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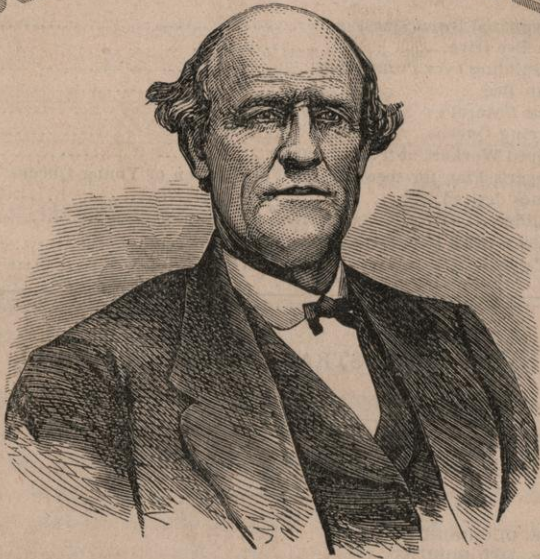
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THE

ILLUSTRATED

BEE JOURNAL.



Vol. I.

OCTOBER 15th, 1870.

No. XII.

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
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THE Illustrated Bee Journal:

DEVOTED TO THE CULTURE OF THE HONEY-BEE.

VOL. I.

OCTOBER 15, 1870.

No. XII.

[Copyright Secured.]

[For *The Illustrated Bee Journal*.]

THE IMPREGNATED DRONE QUESTION.

Mr. Editor:—I notice an article in the August number of the ILLUSTRATED BEE JOURNAL from my friend Earnest Davis, replying to an article of mine in the July number, page 406, wherein he states that I don't fix this thing up to suit him exactly. I presume not, and I am well aware that many more are in the same fix, but does this prove it to be incorrect? He says that I "use a theory to show my assertion to be correct," and then goes on to say that he claims that an Italian queen impregnated by a black drone will produce just as pure drones as her mother, or one that has never met the drone, and gives his theory by saying: "My theory is this: all drone cells being too large to compress the abdomen of the queen sufficient to impregnate the eggs," therefore, the drone eggs are not impregnated, consequently the drone progeny of any queen will be of the same kind or species as the mother, and nothing else. Here, Mr. Editor, you have the whole matter summed up in a nut-shell. I will venture, however, to say a few words in reply to my friend.

First, let me ask friend Davis how he knows the fact that he has given to be so, and nothing else? Is it by

careful experimenting that enables you thus to judge? If so, please give the readers some of your experience, and I will endeavor to do the same. It must, evidently, be that friend Davis is posted upon this matter in which he is so sanguine about. If not, he must use a theory. Mr. Editor, and your many readers, you may get tired of these, perhaps you think them very foolish ideas, but this is a very important subject, and, perhaps, is filled with as much interest as any other connected with the history of the bee; and, no doubt, we are all after the facts in the case, and "what little evidence I have in the matter is not borrowed." I have experimented upon this subject, and given it considerable attention, "for the express purpose of satisfying my own curiosity," and for a great many years I used observatory hives with one comb only, and with glass sides, for the purpose of learning the *modus operandi* of the queen. I have carefully watched them day and night, to learn, if possible, the true facts in the case—whether there was any compression took place with the queen bee while in the act of laying, or depositing her eggs. I have seen the queens deposit eggs by the hundreds, and I can safely say that I have by the thousands, both in drone and also worker cells; and I have seen the queen deposit her eggs in both worker and drone cells when the base or side walls of the cells were not more than one-sixteenth to one-eighth of an inch in length. This I have often witnessed with a good microscope, even held the comb in my hand and saw the queen passing from cell to cell in the act of laying, and I have yet to see any compression take place in the abdomen of the queen. I believe the seminal sac, as shown by the drawings of the ovaries of queen magnified in some of the works, "is located near the terminus or outer end of the oviduct," consequently, must be very near the hinder part of the body of the queen. If you please, compare the size of this part of the body of the queen, and you will readily see that the queen can thrust her ovipositor to the bottom of the cells without even coming in contact with the sides of the cells, as in the case alluded to; and any one can satisfy himself by experimenting upon this subject.

“There seems to be no mistake made by the queen if she is a perfect queen.” You may insert a piece of drone comb in the centre of a worker comb, and you will get no eggs there until the season arrives for them. The queen knows very well the sex before depositing the egg in the cell; she don't make any mistakes; “and I firmly believe, and shall until better evidence is produced, that the queen has full control of the ovaries, and well understands when to lay for drones or worksrs. Also, that eggs produced from one side or branch of the ovaries will produce males, while eggs produced from the other side will be workers, or females.” You will find from the microscopic view of the examinations that have been made that the ovaries are separated into two equal parts, having, apparently, no connection, except that the contents of each branch is discharged through the common oviduct or passage, and the opening from each of these divisions into the main channel or common oviduct. The queen, I believe, has full control, and fully understands, no doubt that eggs produced from the one side produces just what seemeth her good pleasure to lay. And I believe, from my own experiments upon this point, that it needs no compression whatever to fertilize the egg for the different sexes. I am aware that this idea has been promulgated by some who have chanced to see it in some book; it has not originated from their own experiments. I would not say that this is the case with my opponent. I will venture to say, however, that not one bee man in five thousand that ever experimented upon this point (when I say bee men, I don't wish to be understood that every man who takes his pen in hand and can write a flowery article on bee-culture, or, perhaps, has kept bees for ten to thirty years, and still is ignorant of the honey-bee) is or can be a proper judge upon such a subject as the above; and I am aware that the idea has been promulgated by some good bee men; they have candidly and honestly supposed that it was strictly necessary for the queen, while laying for workers or females, that her body be slightly compressed, in order that the eggs, as they pass the sperma-

theca may receive its vivifying influence; and, on the contrary, when she is laying in drone cells, as this compression can not take place, it is supposed that the mouth of the spermatheca is kept closed, consequently, the eggs are infecundated, producing only drones.

This theory may look very plausible to some, but for me I can't make it lay "chunk," and I must say further, I have no faith in it, and will say that like produces like in all animals or species of a fixed race. And I am of the opinion that if my friend will prepare him a good observatory hive, with only one comb, he will soon believe that the queen bee will need no squeezing to make workers, or females. The queen bee is like very many other species of insects—a specimen of God's noble works—and judging from the experiments I have made with the bees, I believe that she is so well organized and developed a perfect insect that she requires no compression of the abdomen to enable her to produce her like. Mr. Editor, how easy it would be to suppose this compression strictly necessary when we don't properly understand this matter, and still how easy and reasonable it would be to suppose it unnecessary and can not be done while laying in cells. When the base or side walls are just commenced, not more than one-eighth, and even down to a sixteenth, of an inch, the queen will deposit her eggs. Truly, I never saw any compression take place, even when the queen was laying in these shallow cells. I have seen them drop their eggs in such cells repeatedly, have watched them with a magnifying glass hundreds, yes, I can tell friend Davis, thousands, of times, and I must confess that I never yet saw the compression take place, and, in fact, I can not believe the doctrine. How will my friend account for the queen laying eggs in these shallow cells, where there is no chance for this compression? and I will assure him there was none, as I believe I can see as well as any man, and have, probably, experimented upon this as well as many others, advocates for it, and I never saw anything that looked like compression. I have held a card of comb in my hand many times, and seen the queen in the act of

laying, and never could discover anything of the kind, and at present I shall content myself that the great Creator fixed this matter up in a little better shape than to compel the poor queen, that is said to drop or lay from one to three thousand eggs per day, to be under the necessity of pressing herself every time she lays an egg; it would necessarily be rather hard work. With all the queens I ever saw laying, I have never witnessed this theory spoken of by the gentleman, and I am quite sure he will tell us that he never did.

I firmly believe, Mr. Editor, that it's a slander upon the queen fraternity in the first degree, to accuse her of this kind of way of doing business. I am aware that my views will not be met with any degree of favor from many, but this will make no difference with me. I shall not condemn any one if he don't believe and think with me upon this and other subjects pertaining to the honey-bee. My views in this matter have been obtained from long and careful experiments. I will give a few of them soon. I have already encroached upon the rights of others.

