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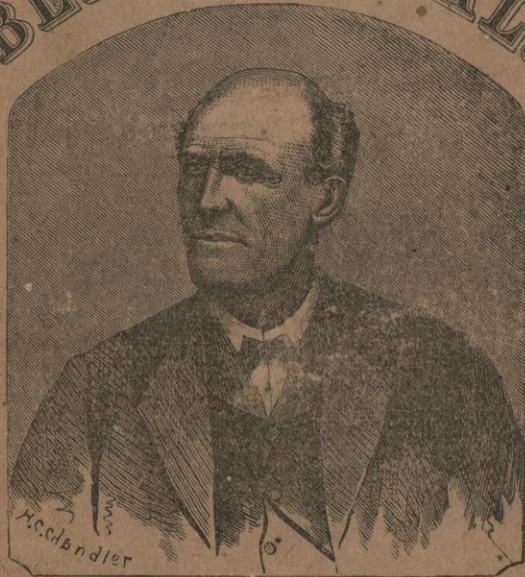
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*G. M. Doolittle  
Brooklyn*

*Vol. 7-8-9-11-12-13  
Monday*

THE  
ILLUSTRATED  
BEE JOURNAL.



MARCH, 1870.

**N. C. MITCHELL, - Publisher,**

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# The Illustrated Bee Journal.

DEVOTED TO THE CULTURE OF THE HONEY BEE.

Vol. I.]

MARCH, 1870.

[No. 4

## WHICH WILL THEY DO?

FOR THE ILLUSTRATED BEE JOURNAL.

MR. EDITOR:—I wish to call your attention to one point in bee culture, which I noticed in the last ILLUSTRATED BEE JOURNAL, page 147. But before I present the point in the JOURNAL, I want to give the statements of prominent bee writers on the subject.

The first I note is found in M. Quinby's "Mysteries of Bee Keeping, pages 194-5: "Her (the queen's) presence will generally prevent much drone-comb from being built." "A singular phenomenon attends a swarm that is constructing combs, without a queen. \* \* That is, four-fifths of the comb is composed of drone-cells," etc.

The next note I make, you will find in W. C. Harbison's work on "Bees and Bee Keeping," page 150. He says: "So long as they have the means of supplying themselves with a queen, they will work away, apparently as contented and happy as if they were in possession of one; but during the time they are destitute, they invariably build drone-comb, if they build any."

Next, I note the remarks of J. S. Harbeson, in his "Bee Keeper's Directory," pages 67 and 273: "If a hive is queenless or has an embryo queen, most of the comb built during the interregnum is large or drone-cells," etc. "But the hive having the old queen con-

tinue their labors with increased vigor, and fills up the vacancy mostly with worker comb, using it both for breeding and laying up stores."

In these extracts, we are clearly taught by three distinguished apiarists, that the queenless stock is the one that builds drone-comb, if any is built, and that the old stock with queen present will build worker-comb chiefly. If this is true, why should friend Gallup ask you to explain the reverse of this in the following paragraph: "But, Mr. Editor, I would very much like to have you give us your plan of preventing the old swarms from filling the empty frames with drone-comb, and thus ruining them for the next spring's operations. If we are going to give instructions to others, let us endeavor to not lead them astray. At certain seasons of the year, and under certain circumstances, nearly all new frames, filled one at a time, where the old queen is mistress, will be drone-comb."

When doctors in bee-keeping so positively disagree, who shall decide? Whom shall we follow? How can it be reconciled? Are they all right? Will friend Gallup explain it?

JEWELL DAVIS.

*Charleston, Illinois.*

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## ABOUT QUEEN BEES.

FROM THE IOWA HOMESTEAD.

---

The past season has been rather a disastrous one in this part of the State to those who had black bees, but the Italians have done well, as they have not only taken care of themselves, but in almost every instance either increased in numbers, or have stored quite a surplus for their owners, and are in excellent condition for wintering. It can no longer be a question about the superiority of the Italians, after such a season as the last. Yet there

are seasons that the blacks will do as well, or nearly so, as the Italians; but one or two seasons is no test to go by, unless it should be such a season as the past; and as there will probably be a great demand for queens next season, a little advice from an old stager may not be amiss.

