column.

MY bees have been quite busy carrying pollen every day since December 3, except two days, when it rained. All seem quite gay.

WM. MCGHEE.

Center, Alabama, January 2, 1876.

BEES are doing finely. Were at work yesterday. CHAS. PARLANGE.

Pointe Coupee, La., Dec. 29. 1875.

I AM wintering fifty stocks of bees this winter. The winter thus far has been uncommonly mild. I have my bees housed in an out-door cellar. This is a nice conntry for bees, if they only pass the winter. The forage is white clover and alsike, and hundreds of acres of basswood timber; surplus mostly from basswood. Honey sel s at 25c. M S. SNOW.

Ono, Wis., January, 1876.

I CAME from Texas to this place last year, but shall return. Am not at all pleased with the country, but it is a fine place for bees, and for them alone. HENRY C. HICKS.

San Pasqual, Cal.

IF you have a friend who keeps bees and does not take the BEE WORLD, write to us and we will send him a sample copy.

MOON'S BEE WORLD.

A. F. MOON & CO.,
Cor. Broad and Elm streets., Rome, Georgia.
JANUARY, 1876.

TABLE OF CONTENTS.

MICHIGAN BEE KEEPERS' ASSOCIATION.

We publish the report as we received it. From the report it will be seen that one man occupied a large portion of the time almost in direct opposition to all practical bee keepers. He very much reminds us of that wise man writing not long since, saying bees laid their eggs in the fall for the spring, &c. We hardly know how or where to place the man. Sometimes we are nearly led to believe he is somewhat idiotic. He wants to know why the bee-keepers or honey-producers are so anxious to allure all classes of people into this most fascinating pursuit, also calling it an uncertain pursuit. He asks if it is a blessing to the new recruits to be allured into this precarious and uncertain pursuit of ours; yet the readers will see that he advises them to keep large apiaries and raise box honey. Oh, consistency thou art a jewel!

ALBINO BEES.

Many have expressed a desire to know something about their habits, color and origin. First, their habits are about the same as the Italian; their color differs from the Italian by having white or ivory colored rings around the body, giving them a beautiful silver appearance. Professor Eastman, of Eastman's College, while examining them, remarked what a fine silver appearance they have. As to their origin, they were first brought out by D. A. Pike, of Smithsburg, Md. They are much like the Italian as to color—that is, they change, grow darker as they advance in age. We shall breed a limited number of early queens.

———o———

WISDOM OF THE BEE.

We have placed an Italian queen in the midst of a queenless swarm of black bees. The Italian queen would drop many eggs in the cage, and those near the sides of the cage the bees would take and place them in their combs—some to rear queens and some to raise brood—evidently to prepare for their loss. On liberating the queen, some on the third and others on the fourth day, it would be found that queens were nearly capped over and many eggs in the worker combs, which hatched on the seventeenth and eighteenth days.

——— o———

GATHERING POLLEN.

Bees have been busy nearly all winter carrying in pollen from the trees. Upon examining swarms on the first of the month we found them to contain quite a large amount of brood.

BEES DESTROYING THEIR EGGS.

J. B. asks the question if we ever knew the worker-bee to transfer eggs from one comb to another; also if bees ever destroy their eggs.

ANSWER.—We have had queenless swarms remove eggs from pieces of comb when placed at the entrance of their hives and taken into their hives and raise several queens from them, when they had been queenless for weeks. This is not an unfrequent occurrence.

Bees often destroy their eggs when failure takes place in the secretion of honey, after having a fair supply, which caused the queen to fill nearly all her combs with eggs. The workers will destroy both eggs and larvæ to prevent starvation. Here their wisdom is displayed.

———o———

HONEY DEW,

In the forests of this and adjoining county the bees are busily engaged in collecting honey dew on the pine trees. The honey drips from the tip ends of the pine leaves. It can also be seen on the dry leaves on the ground. Upon examining the trees, the aphis can be seen in abundance. Honey dew in the winter is something new to us, but the extremely fine warm weather will account for it. This would seem to prove that honey dew is the production of plant lice, instead of being a dew from the clouds.