A. F. MOON.

Paw-Paw, Mich., Sept. 10, 1870.

[For The Illustrated Bee Journal.]

THE ALLEN BEE-HIVE.

Mr. Editor :—I see in the May number of the ILLUSTRATED BEE JOURNAL a cut of T. R. Allen's bee-hive—page 317. I will give the following objections to said hive:

1. It will not do to stand out in the weather, as the bottom board projects beyond the sides and ends of the hive, consequently the bottom of the hive will soon rot. We must have a hive that will stand in the weather, as bee-houses in summer are a nuisance. Also, the lower end of the frame that holds the comb-frames, if set into or stand on the bottom board, will soon rot for the same reason as the hive.

2. To make it a substantial hive it will be costly to construct.

3. There is too much space between the end pieces of the comb frame and the outside shell. Judging from the requirements as shown by the cut, there can not be less than one inch space. In order to lift the comb frame out there ought to be $\frac{1}{4}$ of an inch between the end of the comb-frame and comb-bearer C. The bearer C can not be much less, if any, than a $\frac{1}{2}$ inch. The $\frac{1}{4}$ of an inch between frame-bearer C and the outside shell makes one inch space, which in a flush time of honey will be filled up. Consequently the comb-frames and outside shell will be fastened together. It is not safe to allow more than $\frac{3}{8}$ of an inch between any two pieces inside of a bee-hive, nor less than $\frac{1}{4}$ of an inch where the pieces are designed to be movable. If wider than $\frac{3}{8}$ of an inch the bees will build comb; if less than $\frac{1}{4}$ of an inch they will glue them fast with propolis.

4. In said hive there is no means by which free ventilation can be given to the bees in hot weather, when the entrance is closed and the bees shut in.

The time will be, and now is, when bee keeping, as a specialty, will not pay when the hives are kept all season in one locality. We must have hives that we can give all the ventilation necessary in the hottest weather, to move from place to place. For instance, say there is a large poplar grove within twenty or more miles of you. Then move your bees there just as the poplars are beginning to blossom. They will do to gather honey from for about three weeks. Just about then the linden blossoms begin to open. Then move your bees there, and so on. I have been experimenting with different contrivances to my hive (the Langstroth), and the result is: Eight inches across the bottom board is movable, and when I wish to move my bees I take out that movable board and insert a frame of its size covered with wire cloth, which gives a ventilating surface of 6 by $12\frac{1}{2}$ inches, and in the front end of the upper story of the hive is a similar arrangement, so that there is free

upward ventilation six inches in length between all the comb.

The bottom movable board and ventilator is held in place by $1\frac{1}{2}$ inch screws, one of which has the opposite sides of its head filed down to the barrel of the screw, so that by turning it one fourth round it lets the board and ventilator drop down. The end board and ventilator shut against a beveled edge and are held in place by a button. The alighting board of the hive is hung on by a hinge. By raising it up it closes the entrance to the hive, and is held closed by a button. The hive can be made ready for transportation in a half a minute's time. I move my hives on spring wagons.

I moved twenty stands to a poplar grove on the 25th of May. On the 25th of June I took from them a little over eight hundred pounds of honey. I then brought ten of them home for swarming purposes. The other ten staid until the 26th of July, when we took four hundred pounds more from them. I then moved them home, and only broke four or five combs in moving both ways. I have eighty-five hives now, seventy-five of which I design moving the same way next summer.

I see on page 319, of the ILLUSTRATED BEE JOURNAL, that T. Clark Atkinson says: "Old foggies, arise, shake off your fogginess, and give way to progress, for we are coming." One of his signs of progress is that there is "six or eight different kinds of patent hives in the United States." If I were he, I think I would not cry "Old foggies" until I got one corner of my eye open, at least. Why, the patent bee-hives in the United States are legion. Again he says: "We are progressing in literature. There are at this time two journals published for the benefit of the bee-keepers." Why, Mr. Editor, there were two bee journals published before you started the ILLUSTRATED, and at least one since you started, the *Apiculturist*, published by Church & Park, at Mexico, Mo. Mr. Atkinson says nothing about the old stand-by, *The American Bee Journal*, published by Samuel Wagner, Washington, D. C. Why, it is the daddy of all the bee journals.

Now, Mr. Atkinson, don't say "Old foggies" na-re nother time. Then in speaking of bee books, he says: "There are also several books that are very valuable. Among the rest are Mitchell's Guide to Bee-Keeping, The Bee-Keepers' Text-Book, Mysteries of Bee-Keeping, and several others. Why did he not mention the best one of all, L. L. Langstroth. Why, Mr. Editor, I don't suppose that you claim that your book is *better* than Langstroth's. So much for the cry "Old foggies."

I see on page 326 I. B. J. Hawkins' plan for salting bees. I will also give my plan. I have a stone pan fifty-two inches long and twenty inches wide inside, filled over the bottom about one and one-half inches deep with clean gravel not larger than sparrow's eggs. One inch from the bottom of the pan there is an outlet, so that the water can not rise higher than one-half inch of the top of the gravel. I then take two half gallon fruit cans, put about what salt I can pinch up with my thumb and two fingers into each can and fill with clear water. Then take a piece of board about seven-eighths of an inch thick and a little larger than the mouth of the can, cut a bee shaped notch about one inch deep in one edge of the board, then put the board on the mouth of the can, and turn it bottom upwards and set it in the botton of the pan, and slip the can over the bee shaped notch in the board so that the water can run out freely, and when the pan fills up about the thickness of the board no more water will run out until some water is removed from the pan. Larger vessels than the fruit cans would be better, but having none I use them. I have no trouble with water souring. After long use all I have to do is to pour water enough in the pan to float out any particles of dust that may gather therein.

On May 4th, at 7 o'clock A. M., I ascertained that by laying fine broom straws around a space six inches square in the pan, and counting the bees therein a number of times, that there were over fourteen thousand bee-loads of water taken away per hour from the pan. And there is a branch of running water within three

hundred feet of the Apiary on two sides. My bees take away more water between 7 and 8 o'clock A. M. than any other time in the day.

On the 20th of May I moved fifty-two stands of my bees about twenty miles to a poplar grove. About the 20th of June I took from them nearly two barrels of honey, taken out by the machine. I then moved thirty-six of them about forty miles to a linwood grove, and in the last week of July I took a little over four barrels from them, and nearly one barrel from those left at the poplar grove, making in all nearly seven barrels supposed to weigh 3,120 pounds from the fifty-two stands. Some of them were weak in numbers in the spring. Only one of them swarmed, and that ran away. More anon.

ITALIAN.

Carthage, Ind., Sept. 19, 1870.

[For The Illustrated Bee Journal.]

IS COMB BUILDING EVER PROFITABLE?

Mr. Editor:—The JOURNAL for September 15th is at hand, and I notice some items to which I wish to add a word: You call for ideas in regard to the use of empty comb in the article on “Artificial Comb.” My attention was called to this subject something over one year ago, by an article in the *American Bee Journal*. I think that but very few, if any, bee-keepers would say unqualifiedly that nothing is *ever* gained by giving bees empty combs. The use of the honey emptying machine proves conclusively that it is often of great service. I now propose to vary the question a little, and ask, to what extent can a swarm use empty combs to advantage? Or, in other words, can bees ever build empty combs without loss?

We have been diligently taught that it usually takes from fifteen to twenty-five pounds of honey to construct

a pound of comb. Now, if this is the case, it must be an advantage *always* to furnish bees with all the empty comb they can use, because every particle they have to build is a clear dead loss of honey. I do not think facts will bear out the proposition that the production of comb is always at a loss, but is on the contrary, sometimes an actual gain, and does not cost anything.

Well! how is that?

I will now try and start at the beginning, so that we may start aright. The first instincts developed in the worker bees are those of affection, which lead them to do the work within the hives, in caring for the young, repairing and, if necessary, building new combs. This period, ordinarily, lasts from fourteen to sixteen days. That this is the work of the young bees may be known by examining a swarm just changing from native to Italian, or from Italian to native. Open the hive sixteen days after the new race has begun to make its appearance, and they will be found at the work I have mentioned. This has been often observed.