In the first place, queens can not be raised by the thousands like cabbage plants, and all be good ones; therefore, you had better procure your queens from some old established breeder; even if you have to pay a trifle more on the start, you will be better satisfied in the long run. You had better pay ten dollars for one good one carefully bred, than to get ten poor ones for nothing. For remember that there is a great difference in queens; their purity may be unquestioned, yet they are not fit to breed from. I procured three queens from one party at ten dollars, and their purity was unquestioned, yet with all the coaxing I was master of I could not obtain as much brood from the three as I could from one ordinary queen in the same length of time, neither could I succeed in raising prolific queens from them. I have queens now that were properly bred from prolific stock, three years old, yet they are as good as ever, and I have one four years old that this season (1869) kept fully up to the standard. Breeding in and in should be carefully avoided. It is astonishing what a difference in the profits of your yard it will make in three years' carefully breeding. It is a known fact to practical, observing bee-keepers, that some queens are three and even four times as prolific as others under the same circumstances. Now, if you will follow the practice for three seasons, of breeding only from your most prolific queens, and see that every hive is supplied with a prolific one, you can bring every swarm up to a satisfactory standard. We will say that you have never seen the Italians. You procure a queen from some one, say Tom, Dick or Harry. They have not been in the business; yet they advertise queens at two dollars

each, (cheaper than any one can afford them,) that is, if they are all right in every particular. You get your queen, and your expectations are great, as you have read and been informed of the great superiority of the Italians; and ten chances to one if your expectations are realized, and forthwith you condemn the Italians, or those that have recommended them—they are all a humbug, etc. And all this disappointment is not owing to the Italians, but the queen is worthless. In fact, you are not a competent judge. Therefore, I say, if you are not acquainted with them, procure your queens from some old established breeder—one that has a reputation already built up, and then you will not be apt to be disappointed in your expectations. I have no queens for sale—so am grinding no ax!

E. GALLUP.

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FOR THE ILLUSTRATED BEE JOURNAL.

I am asked what such a one means by saying that he was fearful that he would be obliged to cage his queens to stop their breeding?—or is there any necessity of caging queens, etc.? In old brimstone times, it was a good plan to cage or destroy all queens about thirty days before consigning the swarm to the brimstone pit, as then there would be no brood in the combs, and the most of the combs would be filled with honey; or swarms that you are calculating to double up, should have one of their queens taken away about twenty days before doubling. Then all the brood is hatched out, and it leaves the comb clear for next season's operations. That is, I have done so in box-hive times; but I have never practiced doubling up since I commenced using movable comb-hives, because I practice artificial swarming, and I can not discover the propriety of making swarms to double up in the fall. In this climate the month of August is the time to strengthen up and equalize all stocks for winter. I am amazed that the books say October is the time to equalize, double up, etc. The books

are nearly two months too late. But remember we can not afford to be tied to books. We will say about the first of August we commence taking brood-comb and honey from the strong stocks and giving to the weak, (and we must carefully guard against allowing the strong stocks to build too much drone-comb,) and by the last of August we will have all equalized and prepared for winter. Then if we choose to make any more swarms, we make up a full swarm at once with bees, brood, honey and queen. How? By taking a single comb from as many hives as it takes frames to fill our hive. Here I am off the track as sure as fate.

In all my experience, the more prolific the queen the more the bees are incited to activity—the more honey they will store. In fact, give me a prolific queen every time for storing honey or any other purpose. Therefore, I never borrow any trouble about the queens breeding so much that they will not store any honey. Nature has made provision for this; because late in the season, if the bees cease gathering honey, the queen stops breeding; and early in the season, the more brood the better. I never yet saw a swarm storing honey in boxes that did not have enough in the brooding apartment for wintering; that is, in a standard hive of 2,000 cubic inches.

*Osage, Iowa.*

E. GALLUP.

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**TWO-STORY HIVES.**—Mr. John Locke, of Cedar, Jefferson county, had, last spring, twelve stands of bees in the common Langstroth hive, and one stand in a double (two-story) Langstroth hive. The bees are Italian and hybrid. From these fourteen stands he got thirteen swarms, and 1,030 pounds of surplus honey. From the two-story hive, which did not swarm, he got a trifle over 200 pounds. During the last week in August, and the first week in September, the two-story hive had collected over five pounds per day, in the upper story alone.