———o———

MESSRS. KING & SLOCUM placed us under obligations to them for the report of the Michigan Bee-Keepers Convention, as furnished them by the Secretary. The report is not entire, but will be completed in our next number.

BEES IN THE SOUTH.

IT has been the impression of some that bees did not store up honey in the South, as they would in a colder climate. This is a great mistake. So far as we have been able to judge, the South has given the greatest yield. The only and greatest difference rests in the locality for pasturage.

——— o ———

HYBRIDS OR GOOD ITALIANS.

On page 55 of our present number Friend Smith, of Monroe, Ga., says he has a few nice, bright queens raising "hybrids," and asks if drones from these queens be "hybrids" or good Italians?

ANSWER.—We have always found such drones to be worthless, and can not think otherwise, notwithstanding some of our bee-men think different.

———o———

THE article in our last number, entitled "A Southern Bee-Keepers Society," should have been credited to Wm. J. Andrews, instead of James Andrews.

———o———

OUR readers are requested to notice the advertisement of C. F. Lane, Koshkonong, Wis., relative to seeds and plants for bee-keepers. His prices are remarkably cheap, but from the numerous references he gives us we are quite sure he will fill his orders as stated.

———o———

PARTIES desiring early queens are requested to read our advertisement, in another column.

———o———

SEE change in advertisement of R. M. Argo; also that of Messrs. Dadant & Son.

———o———

☞ Renew at once!

EARLY QUEENS.

In answer to many inquires about queens, we will say that we will have a few choice early queens to spare.

As to quality or purity we shall breed nothing but the best. From the many compliments we have received through the press we will mention one or two:

[From the Savannah News.]

Mr. Moon had on exhibition at our State Fair some of the finest Italian bees ever exhibited in the South.

[From the Macon Telegraph.]

Mr. Moon exhibited the finest Italian bees that have ever been shown at the fair, and has received many orders for queens and bees.

———o———

H. Deahle, Winchester, Va., manufactures honey boxes, hives, &c., and fills orders for the same. Read his advertisement.

MOON'S IMPROVED BEE HIVE.

We are prepared to furnish this hive, in quantities to suit purchasers, for the coming season. We believe it to be full as cheap for bee-keepers to order their hives through us, as to make them themselves. We make them of good material, and paint them twice. We can give many reasons regarding the superiority of this hive but the fact of its having taken first premiums wherever exhibited, its extreme simplicity and cheapness, its adaptability to the wants of the South, and the fact that it is the result of years of careful study and experience on the part of the proprietor, is sufficient reasons for our adopting it.

Our prices are as follows: One complete hive, with two coats of paint, full set of honey boxes, $4.00.

In lots of 5 hives, and over, $3.50 each.

Materials cut to fit, all complete, unpainted, in lots not less than 5 hives, $2.50 each.

We place the hives on the cars, free of charge, on receipt of price. Remit money by postoffice order, registered letter, or draft on New York.

Address all orders to

A. F. MOON & Co., Rome, Ga.

☞Send us four subscribers for 1876 and get a copy for yourself, free.

Publisher's Department.

ADVERTISING RATES.

SPACE	1 Month	2 Months	3 Months	6 Months	1 Year
1 Page	16 00	30 00	40 00	70 00	125 00
3-4 Page	12 00	20 00	30 00	55 00	80 00
1 Column	10 00	18 00	25 00	45 00	75 00
3-4 Column	8 00	15 00	20 00	35 00	70 00
1-2 Column	7 00	12 00	18 00	25 00	50 00
1-3 Colum	6 00	10 00	15 00	20 00	30 00
1-4 Column	5 00	8 00	12 00	16 00	20 00
1 Inch	2 50	4 00	6 00	9 00	5 00
1-2 Inch	2 00	3 00	5 00	7 00	12 00

Fourth page of cover, double rates. Third page of cover, 50 per cent added to rates. WORLD included in all advertisements of eight dollars and over. No advertisements continud longer than ordered. Bills of regular advertisers payable quarterly; transient in advance. Address all communications to

BEE WORLD.