The next and last instinct is *avarice*; and this in the bee, as in the human, increases with age. Then they go forth to the fields to gather their varied stores—to become wealthy and independent. Although this instinct is usually developed at about the sixteenth day, it may be hastened by a lack of outside laborers. Last May I put a small swarm of Italians in a hive from which I had just drummed out a native swarm. They were in an exposed place, and powerful winds being prevalent just then, the outdoor gatherers were reduced to a mere handful. The young blacks came to the rescue when seven or eight days old, to make up for the decimated numbers. The same thing may be observed in artificial swarming, when one hive is moved to a new location and its outdoor forces caught in another hive. For a day or two they remain quiet, when a new division takes place, and the young fellows go to work in the field. Now, although these chaps do sometimes go to work in the fields from force of circum-

stances, when only seven or eight days old, I do not think they will do so *if there are enough bees over sixteen days old to do all the needful outside work*. There may be twice as many as are needed to care for the internal wants of the hive, but as for going out to the fields to work, they "*don't see it*" until the *avaricious impulse* is developed. So they "hang round" the hive inside, or out, it matters little which, if the weather will admit of either.

Now, in a large, prosperous swarm there are probably two thousand young bees hatching daily. In fourteen days there would be 28,000 of these nurses and wax-workers, and not one half of them are needed to care for the wants of the young bees—the larvæ I mean. The others are eating to sustain life, of course, and are willing to do what they are adapted and inclined to do, *if they can have a chance*. It is in not *always* giving them all a chance to fulfill their mission that we fail to realize as much as we might.

Well, now, these fellows having no young bees to take care of get fat. Yes, Mr. Editor, they get fat. I can find no better term to express my meaning. It is not, of course, laid on them in adipose tissues, but is secreted between the scales of the under side of the abdomen, in thin flakes, and they can remove it and build a portion of comb *just as well as not*. That is my opinion, founded on observation, and if it is not in the main correct, I should like to know the reason why?

I have often had swarms, both small and large, with more young bees, under sixteen days old, than were needed to care for the brood, and they persisted in building new comb, if there was a vacant space, when they had empty comb convenient of access.

Now, if what I have said is correct, let us inquire when new comb may be built without loss. First, we would say new swarms have the right conditions; they have many young bees and no larvæ to nurse of any account for the first week after being hived. But mind, I do not say they can construct *all* the comb needed. It

will pay well to give them enough empty comb, so that they shall not have to wait for a place to empty their honey, and that the queen may not lack for enough cells to lay her eggs.

Large swarms which have not swarmed are also peculiarly adapted to build a portion of the comb which they require.

But I fear I am getting tiresome and that you will say, "Hold on." "Nuff said." So for the present I will drop the subject just here.

I now wish to say that I have frequently tried the plan of artificial swarming, for six or eight years, partly drumming out one entire swarm, then moving another populous swarm and placing the hive of brood in its place. It should be done in the forenoon of a bright day, when the bees are busily engaged. The hive from which the swarm was drummed will almost invariably swarm in eleven or twelve days. They work during this time like any other swarm that is raising queens. It would be a great improvement to give them a queen. The new swarm works equally as well for aught I can see as any natural swarm of the same size. The swarm that was moved will be ready for another removal in ten days. I once got two good swarms by removing a large hive twice, and they afterwards swarmed, a large, nice swarm.

The first two or three years that I had the Italians I let them swarm naturally, and some of the second swarms were either driven back by removing their queens, or if hived, I caught all but one queen to experiment with. I used frequently to let one run into a hive of native bees after they had swarmed (unfertilized, of course,) and do not remember of ever having one destroyed when introduced in that way. I have never tried this with a queen I valued, and do not recommend it, though my experiments in that line seemed to prove it a good way to introduce queens.

I consider very late in the fall the safest time to introduce queens. Cage them in the cluster of bees a

week; feed the swarm diluted food twenty-four hours before liberating (one part honey and two parts water, or sugar and water) and destroy cells, of course.

J. L. HUBBARD.

[For *The Illustrated Bee Journal*.

THE ITALIAN BEE.

Mr. Editor:—As I am in the bee business, it may not be amiss to write a short piece for your most excellent JOURNAL. The JOURNAL comes to us regularly, though a little slow. It is read with great pleasure, and I look forward to the time when it will come twice a month instead of once.

I have increased my colonies from nine to seventeen, and also have twenty nucleuses of two, three and four frames, the frames the same that I use in my large hives. These I will throw together next month, and make some five more full colonies.

It is with much pleasure that I record the superiority of the Italian bee over the common bee. The Italian queens are more beautiful, larger, more prolific, and not as easily frightened in handling the frame as common queens. I find all queens raised in the fore part of the season are a beautiful yellow or leather color, while those raised in the fall are at least one-half dark. The workers from pure mothers all have three yellow or leather-colored bands immediately behind the wings. In form, they are more tapering than common bees. They are more beautiful, more industrious, more hardy, more courageous and active in self-defence. They are less inclined to sting, more disposed to rob; they swarm earlier and more frequently than the common bees. The Italians are best in making nucleuses, because they are self-sustaining until late in the fall, while the common bee must be fed; and as they are less inclined to sting, and more courageous in defending their stores, taking all things into consideration, the Italians make the best nurses.

I would advise all bee-keepers that are inclined to try them to purchase only of some reliable man who will guarantee the purity of all he sells, so that if the first queen procured should prove impure, it would be replaced by others until a pure one was obtained. The lowest price is not always the cheapest. Bee-keepers all admit that they have the three bands, but a slight mixture of native blood would be hard to detect.

To change a colony of native bees, you must first catch the native queen and destroy her; then having your Italian queen secured in a wire-cloth cage, insert the caged queen between the combs, and let her remain eight days, and on the ninth day destroy all the queen cells. Then remove the stopper in your cage and stop the cage with comb. After the queen is waxed in with comb, the cage must be inserted again between the combs or frames, so that the bees can release her in a few hours. I never have lost a queen when introduced in this way.

This has been a very good season for bees in this locality. Fruit blossoms were very plenty, and I never saw the like for white clover—fields were perfectly white—which lasted nearly three months. The Italians are now very busy on smart-weed, golden rod and a purple blossom that I do not know the name of, while the common bees are idle and eating their stores. .

Before cold weather sets in all weak colonies must be thrown together and fed, but if you wish to keep all of your colonies, you must feed and strengthen them by feeding and by giving them a frame of brood from some strong colony that can spare it.

I would advise all beginners to procure some good work on bee-keeping. Get "Langstroth on the Hive and Honey Bee," or "Quinby's Mysteries of Bee-Keeping," or "King's Text-Book," or "Mitchell's Guide." Then take some good journal on bee-keeping, and, with a good share of pluck and common-sense, there is no such thing as fail, but success—remunerative success.

Respectfully yours,

LEONIDAS CARSON.

Frederick, Ohio, Sept. 29, 1870.

[For The Illustrated Bee Journal.]

MORE ABOUT NATURAL *vs.* ARTIFICIAL SWARMING.

Mr. Editor:—I was somewhat surprised to find in the September number of the JOURNAL my article republished over the signature of “Novice No. 2,” with an occasional line of his thrown in by way of comment. Now, I do not wish to be sarcastical, but as he has worked himself up into a feverish state of excitement, I will reply to his article in the same spirit in which he replied to mine, and for his consolation would say I feel very badly used up; but I fear my namesake will not survive the ordeal if I do not let him have his “own way.” Hear him, at the close of his superlative effort: “Mr. Novice can have his own way with his own bees, if he will allow me the same privilege;” as if I had been compelling him to swallow what I said. The fact is, as long as he can have his “own way,” advance his own ideas, and be let alone, he thinks he has a strong argument in favor of artificial swarming. If the advocates of artificial swarming are not willing to have their method examined and criticised, they had better throw up their weapon of defense and cry, enough.