## LETTER FROM PLATTSBURG, NEW YORK.

FOR THE ILLUSTRATED BEE JOURNAL.

N. C. MITCHELL, Esq.—*Dear Sir:* The February number of THE ILLUSTRATED BEE JOURNAL came to hand this moment, for which accept my thanks. In my last I meant to say something about your hive, and what I thought of it. Well, sir, my opinion is this, that the hive is admirably adapted to our northern climate; first, on account of its being the exact size, which is wanting in most all other hives now in use; and I will give you my reasons for assuming that position. You know that there are but a certain quantity of bees that constitutes the colony, let the hive be as large as it will. Now, if the hive is large, there is no doubt that the bees will fill it up, if the season is favorable; and there being but a limited number of bees to consume that honey, there is a great deal of it left over the season, which could not be eaten, and what is eaten by them is that portion near the center of the hive, and the cells containing the honey will not be removed by the bees, causing the queen to discontinue laying, excepting the few empty cells that have been emptied through the winter by the bees; and when spring comes the bees go in search of more honey, and placing it in the empty cells contract the queen's dominions, and the first thing we hear such bee-keepers sing out is, "I don't know what ails my bees, they have all left and the hive is full of honey!" And we see in the agricultural papers articles called "Exodus of the Honey Bee." Those are my reasons for saying that it is of the right size, so that when brooding season comes the bees will have eaten up most of their honey and given the queen plenty of room to deposit her eggs, and the colony the chance of throwing early swarms, from which we expect our crop of honey. But if, as we have said before, the queen is hindered from depositing

her eggs, she can not furnish bees fast enough for the already decreasing colony. She will leave the hive with the few bees that are left her; hence, the "exodus." Make the hives of the right proportions and all this will be remedied.

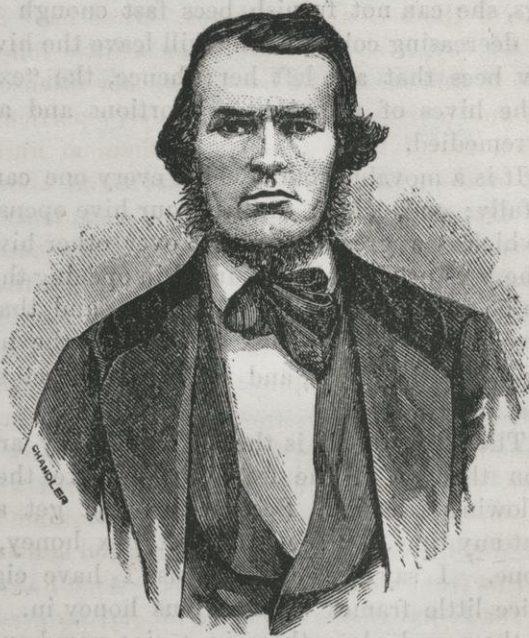
2d. It is a movable comb, which every one can keep successfully; and, added to this, your hive opens like a book, which is a great advantage over other hives, because the bees need not be disturbed in opening the hive, and can be put back in so short a time, and that they are so well adapted to persons that are in the habit of making artificial swarms, and that you can get surplus honey at any time.

3d. The nicest of all is the surplus honey arrangement on the top of the frames. We like them for the following reasons: Because we can get surplus honey at any time. "We can't get box honey," says some one. I say we can, because I have eight of these nice little frames with surplus honey in. I take four of them and place them in a nice new box, without any hole, or without having them all gummed up, with glass at both ends; and, oh! how much nicer than my neighbor's honey! It looks ten cents on the pound better! Does it pay? I am a little inclined to think it does. Besides, if I retail it by the pound, I have no need to break a whole box to get a piece, and the cook likes it better because she can take some of it without breaking the whole box to pieces.

4th. The moth-trap attached to the hive is a nice thing. It will answer all purposes for which it is designed. It will work wonders with robbers, besides being splendid for bees wanting air when too warm or when confined in cellars or houses in the winter.