BEE-KEEPER'S

DIRECTORY

Cards inserted in this Directory, and a copy of the WORLD, one year for twelve dollars—cards to be four lines or less. For each additional line one dollar will be charged. A line will average eight words.

WE HAVE,

In their winter quarters, about 80 COLONIES

IMPORTED

QUEENS.

Our price for next spring will be:

For one colony, with Imported queen $18.00
For one colony, with home-bred tested queen 14.00

All these queens were raised last season. For large orders or particulars, send postal card to

CH. DADANT & SON,
3tfc Hamilton Hancock Co., Ill.

HONEY BOXES

Our boxes are cut, ready to nail together, grooved for two glass sides, light smoothly finished, will ship safely, and will hold 5 pounds.

We also furnish the Standard Langstroth bee hive cut and ready to nail together. With our present increased facilities and rapidly increasing patronage, we are able to furnish these boxes and hives at a lower rate than ever before. Send for price list and sample honey box.

HENRY DEAHLE,
3t3 Winchester, Va.

VINEGAR. HOW MADE IN 10 HOURS, from Cider, Wine Molasses or Sorghum, without using drugs. Address F. I. SAGE, Vinegar Maker, Springfield, Mass.

HONEY PLANTS AND TREES

We grow or keep always for sale seeds of the following. All are strictly

PURE, CLEAN & RELIABLE

Chinese Mustard, 1 pound $1.50; oz 15c; pkg. 5c
Black Mustard, Alsike Clover, Common Sunflower each, 1 pound 40c; 1-2 pound 25c
Vetches, Rape each, 1 pound 20c; White, Lucerne, California, Yellow Trefoil Clover, 1 pound 55c; 1-2 pound 35c. Scarlet Clover 1 pound 35c.
White Yellow and Bokhara Clover, each 1 pound 60c; 1-2 pound 35c
Esparcet or Sainfoin 1 pound 42c; 1 2 pound 25c.
Silver Hull Buckwheat 1 pound 15c; peck 75c; bushel $2 00.
Mignonette [common] 1 pound $1.25; 1-2 pound 75c; oz. 10c. Mignonette [Parson's New White] pound $10.00; 1-2 pound $6.00; oz 80c; pkg 10c.
Catnip 1 pound $12.00; oz 1.20; pkg 25c.
Borage, 1 pound 1 25; 1-2 pound 75c; oz 10c.
Motherwort 1 oz 1.00; pkg 10c. Russian Sunflower, 1 pound 60c; 1-2 pound 35c.
Basswood seed, 1 pound 60c; 1-2 pound 35c. 1 pound 1.50; 1-2 pound 85c; oz 15c; pkg 5c.
We pay no postage on packages and our over 1-2 pound is ordered, add 1c per oz to pos age if to be sent by mail. No charge ing &c. Please remit, at our risk by P on Milton, Wis., or registered letter or Koshkonong, Rock Co., Wis. Address p

C. F. Lane's N. W. Apiary & Seed Wa
KOSHKONONG, WISCONSIN.

VICK'S FLORAL GUIDE.

This is a beautiful Quarterly Journal, finely illustrated, and containing an elegant Frontispiece with the first number. Price only 25cts for the year. The first number for 1876 just issued. VICK'S FLOWER & VEGETABLE GARDEN 35c s; with cloth covers 65cts.
Address JAMES VICK, Rochester, N. Y.

Italian Bees and Queens for 1876.

AND

FANCY POULTRY.

I can spare about thirty full colonies in the spring, with choice tested queens most of them reared from imported stocks. Also a number of Nuclei hives with choice queens.

FIRST CLASS POULTRY

I have also on hand a fine lot of first class poultry. Eight leading varieties selected from the best yards of the North and England which I offer at low prices. Eggs from each of the above varieties for sale in season, and packed with the greatest care.

For circular with prices send postal card to
R. M. ARGO.
3tf Lowell Garrard Co., Ky.

BEES AND SUPPLIES

Furnished by *M.* Quinby at St. Johnsville, N. Y. Smoker greatly improved; price reduced to $1,60 by mail; Send postal card for circular and price list. t