Dr. Bohrer, in the same number of the JOURNAL, attacks my article in a more courteous manner, and I shall endeavor to meet both their objections, or a part of them, at least. If I understand the gentlemen correctly, they claim that both methods of swarming are correct, and attack my position that “either the one or the other is wrong, or to be condemned.” This proposition I claim as a matter of fact, from the fact that no two things in nature are alike. That natural swarming is the correct method, is a matter of opinion, with the greater presumption resting on this opinion, which opinion I have assumed and endeavored to prove. Now, then, if Dr. Bohrer or Novice can show to me that there are two *right* methods (which their objections imply) to perform a thing, then I will admit that artificial swarming may be proper and right.

Again, they claim, but have failed to show why, that no law of nature is changed or violated when they swarm artificially. In taking this position, they virtually make the two terms synonymous. Natural has for its opposite artificial, and when anything is made or performed artificially, it is changed, and only represents the natural thing. Now, then, if the gentleman can show to me that there is anything made or performed artificially that is equal to, just as good, or exactly like the natural thing itself, then I will admit that artificial swarming may be proper and right.

Novice asks, what law of nature is violated? To be brief and not particularize, I answer, that law which governs and controls the insect creation. As Novice's comprehension is so very obtuse, I would say that in using the egg in my illustration I intended to convey the idea that the bees should be let alone in the hive, and not break the hive until the bees are ready to come out themselves, and not to uncap the cells, as he understands. If Novice No. 2 will place himself astride a grindstone, and hire some one to revolve it very rapidly for some moments, I have no doubt he could be considerably sharpened, and be able to comprehend ordinary language and illustrations.

I have not yet exhausted all my ammunition on the subject, and will proceed to give some more reasons why natural swarming is preferable to artificial. In "Adair's Annals" for 1869, we find the following: "A colony of bees is a unit. Each bee is but a member of the whole body, and not separate and individual any more than the fingers of the hand." If this be true, which I doubt not, it furnishes a strong argument in favor of natural swarming. In artificial swarming you tear asunder what properly belongs together; you do not know what bee to take and what one to leave. Again, Adair says: "At certain times certain bees make wax, certain others build it into cells;" and I will say, at certain times certain bees are in search of honey, others in search of polen, while others are acting as body-guard to the queen, each having its work to perform, and all working together with the pre-

cision and exactness of a good time-piece. Now, then, when we swarm these busy workers artificially, do we not disturb their internal arrangement and order more than if left to their own choice to emigrate or remain? It is like removing a setting-hen and trying to make her set at another place. She is inclined to go back, or set standing, and will seldom do any good. NOVICE.

[For The Illustrated Bee Journal.]

DRONE-LAYING QUEENS.

Mr. Editor:—On the 6th of August I had two sister queens hatched—both small. On the 11th one began to lay eggs, and the other one on the 12th. The one that commenced laying first, almost half of her eggs hatched drones, although they were in worker cells—workers and drones all mixed up promiscuously. The other one laid all, or nearly all, drone eggs, also in worker cells. Why was this? I had thousands of drones flying at the time.

The one that commenced laying on the 11th is now laying all worker eggs that are hatching beautiful Italian bees. The other one I removed from the nucleus box to a full colony, but they would not accept her. She was permitted to live in the hive two days after she was released from cage, but layed no eggs. I then put in a comb of eggs and young brood. As soon as that was done the bees dispatched her, and raised another from the brood put in. Why did these two queens lay drone eggs, and one afterwards lay all worker eggs? Did they commence laying before they were fertilized? And how about the *fine* day theory? One of these queens I am sure was hatched on the morning of the 6th of August, and on the 11th I saw her laying eggs. The other one was hatched in the evening of the 6th, and I saw eggs on the 12th. Perhaps some that are awaiting *fine* days, then changing their queens with select drones, have their queens fertilized before they are caged, and then crying *Eureka*. These queens were small, but I

have had queens as small as they were that were fertilized and done well.

Will you, Mr. Thomas, Dr. Bohrer, or somebody else, explain this mystery in the next ILLUSTRATED BEE JOURNAL, and much oblige,

H. NESBIT.

Cynthiana, Ky., Oct. 15, 1870.

[For *The Illustrated Bee Journal*.

THREE STRIPED WORKERS NO TEST OF PURITY.

Mr. Editor:—I am repeatedly asked what I consider a sure test of purity in Italian queens. The first Italian queen that I ever owned, in five days after introducing her I started nuclæ and raised five queens. And mind you, there was no Italian drones, at least within a circuit of twenty miles, and I knew of none nearer than sixty miles. One of these queens produced workers lighter colored (and all marked with the three distinct stripes) than the workers from the mother. Mr. Langstroth and Professor Kirtland both claim that they have had similar cases (See *American Bee Journal*, volume 1st). I now have workers from queens raised from Hybred mothers and fertilized by pure drones that are as handsomely marked as any Italians I ever saw. Yet in handling they show the crossness of the Hybred. In 1869, on the 26th of August, I received a queen from Henry Alley that produced splendid workers to look at, and supposed I had a good queen as I introduced her to a black swarm. But this spring I discovered occasionally a black bee emerging from the cells, and on raising queens from her they were all found to be black ones without an exception. I know positively that there are a great many cheap queens sent out as pure, and accepted as such that are not pure or fit to breed from, and a great many queens are sent out by parties (innocently) that do not even know pure stock. In the first place I want the abdomen of the pure worker round and pointed, not stub tails as a certain writer calls them. I want them

good workers. The queens must be prolific and produce queens of a uniform color (allowing for the difference in season), and pure workers must be peaceable and quiet to handle under ordinary circumstances. I do not care about the queens or workers being extra light colored. In fact, I have invariably found pure imported queens of a dark leather color, and so far I have never seen an extra light colored queen that produced extra light colored workers that come up to my standard of fertility and excellent working qualities. I am compelled to agree with Mr. A. Grimm on that score. I want prolific queens for profit every time, even if they are dark colored.

Now, Mr. Editor, some of our extensive queen breeders may take exceptions to this article, yet I think the facts should be given even if some are not so well pleased with them. When a certain party sends out cheap queens all over the country, and four out of five are certainly impure, and the fifth one doubtful, no doubt facts may not be gratefully received.

E. GALLUP.

From Coleman's Rural World.

MRS. TUPPER'S PLAN FOR SECURING THE FERTILIZATION OF YOUNG QUEENS BY ANY DRONES DESIRED.

As the article on controlling the fertilization of the queen bee, copied in last week's *Rural World* from the *American Bee Journal*, is as clear as mud, I will inform your readers how I have succeeded for the last two years in having young queens fertilized with such drones as selected. The discovery was made by Mrs. Ellen S. Tupper, of Brighton, Iowa, who, in a letter to me, dated May 23, 1868, was kind enough to inform me of it, and who then stated that she had made the discovery some time previously.

Now that the matter, practically, is being made a success by a great many, a certain class of humbugs step forward at this late day have the impudence to claim pub-

licly the discovery as their own. I will now proceed to describe the process in a come-at-able way.

Procure a wire-cloth dish cover nine or ten inches in diameter—(they only cost from thirty to fifty cents each); fasten a piece of thin board in the bottom (a wide shingle is just the thing); make a door in the board large enough to put in your hand, and you have all the “fixings” needed. If no dish covers are to be had, make a cage of wire-cloth twelve or fourteen inches long, and six or eight inches in diameter. Fasten a piece of empty comb three or four inches square on the inside, which, when required for use, fill with honey and water. In the spring and summer young queens leave the hive to meet the drones, usually on the fifth day; in the fall months they seldom leave until seven or eight days old. Got that in your head? Now, then, on the morning of the day a queen is to leave her hive, put her with four or five selected drones into the fertilizer. The drones should be caught as they are about to leave the hive—those returning from a trip won't answer, as they are most always, as a general thing, too fatigued.

Lay the fertilizer when fixed (so that the warm air can get into it,) over the frames of the hive to which the young queen belongs—can be put on any hive, though; put on the cap, which should have an opening in the top or side, covered with glass, to *admit light*. Leave her there thirty-six or forty-eight hours—a shorter time usually answers. At the end of that time, if a dead drone is found, release her and she goes down into the hive and commences to lay in a few days.