J. B. TRUDO.

*Plattsburg, New York, Feb. 8th, 1870.*



ELISHA GALLUP.

ENGRAVED FOR THE ILLUSTRATED BEE JOURNAL.

We present our readers with a true likeness of Elisha Gallup, taken at the age of forty years.

Elisha Gallup was born August 22d, 1820, in the town of Milbourne, county of Sherbrook, Canada East. His parents were born in Connecticut, on Long Island Sound. By occupation a farmer; with the exception of eleven years a miller. He removed to Wisconsin in October, 1859, and settled in the town of Metonier, Fond du Lac County. In June, 1865, he removed to Mitchell County, Iowa. And now, in the fear that we may not do justice, we will here introduce friend Gallup, and let him speak for himself:

From my earliest youth I have been an enthusiastic admirer of the busy bee; in fact, my earliest recollec-

tions are of the bees and bee-hives. Often have I heard my mother say, if she lost me when a little fellow, she was sure to find me by the bee-hives. My intense desire to learn and investigate the bees in every particular has been such that I have dreamed of them at night and thought of them in my waking hours to an almost absorbing extent, and to-day I am still a student; and I find those persons who proclaim themselves *finished*, in every branch, are the ones who in reality *know* the least.

My early advantages were of a limited nature in the way of education—scarcely common school advantages did I have. My first reading upon the subject of bees, was a small pamphlet written by Weeks, of Vermont, which abounded in errors. My next was a work by T. B. Miner. I picked up my first real insight into the true system of bee-keeping from an old German, by the name of Wellhuysen. He made one hundred and twenty-five swarms from one, in two seasons. And here I will remark, that I have been suspected of getting my knowledge upon the subject of bee culture from Mr. Langstroth's work; but to settle that matter quickly and satisfactorily, I have never been known to quote from Mr. L.; neither could I have done so, from the fact I had it not to quote from. Once I remember to have had the privilege of skimming through it one evening, at the house of a friend, and that was merely to see if there were any new ideas put forth.

Eight years ago last season I obtained my first movable comb-hive. My progress from that time I felt was rapid, from using a glass observative hive of one single comb, for several seasons in Canada, of my own getting up. In my opinion, the movable comb-hive is very far superior.

Mr. Quinby's first edition struck me as being excellent; and when I saw an advertisement of his second edition, knowing that he had the advantage of the movable combs, I looked forward with confidence, and

expected to see some questions fully discussed by him, which I considered of vital importance; and when I obtained the book, and found that he had almost stood still, and those questions not even mentioned, I was disappointed in the work, and this determined my course to some extent.

For the purpose of fitting myself to appear before the reading world, I attended writing school, so as to accomplish myself in at least writing a legible hand. This was in the winter of 1865-66. As you say you are somewhat familiar with my writings, I leave you to judge of my success. My disadvantages at my time of life I fully appreciated; but being a man who has the fortitude to not look back when the hill has once begun to be climbed, my ambition and energy kept me ever on the onward path. I commenced first to write for the *Bee Journal*, and to-day my private correspondence would fill a goodly sized volume, of which I am proud—with innumerable testimonials from different parts of the United States and Canada, and from those who were entire strangers, which enhance their value, being assured it is not flattery.

Wishing, at no distant day, to welcome you to my home, and assuring you a good visit,

I am truly yours, E. GALLUP.

Our readers see in Mr. Gallup a self-made man, and to-day is recognized as the leader in Apiculture, standing in the front rank, still advancing, learning something every day of his little busy pets. What a name has he made for himself! His letters have, no doubt, been read in every county in the United States. You can scarcely find a bee-keeper that has not heard of Gallup; he may be justly called the Huber of America. We are pleased to announce to our friends that Mr. Gallup will contribute to our journal.

The friends of Mr. E. Gallup will hereafter address him at Orchard, Mitchell County, Iowa. N. C. M.

## LETTER FROM MADISON COUNTY, IND.

FOR THE ILLUSTRATED BEE JOURNAL.