The cages or fertilizers can be made in any form, and two or three can be put on one hive at a time. The principle is, that queens will be fertilized in confinement, if shut up about the time they would have flown. I have had over a hundred queens mated in this way, this season, and a great many last season. It is a great help, as it prevents all loss of queens when flying, and also enables us to select our very finest drones, and cross with any importation we please. If any do not understand it, please ask questions.

L. C. WAITE.

[From Coleman's Rural World.]

CONTEMPTIBLE.

The August number of the *American Bee Journal*, published at Washington, D. C., contains the translation of an article on Controlling the Fertilization of the Queen Bee, from the *Bienenzeitung*, written by Mr. Semlitsch, a noted German writer on bee culture, who procured the method of Mrs. Ellen S. Tupper, of Brighton, Iowa.

The article referred to was copied in last week's *Rural World*.

This is the first time this method has been noticed in Mr. Wagner's paper, and is now given as something new under the sun. Every apiarian in the country knows that it is the discovery of Mrs. E. S. Tupper, and if we are not much mistaken, that lady informed us that she had communicated the fact of the discovery, when first made, to the editor of the *American Bee Journal* himself.

The most contemptible part of the matter is, that although the discovery has been mentioned in all the other bee journals and leading agricultural papers, and experimented upon by all the leading apiarians of the country, Mr. Wagner has not, until now, given any notice of it in his journal; but after the thing has become a fixed fact, and can no longer be doubted, he has the audacity to come out and claim it as a "Hungarian Process," and endeavor to deprive an American lady of the honor that close study and laborious attention to business has given her. Can it be that he acts in this manner because Mrs. Tupper sees fit to write for other papers and not for his?"

This method has been so long discovered that it is known all through Germany, even, as "Mrs. Tupper's discovery."

Take it all in all, it is one of the most contemptible attempts to injure another that we have yet seen, and will undoubtedly act like a two-edged sword, cut both ways.

Mrs. Tupper is too well known and too well appreciated by apiculturists in her own country and in Europe to

suffer any theft of this kind; but that the oldest bee journal of the land should condescend to such trickery is little less than astounding.

L. C. WAITE.

St. Louis, August 20, 1870.

JOHN M. PRICE.

We present our readers with a true portrait of John M. Price, of Buffalo Grove, Iowa. Mr. Price is the inven-



ENGRAVED FOR THE ILLUSTRATED BEE JOURNAL.

tor of the *Casket Bee-Hive*, and is known by all readers upon apiculture to be an able writer, and one that has done much good. Success to him! May his shadow never grow less.

EDITOR'S TABLE.

THE ILLUSTRATED BEE JOURNAL, a semi-monthly for only two dollars per annum, the cheapest journal of the kind, is particularly adapted to the wants of all interested in bee culture. Subscriptions may begin at any time. Subscribe at once and get the JOURNAL free to the first of January.

All postmasters are respectfully requested to receive and forward subscriptions to the ILLUSTRATED BEE JOURNAL. Every farmer and every farmer's wife, boy and girl is respectfully requested to act as agent and get up subscriptions for the ILLUSTRATED BEE JOURNAL. Agents may retain twenty-five per cent. for their trouble. Agents are requested to examine our wants in advertising columns. Specimen numbers sent free.

Send all money by post-office order or registered letter. Sums under five dollars may be sent by mail at our risk, if enclosed in presence of the postmaster. tf.

NATIONAL BEE KEEPERS' CONVENTION.

OUR readers no doubt will be gratified to learn of our success in procuring rates at half-fare for all who visit the National Bee Keepers' Convention on the 21st and 22d of December, 1870. Each one will be required to pay full fare to Indianapolis, but will be returned free of charge. We have already in our possession checks or certificates to return visitors over three of our principal roads. We feel ourselves under special obligations to Messrs. S. F. Pierson, General Ticket Agent, and C. C. Gale, Assistant Superintendent of the Cleveland, Columbus, Cincinnati & Indianapolis Railway, for their prompt-

ness in aiding us in thus procuring half-fare rates. Duty compels us to notice another distinct mark of kind courtesy with which we have been treated in connection with the efforts made in behalf of our Convention, in the person of Capt. Simpson, Assistant Superintendent of the Terre Haute & St. Louis Railway. We found the Captain at his desk. He is a young man of pleasing address and general affability of manner, and certainly a more perfect gentleman it has not been our good fortune to meet. He at once telegraphed to his superior in office, and when we called at his office the next day for the reply, it was, "All right, I assure you." And now, before dismissing this subject, we will say that the Terre Haute & St. Louis line has one officer they may well be proud of, and one we will warrant will win favor in any station in life, and that man is Capt. Simpson. Success and prosperity attend him, and may his shadow never grow less. Our excellent Governor of Indiana has placed the Hall of the House of Representatives at our service, and let us say that all is in readiness, we have done all that we can thus far to make the National Convention a grand success; and we here say to all, come out, bring your neighbors along with you, and let it be said that the bee-keepers were not out merely by the hundreds, but by the thousands. Tell your neighbors of this half-fare arrangement; tell them to come out and see and hear the most talented and most able writers and speakers in America. In our last we told you that E. Gallup would be at the National Bee-Keepers' Convention of the 21st and 22d of December. Every one just commencing in bee culture should not fail to be on hand, as subjects will be propounded and discussed of invaluable price to you. Let us have a grand turnout from all of the States.

A FEW WORDS TO THE LADIES.—Look where we will, we see widows toiling from early morning till late hours of the night, and after all this toil but a scanty living is earned. We have often thought if that poor, industrious, hard-laboring woman were only the possessor of one col-

ony of bees to commence with, and only knew how to take care of them, she would soon have bees enough to support herself and family. Have you ever thought of it, my good woman? You can keep bees as well as the sterner sex, and often have we said that the day was coming when bees would be kept and handled just as successfully by the women as by the men, if not more so. We know of a number of women that are now keeping and handling bees successfully; and they say they would prefer doing it to milking and making butter. We would be glad, and, in fact, rejoice to see many ladies at this National Bee-Keepers' Convention. We know of a number that will be here from a distance, and truly do we hope to see a general turnout of both ladies and gentlemen. To the poor, laboring widow we will say, who would like to keep bees and is not able to take our JOURNAL, that if getting a minister of the gospel to certify to that fact, we will send her the ILLUSTRATED BEE JOURNAL for one year free.

THE BEST YET.—George Perine, the best engraver on steel this country ever produced, has been a long time engaged on a 19x24 portrait of M. M. ("Brick") Pomeroy, which will be the best and most elaborate work of art of the kind ever made in America. It will be printed on heavy plate paper for framing, and will rank with the choicest art works of the world. The price of the engraving will be \$2—very low for so fine a work. C. P. Sykes, P. O. Box 5217, New York City, Publisher of Pomeroy's *Democrat*, offers one of these beautiful pictures as a premium for three new subscriptions to that paper, at regular rates, (\$2.50) received at the office in New York City, before the first day of December, when the engraving will be ready to send out, by mail, wrapped on a roller, prepaid.

We shall soon see how looks the man who writes Sense and Nonsense; political and descriptive articles, and those strangely beautiful Saturday Night Chapters.

PETERS' *Musical Monthly* for October contains the following choice collection of Music, printed from full-size music plates:

Truly Yours, song and chorus by Hays. Papa, come Help Me Across the Dark River, song and chorus by Persley. The World is full of Beauty when the Heart is full of Love, song by Von Smit. Eyes of Loving, Laughing Blue, song and chorus by Philip Phillips. We Won't leave the Farm, song and chorus by Persley. Cast thy Burden upon the Lord, Quartet. Jesus and the Children, Quartet. Halte Militaire, or Camp Polka. Falling Leave Polka. Christine Nilsson's favorite Schottische, and Floating Breezes Valse, Sentimental.

This Magazine is invaluable to all lovers of music, any single piece of the above being worth as much as is asked for the entire lot. It is published monthly by J. L. Peters, 599 Broadway, New York, at \$3 per year. Sample copies mailed on receipt of thirty cents.

WE have made arrangements with the publishers of the *St. Louis Home Journal*, the great literary paper of the West, whereby we are enabled to furnish the ILLUSTRATED BEE JOURNAL and the *Home Journal* for the low price of \$2.50 per year. We trust our friends will come forward at once and avail themselves of this very liberal offer.

THE *Dollar Farmer* is the name of a new Agricultural and Family Magazine, published at Louisville and Shelbyville, Ky. Each number is handsomely illustrated. Send ten cents for a sample copy. Address, Editor of the *Dollar Farmer*, Shelbyville, Ky.

ADAIR'S SECTION BEE-HIVE.

PATENTED AUGUST 27, 1867.

Frames close fitting and forming a hive of themselves, that can be handled like a solid box, and shipped any distance. No unnecessary draft of air through the hive, as in open side frames. No surplus room around the frames to be occupied by idle bees. Can be enlarged or contracted at will in a few minutes. Is the most perfect queen nursery; as the brood chamber can be broken up into NUCLEI of any size, and reformed when desired. It can be arranged so that queens can be fertilized without leaving the hive. Several queens can be kept in the same hive during the winter, and it is believed it can be done all the year, so that each hive may have the services of one or more queens. It needs no winter protection; but if housing is preferred, four times as many can be stowed away in the same space that other hives occupy. Box room unlimited. Supers or laterals, or both, can be used. It is a perfect observing hive. Bees can be fed in it, in the center of the cluster, in any weather, without disturbing them, with both meal and honey; and brooding kept up all the year. It can be built of wood, stone, brick, adobe, concrete, lath and plaster, paper, straw, iron, and other materials.

THE "OUTLINES OF BEE CULTURE,"

Which gives full description, with illustrations, and much other valuable information, sent for ten cents.

RIGHTS AND TERRITORY FOR SALE.

COMPETENT AGENTS WANTED ON LIBERAL TERMS.

Send for circulars and terms to agents. Rights free to ministers of the gospel who buy a sample hive.

D. L. ADAIR,

Hawesville, Kentucky.

ITALIAN QUEEN BEES

From Mothers, directly from the highlands of Italy, and purely fertilized. Safe arrival guaranteed. Also, small swarms to build up or raise queens.

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Camarge, Illinois.

ITALIAN QUEEN BEES.

Queens shipped in June, for \$2.50; after July 1st, three for \$7, or five for \$10. Queens sent by express. Purity and safe arrival guaranteed. Send stamp for circular.

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H. ALLEY,

Wenham, Essex County, Mass.

SPECIALITY OF IMPORTING QUEEN BEES EXCLUSIVELY FROM UPPER ITALY.

For one Queen in May, \$14; in June, \$13; in July, \$12; in August, \$11; in September, \$8 to \$10. The money to be remitted in the month previous to the date fixed for the reception. The Queen will be sent from here *genuine*, and safe arrival guaranteed.

CHARLES DADANT

Hamilton, Illinois.

THE QUEEN BEE-HIVE.

The accompanying Engravings represent

THE QUEEN BEE-HIVE,

Patented August 10, 1869, by

THOS. ATKINSON, of Memphis, Tenn.,

and acknowledged by all who have used it, or know the practical workings of this superior Hive, to be the

Greatest Improvement of the Age.



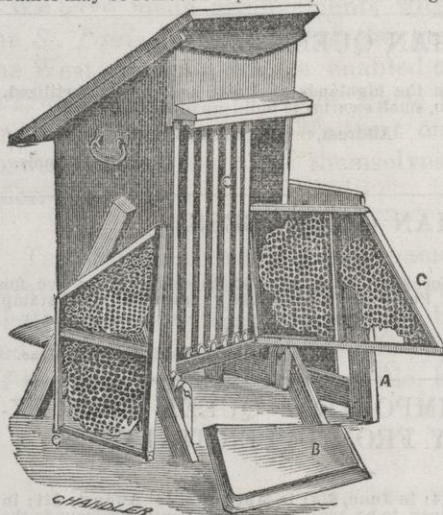
Some of the advantages claimed in this Hive are: 1st. Simplicity of construction and cheapness. 2d. Ease of access; the brood comb in any or all of the frames being removable from the back of the Hive without, in the least, disturbing the working of the bees, or the surplus hone' frames or boxes. 3d. Perfect management of the hive and bees without drugs, fumigation, or "CHARMING" humbugs. 4th. The most effectual **MOTH TRAP** yet invented. 5th. Perfect ventilation winter and summer, and security from sudden changes of temperature, having inner movable sides (B in engraving), making double sides with air chambers between. 6th. Adaptation to the wants and instincts of the bees. 7th. Perfect artificial swarming arrangements; C, showing the frames as turned out and removed. 8th. Economy of animal heat. 9th. In a word, all the advantages of any or all other movable comb hives; and to corroborate this statement we would refer inquirers to disinterested parties who have used the hive.

The construction of the hive induces industry in the colony, and any of the frames may be removed at pleasure, without danger of being stung.

The hive is PERFECTLY SIMPLE AND EASILY MADE by any one of ordinary mechanical skill, yet is a perfect house in itself, having two openings for the ingress and egress of the bees, and a glass door, which affords complete inspection of the colony.

THE QUEEN BEE-HIVE will prevent bees from swarming by removal of a few sections into a new hive, and by this process of artificial swarming, the colonies are rapidly and successfully increased. Every section or frame is free, independent, movable, and self-adjusting; all of the same pattern, and will fit any hive.

Hundreds have been sold, and from almost every section of the country the most unqualified recommendations are offered; yet the only recommendations we desire to offer are the merits of the Hive itself. Territory and Rights in the United States for sale by Atkinson, Schofield & Barber, the un-



dersigned, except the state of Ohio, which is under control of Parker & Barkley, 32½ East Washington Street, Indianapolis, Ind.

We are rapidly selling Hives, Rights and Territory, as follows:

Sample Hives, \$4. Personal Right, \$8. Township Right, \$50 to \$100. Counties, \$200 to \$500. For circulars and further information address,

ATKINSON, SCHOFIELD & BARBER, Indianapolis, Ind.

ADVERTISEMENTS.

PRICE OF BEES AND QUEENS,

FOR THE YEAR 1870.

Full Colonies of Italian Bees, with tested pure Queens of last summer's raising, in a Langstroth movable comb, full of comb, and honey enough to last until May 20th, I will deliver at the express office at Jefferson station, for \$15 each.

6 colonies for \$14 each; 10 colonies for \$135; 20 colonies for \$250; above 20 at \$12 each; any number over 50 \$11 each.

I will sell 100 colonies for \$1000.

Parties that wanted such a large number of stocks, would have to order them at their own risk, and would do well to oversee transportation.

Italian Queen Bees, whose worker progeny has hatched in my Apiary, and shows by its marking that they have met with an Italian drone, I will sell at the following prices:

If sent from April 20th to May 5th, \$8; May 5th to June 1st, \$7; during the month of June, \$6; during the months of July, August and September, for \$4. If from 10 to 20 queens are ordered, a reduction of ten per cent will be made; if above 20, a reduction of twenty per cent.

All queens will be sent by mail post-paid. The box or boxes in which the queens are sent must be opened in presence of the Postmaster or another witness, and a certificate from one of them must be sent by return mail. If one or more of the queens should have died during shipment, on receipt of this certificate from the Postmaster or other witness, another queen will be sent or the money refunded.

Young Swarms of Italian Bees, medium sized with a tested pure Queen of last summer's raising, sent in a common shipping box, with feed enough to stand the journey, if sent before June 25th, will be sent for \$9; between June 25th and July 10th, for \$8; from July 10th to August 1st, for \$7; and after that time for \$6. If a colony with a queen reared from an imported one, or queens of that kind are ordered, one dollar extra will be charged. Express charges to be paid by purchaser.

In some cases, where claims are made on account of losses incurred during shipment, I will demand an affidavit setting forth the facts in the case before I will satisfy the claims.

Safe arrival and purity guaranteed in every shipment. The Cash must accompany every order or it will not be noticed.

ADAM GRIMM.

JEFFERSON, WIS., February 1, 1870.

ITALIAN QUEEN BEES FOR 1870.