MR. EDITOR:—I have frequently been asked for an opinion in regard to the moth-proof qualities of Mitchell's Buckeye Bee-Hive; but, not having had an opportunity until quite recently to examine its arrangement as a moth-proof hive, I have not until the present given a definite reply. Though I will state that I have until within a few months past had considerable doubts as to the reality of such an invention. Having always entertained, and still entertain no other thought upon the subject, but that a moth miller can pass through any entrance which will admit of the passage of a honey bee—the latter being much the largest. This fact Mr. Mitchell has taken advantage of, and has constructed entrances through which the moth can pass, but which will exclude the bees, they being smaller than is required for insects of their size. These entrances are situated one on each side of the bee entrance, and lead down into the moth-trap. These passage ways are terminated by tin tubes, an inch or two from any of the walls of the trap, thus making the escape of the moth miller next to impossible, as they will not one time in a thousand find the end of the tube through which they entered, and which they must find before escape is at all possible. But some have concluded that as these entrances to the moth-trap are situated on each side, and so near the bee entrance, the miller is as likely to enter the bee chamber as the trap. This to a great extent, I think, a mistake, as the miller on first approaching the hive is not very bold about entering through a dense crowd of bees, who at night always guard the entrance to the bee-chamber. They mostly move about the edges of the cloister of bees found at the entrance, this will bring them in contact with the passway leading to the trap, through which

they will almost invariably pass, for I never witnessed a miller pass by a small hole or crack without first looking into it. Now, the moth-trap being separated from the bee-chamber by wire cloth, it is not possible for them to do the colony of bees any further injury, but are imprisoned forever.

From this it will be seen that Mr. Mitchell's invention will at least destroy a large number of moth millers, and which must be regarded by all unprejudiced and sober-thinking bee-keepers as a great success. I do not understand that it is claimed by Mr. Mitchell or any of his friends, that the moth miller cannot, by any means, enter his hive; but I understand his claims to be, that in attempting to enter the hive large numbers are, by their own peculiar disposition, led into the trap; but if one does occasionally succeed in entering the hive, it is not near so bad as if a half a dozen were to meet with equal success. Now, in making these statements, I will say that I am in no way interested in his hive or territory, nor am I one of his agents; but I do own a little of Mr. Langstroth's territory, and, in some respects, think his hive equal to any; but it has no device attached to it by which moth millers may be trapped. Aside from the moth-catcher I cannot say any thing against the Buckeye hive so far, as I have not fully tested it, though I feel confident that this hive in the hands of industrious and skillful bee-keepers will prove to be good. As regards its merits for catching drones, I would say they are also good; but, at the same time, I would advise the bee-keeper to put all surplus drone comb out of reach of the queen, and by this means, save the bees the labor and waste of stores in raising more of them than are requisite to impregnate the young queens. A few dozen in each hive is sufficient for this purpose. Persons wishing to know my opinion of the Buckeye hive, will understand from this that I think some of its features are admirably adapted to the wants of the bee-keeper. So

far I have not found a hive that suited me in all respects, and it may be that I never will. There are several hives in use which suit me in several particulars, but not in all. If, on further trial, I find the Buckeye hive to be the one I have been looking for, I shall not blush to own it, and will give Mr. Mitchell full credit for his invention. During the coming season it is my intention to try several hives, and should I give any one the preference over all others, I shall not consider that I have sufficient grounds for making war on the others, or their inventors. There is a kind of bitter antagonism among some of our hive inventors that I can not approve, from the very plain fact that those who know least and have the poorest hives are the most noisy, thus demonstrating that it is not so much the general interests of the bee-keeper and his occupation they are seeking to promote, as it is to advance some selfish or personal interest. It is to be hoped that inventors of hives will cease to abuse each other before the public, and give us facts that have been fully demonstrated, and not guessed at only, then bee-keeping will have taken that high and honorable position among the branches of science and industry which all pursuits merit. Knowledge will be distributed among the bee-keepers of the country without any suspicion whatever that it is some new humbug with which they are to be swindled. It must be remembered that many hives, in time past, have been invented and presented to the bee-keepers of the country by persons who knew little or nothing of the wants of the bee-keeper, or of the habits of the bee. Some of these characters have presumed to take the credit from the great Langstroth of having first introduced to us in America the movable comb. Now, in referring to this distinguished bee-keeper, I do not pretend to say that his invention is superior to all others of more recent date, for in this, I might probably be sadly mistaken; but I do it merely to refer bee-keepers to some of the