In order to prevent too close breeding, I made two importations of Italian queens last fall—one importation from the celebrated apiary of Dzierzon, the other from Italy. Queens from these importations, at the usual orders. Those wishing queens will do well to

PATRONIZE MY APIARY,

both for pure queens and promptness in filling orders. Send for Circular.

A. GRAY.

RILEY, BUTLER COUNTY, OHIO, April 1, 1870.

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Queens reared from queens imported from Italy. Also stocks of Italian Bees for sale. All orders promptly filled.

PURITY OF STOCK GUARANTEED.

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ADVERTISEMENTS.

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\$4.00

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ITALIAN QUEEN BEES.

Purity and safe arrival guaranteed. Circular free.
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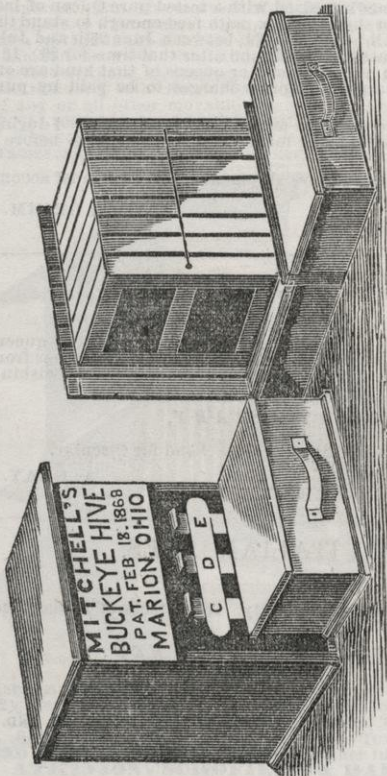
G. H. BOUGHTON,
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TESTED ITALIAN QUEENS.

Shipped to May 15, \$8.00; shipped to May 31, \$7.00; shipped after June 1, \$6.00.
Safe arrival guaranteed. Circular sent free.

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PATENTED FEBRUARY 18 1868

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TOWNSHIP OR COUNTY RIGHTS
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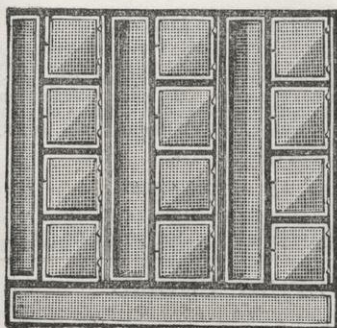
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QUEEN NURSERY.

This important invention is now ready for sale, and is furnished to order to suit any Movable-Comb Bee-Hive, at short notice.

Individual, Township, County, and State Rights are for sale.

Those wishing Rights and Models should address

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PURE ITALIAN QUEEN BEES.

AARON BENEDICT,
Importer and Breeder of

PURE ITALIAN QUEEN BEES.

Queens and Full Stocks constantly for sale.

BENNINGTON, MORROW CO., OHIO.

All orders promptly filled. Satisfaction guaranteed. Send for Circular Price List of Queens and bees.

A G E N T S !

Great inducements offered to agents to sell Italian and Egyptian Queens.

Address,

LITTLE BEE MAN,
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FIFTY COLONIES OF ITALIAN BEES.

I will deliver at express office in this place, full colonies of Italian Bees "Queens warranted pure," with honey to last till May next, packed ready for shipment in Langstroth hives, and guaranteed safe arrival to any express office by railroad or river in the United States or Canadas for \$20.00 per colony, to be shipped this Fall or next Spring.

Purchasers to pay expressage.
Sept. 14 tf.

Address,
H, NESBIT, Cynthiana, Kentucky.

ITALIAN QUEENS AND BEES.

Pure Italian Queens for sale during summer. Price \$5, sent by mail, when I think it safe to do so; if not, will send by express. Full Colonies of pure Italian Bees for sale in the fall, winter and spring. Price \$20, delivered at the Express Office in Anderson. Money to accompany all orders, which may be sent at my risk, either by Express and directed to me at Anderson, or by Post Office Money Order on Anderson, Madison County, Indiana, and directed to Alexandria, Madison County, Indiana. Purity and safe arrival of Queens and Colonies guaranteed to nearest Express Office to purchaser. Address

G. BOHRER, Alexandria, Madison Co., Ind.

EARLY ITALIAN QUEEN BEES.

The advantage of climate enables me to furnish *Italian Queen Bees* much earlier in the season than parties further north can do. My early raised queens will supply any deficiency in drone brood, and if introduced in colonies of black bees before preparations are made for swarming, will, without doubt, supply drone brood for that purpose in proper season.

PRICE. Queens from first of May to first of July, \$5 each.

PURITY AND SAFE ARRIVAL GUARANTEED.

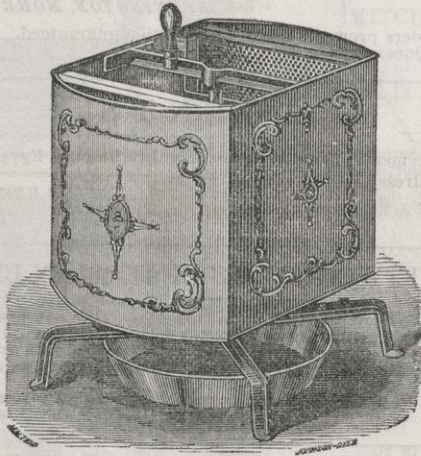
DR. W. McK. DOUGAN,
SAWYERSVILLE, RANDOLPH Co., N. C.

TO THE BEE KEEPING PUBLIC.

As I can not properly attend to all my bees, I will sell a number of colonies this fall, very low for cash, also as I intend to break up a number of colonies that are getting too old to prosper, I will have an equal number of finely colored, choice, tested Italian Queens to sell, very low, to wit: \$4 each or \$36 per dozen. Orders filled in the order of reception.

JOHN L. McLEAN,
RICHMOND, JEFFERSON Co., OHIO.

PEABODY'S HONEY EXTRACTOR.



This Mel-Extractor is now in use and highly recommended by the best Apirists in the country.

All orders, with the cash, filled promptly, or the money returned.

The machine weighs but forty pounds, all packed, ready to ship. Expressage low. Price of single machine, \$15.00.

We are now having made an *IMPROVED KNIFE FOR UNCAPPING CELLS*. Henceforth we will furnish two of them gratis, all finished, with each machine sold at retail price.

Price of Knives, with handles, sent by mail, post-paid, \$1.25 each.

TERMS—Cash in all cases.

J. L. PEABODY.

VIRGIN, MACOUPIN Co., ILL.

BUCKEYE BEE-HIVES FOR SALE IN OHIO.

John Miller, of Pierce, Stark County, Ohio, has purchased the Counties of Cuyhoga, Medina, Portage, Stark, Summit and Tuscarawas. Bee keepers in these counties would do well to address as above, or address,

REV. ELI MILLER,
CANTON, STARK COUNTY, OHIO.

FOR SALE.

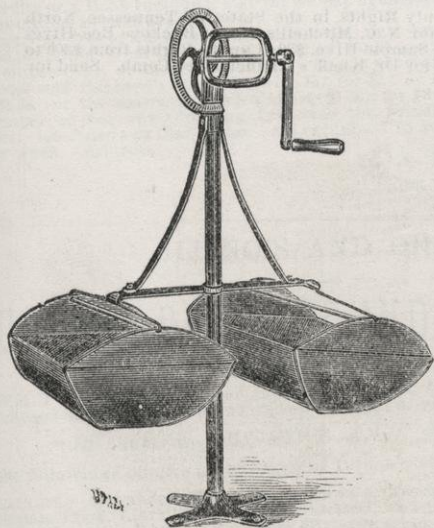
The genuine Alsike Clover Seed—80 cents per pound by Mail, or 65 cents by Express, where ten pounds or more are ordered at one time. Address,

COL. JOSEPH LEFFEL,
SPRINGFIELD, OHIO.

P. S.—Send for my Poultry Circulars of all kinds of Pure Breeds of Foultry.
COL. JOSEPH LEFFEL.

ADAIR'S MEL-EXTRACTOR.

PATENT PENDING.



This machine is all iron, except two buckets in which the honey is collected, which are of tin, and are just large enough for the frame of honey to lay on. No wood about it to get sour or dirty. The black grease from the gearing cannot fall into the honey. It only weighs about twenty eight pounds and can be packed in a small box and be sent for less freight than any other. It will empty small pieces of comb; as many as can be laid on it at one time. It will strain liquid honey or extract the juices from fruits for making jelly. It will separate sugar from sorghum after it grains, and make a nice article of sugar. The frames of comb are laid on it horizontally, and assume a verticle position as soon as set in motion, thus making it a filter for liquids, as well as the best mel-extractor.

Price \$14. Three machines for \$35, with a liberal discount to those who buy to sell again.
D. L. ADAIR.
Hawesville, Ky., July and August.

QUEENS, BEES AND HIVES.

Italian Queens of the brightest color, warranted pure.....\$5.00
Full Colonies of Italian Bees, in McClellan Hives..... 20.00
McClellan Hives, best and cheapest Movable-Comb Hives made (no patent). 4.00

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HIRAM MCCLELLAN,
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ARTIFICIAL HONEY, PURE AND DELICIOUS.

How to make it easy and cheap; sent *free*. Address,
G. G. BERRY, North Strafford, N. H.

MITCHELL'S BUCKEYE BEE-HIVE.

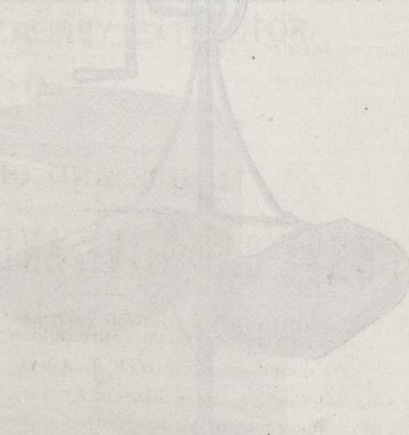
Persons desirous of purchasing Farm, Township, or County Rights, for Mitchell's Buckeye Bee-Hive or Moth-Trap, or procure Italian Bees or Sample Hives, in the State of Pennsylvania, will please address

D. H. LINTNER, Bee-Keeper,
Lancaster, Penn.

THE OFFICE OF J. H. CROPPER

Is removed to No. 52, Cor. Union and Cherry Sts., Nashville, Tenn.

For the sale of Farm and County Rights, in the States of Tennessee, North and South Carolina, and Florida, for N. C. Mitchell's Patent Buckeye Bee-Hives and Moth-Trap. Farm Right and Sample Hive, \$20; County Rights from \$300 to \$1,500. Also, State Rights for sale for Dr. Knapp's Artificial Bee Comb. Send for Circulars.



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ILLINOIS AND OHIO.

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WM. T. GIBSON, an old and reliable resident of the city of Indianapolis, has purchased of myself and others, the entire right of my

"BUCKEYE BEE-HIVE AND MOTH TRAP,"

In the following Counties in the States of Illinois and Ohio:

ILLINOIS.—Alexander, Bond, Boon, Brown, Bureau, Calhoun, Carroll, Cass, Christian, Cook, Clark, Clay, Coles, Crawford, Cumberland, De Kalb, Du Page, DeWitt, Douglas, Edgar, Effingham, Edwards, Gallatin, Green, Grundy, Hamilton, Henderson, Hardin, Jasper, Jersey, Jo. Daviess, Johnson, Kane, Kendall, LaSalle, Lawrence, Lake, Lee, Livingston, Logan, McHenry, Macoupin, Marshall, Mason, Massac, Menard, Mercer, Marion, Montgomery, Moultrie, Ogle, Peoria, Piatt, Pike, Pope, Pulaski, Putnam, Richland, Rock Island, Sangamon, Schuyler, Shelby, Stark, Stevenson, Saline, Scott, Tazewell, Union, Vermillion, Wabash, Wayne, White, Will, Whiteside, Winebago, and Woodford.

OHIO.—Adams, Ashland, Ashtabula, Athens, Clark, Clinton, Darke, Delaware, Fayette, Gallia, Geauga, Green, Highland, Hocking, Jackson, Lake, Lawrence, Madison, Mahoning, Meigs, Morgan, Noble, Pike, Sciota, Vinton, and Washington.

Persons wishing to

PURCHASE COUNTY, TOWNSHIP, OR FARM RIGHTS,

Procure model or ordinary Hives, or gain information relative to Bees, in the above-named Counties, will do well to address

WM. T. GIBSON,

5 Odd Fellows' Hall, Indianapolis, Ind

RAILROAD TIME TABLE.

TRAINS LEAVE.

TRAINS ARRIVE.

C, C., C. & I. R. R.—(BEE LINE.)

Eastern Express.....4:20 a m	Western Express.....2:30 a m
Union Accommodation.....7:45 a m	Night Express.....6:40 a m
New Orleans Express.....11:25 a m	Union Accommodation.....3:20 p m
Night Express.....7:30 p m	Day Express.....5:55 p m

P., C. & ST. L. R. R.—(INDIANA CENTRAL.)

Day Express.....3:40 a m	Western Express.....2:20 a m
Mail Express.....8:50 a m	Richmond Accommodation.....11:15 a m
Night Express.....7:20 p m	Day Express.....4:15 p m
Sunday Express.....7:20 p m	Sunday Express.....2:20 a m

TERRE HAUTE, VANDALIA & ST. LOUIS RAILROAD.

St. Louis F. L.....3:05 a m	Eastern F. L.....3:25 a m
Greencastle Accommodation...7:05 a m	Mail and Express.....10:10 a m
St. Louis and Ev. Express...12:00 m	Accommodation.....6:10 p m
Mail.....2:55 p m	New York Express.....6:45 p m
St. Louis Express.....7:10 p m	

INDIANAPOLIS & ST. LOUIS RAILROAD.

Fast Express.....3:05 a m	Lightning Express.....3:28 a m
St. Louis Express.....7:00 a m	Accommodation.....10:30 a m
Mattoon Accommodation...12:00 m	Accommodation.....6:25 p m
Night Express.....7:10 p m	Day Express.....6:50 p m

LAFAYETTE RAILROAD.

Toledo & Quincy Accom.....4:10 a m	Chicago Express.....2:50 a m
Chicago Mail.....12:00 m	Toledo & Quincy Express...11:30 a m
Chicago & Quincy Express...8:00 p m	Chicago Mail.....7:05 p m

INDIANAPOLIS, BLOOMINGTON & WESTERN RAILROAD.

Accommodation.....6:50 a m	Mail.....9:25 a m
Mail.....3:00 p m	Accommodation...4:45 p m

CINCINNATI RAILROAD.

Baltimore Express.....3:35 a m	Baltimore Express.....2:55 a m
Mail.....11:45 a m	Martinsville Accommodation...1:50 p m
Martinsville Accommodation...1:40 p m	Mail.....11:45 a m
Express.....7:40 p m	Chicago Express.....7:05 p m

CINCINNATI & INDIANAPOLIS JUNCTION RAILROAD.

Morning Express.....4:20 a m	St. Louis Express.....11:50 a m
Mail.....4:05 p m	Mail.....11:30 p m

INDIANAPOLIS & VINCENNES RAILROAD.

Accommodation.....7:30 a m	Worthington Accommodation...9:50 a m
Worthington Accommodation...2:00 p m	Accommodation...5:15 p m

INDIANAPOLIS, PERU & CHICAGO RAILROAD.

Toledo Express.....7:35 a m	Chicago Express.....5:40 a m
Mail and Chicago Express...12:50 p m	Mail and Toledo Express...9:20 a m
Kokomo and Chicago Express...8:00 p m	Chicago Express.....5:00 p m

JEFFERSONVILLE, MADISON & INDIANAPOLIS RAILROAD.

Jeffersonville and Madison Ex. 3:30 a m	Night Express.....3:00 a m
Jeffersonville Mail.....7:15 a m	Seymour Accommodation...9:30 a m
Seymour Accommodation...5:00 p m	Jeffersonville & Madison Mail...11:25 a m
Express.....7:15 p m	Jeffersonville Express...7:05 p m
Sunday Train.....7:15 a m	Sunday Train.....7:05 p m