gross and wholesale misrepresentations which are afloat among us. The man who willfully misrepresents in a case like the one above alluded to will sell us a humbug of a hive if he can. In conclusion I would refer bee-keepers to such parties as I am satisfied have good hives to sell. There are doubtless others, but I am not acquainted with their hives. Mitchell, Conklin, Langstroth, and Quinby, are all worthy of the bee-keepers' attention.

G. BOHRER.

*Alexandria, Madison Co., Ind., Feb. 7th, 1870.*

## WINTERING BEES IN AND OUT OF THE CASKET BEE-HIVE.

FOR THE ILLUSTRATED BEE JOURNAL.

Bees wintered on their summer stands must have upward ventilation to winter safely. If upward ventilation is not provided, frost forms in the hive above, around, and, in extreme freezing weather, even down on to them, and if they are not killed outright, each succeeding cold snap adds to the pile of dead on the bottom board, and, in single hives, the chances are greatly against the bees, as either too little or too much honey in the combs but insures their destruction.

If, in the spring, a few bees do escape the rigors of the winter, they have to run the gauntlet of cold or snowy nights, warm days, and with snow on the ground. The returning warmth of each day tempts them to flight to void their excrement. After the long confinement of months the colony is then rapidly decimated by falling on the snow; when, if they do not in the spring fall a prey to the moth worm, they may, with a good season, be in a good condition the next fall to try to winter again.

But a great many will be found to have only drone laying queens, the cluster not having been able to protect, during its frequent freezing and thawing, the queen from chilling; and, without upward ventilation, I have lost all I have tried to winter on their summer stands, and the winter of '65 and '66 killed 9 out of every 12 in this vicinity, some losing all.

With double-cased hives, well packed with rags, frost will be unknown in the inside hive; but its very warmth seems but to insure their destruction by flight and falling on the snow; and the warmer the hive, the more has been the loss of bees from the above cause. Bees, with me, in double-cased hives well packed with rags, have repeatedly tried to fly out when the thermometer was only 18 degrees above zero in the shade, on the north side of the house, on bright sunshining days. Such warm hives also keeps the bees in a ferment and they consume more honey than if kept some cooler, and the combs are generally very mouldy, green and damp, and the hives not very sweet, all of which does not add to their health and prosperity, and retards breeding in the spring; for a frame covered with mold placed between two frames with brood is soon cleaned. But if the mouldy combs are on one side of the cluster the bees will not touch them, or are very loth to do it. From the above it will be seen that to winter bees successfully, the hive must be warm enough to protect them from frost, and cool enough to keep the bees, *if not in a semi-torpid state*, at least, perfectly quiet. It must have an imperceptible upward ventilation to carry off the moisture, and breath of the bees, and so prevent the moulding of the combs. It must also have a means of confining the bees to the hive, to prevent their flight from the hive until it can be safely done, and furnish them with an ample supply of fresh air for the respiration, in such a way and manner that the bees cannot cluster on the ventilator, and so insure their own destruction, either by suffo-

cation, or by the front ones stinging those behind them to death. I have had swarms, by the use of wove wire ventilators, almost entirely destroyed by their stinging one another to death, in their struggle for air at the ventilators.

The current of air through the hive must be imperceptible, both at the inlet and exit, and be entirely free from all currents of cold air.

By the use of the Casket Bee-hive, the misfortunes of the bee-keeper, from frost, moisture, warmth, and flight of bees, are removed, and a semi-torpid or quiet state of the bees, ventilation without cold currents of air, and a sure and safe confinement of the bees secured, with bright not mouldy combs; and bee-keepers will, by the use of the Casket Bee-hive, find all the annoyances of wintering in the bee house or cellar, as dampness, too much or too little ventilation, removed, and their security and safety very much enhanced by its use.

*Buffalo Grove, Iowa.*

JOHN M. PRICE.

— Brother Price would do well to send us a cut of the Casket Hive, and all other inventors are invited to follow suit. Bee-keepers are anxious to know what hives are in use, and the good qualities of all. Our JOURNAL is free for a full description of any hive, or anything that pertains to bee culture, no matter what. Send them along.

N. C. M.

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### LETTER FROM LAPORTE, IND.

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FOR THE ILLUSTRATED BEE JOURNAL.

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MR. N. C. MITCHELL—*Dear Sir:* I have just received your JOURNAL for January, in which I find many valuable premiums offered to your subscribers. I do not mean to flatter in the least degree, when I say that it is the best journal in this country, and I hope it may live to do much good. It is a live paper, and every bee-keeper

ought to have it in his house. To aid in carrying on this good work, I will give to each of fifty new subscribers to the ILLUSTRATED BEE JOURNAL, at three dollars each, one pure Italian Queen and one copy of the ILLUSTRATED BEE JOURNAL for one year. This offer is limited to fifty subscribers, and the first names received will be the accepted ones. Send your names and money to N. C. Mitchell. Get his receipt for the money, and send it to George W. Merchant, Laporte, Ind. Write name, post-office, State and county plain, that no mistake may occur. The queens will be sent to each subscriber in the order in which his name and money is received, and as early in the season as they can be reared.

Hoping that the above offer will meet with your approbation and the wants of all that wish to avail themselves of it, I am, most respectfully, yours truly,

*Laporte, Ind.*

GEO. W. MERCHANT.

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## BEE-KEEPING STATISTICS.

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From the last yearly report of the Department of Agriculture, we learn that in 1850, the amount of honey and wax reported in the census returns was 14,853,790 pounds; in 1860, 23,366,357 pounds of honey, and 1,322,787 pounds of wax. New York stood at the head of the list, with 2,369,751 pounds; and nine other States are credited with more than a million pounds each, in the following order: North Carolina, 2,055,969; Kentucky, 1,768,692; Missouri, 1,585,983; Tennessee, 1,519,390; Ohio, 1,459,601; Virginia, 1,431,591; Pennsylvania, 1,402,128; Illinois, 1,346,803; Indiana, 1,224,489.

The statistical census of 1860 returned, from Massachusetts, 59,125 pounds of honey; the State census of 1865 gave 80,356 pounds, valued at \$23,224—about 29 cents per pound.

The census of 1860 gives Iowa 917,877 pounds; the local returns of 1865 made an aggregate of 1,128,399 pounds, from 87,118 hives of bees. This gives an average of surplus honey to each hive of about thirteen pounds.

In 1868 the Department sent a series of questions to bee-keepers in various parts of the country with a view of ascertaining more about this interest. Returns were received from four hundred and eighty nine counties in thirty two States. The aggregate number of hives reported was 722,385. At the same ratio for the unreported counties the aggregate for the country would be nearly three millions of hives. But reports have undoubtedly come from counties having somewhat more than an average population, including many in which special attention has been paid to bee culture; and a careful estimate should therefore place the total number of hives at a lower figure. Two millions would be as low as these returns appear to warrant. This is but one to every twenty of the present total population, which the assessor's returns of Iowa—the only official statement for comparison—present a ratio of one hive to ten of the population.

Estimating the total number of hives at two million, and the surplus honey taken at only fifteen pounds per hive, (which is but two-thirds of the average reported,) the value of honey annually produced in the United States, at the average valuation of twenty-five cents per pound, would be \$7,500,000. Were a rational system of bee-keeping in use, crops cultivated for bee pasturage, and the bees carefully wintered, this amount could easily be increased. The profits arising from the sale of surplus honey averages from fifty to two hundred per cent. of the capital invested. The middle, northern and southern States are particularly adapted to profitable bee-keeping.—*Prairie Farmer.*

PROGRAMME OF  
THE MICHIGAN' BEE-KEEPERS' ASSOCIATION,  
*To be held in Lansing, March 23 and 24, 1870.*

WEDNESDAY, MARCH 23D.

1:00 P. M.—Remarks on the management of the Apiary in Spring and Winter. Speaker, E. Rood, Wayne, Mich.; Alternate, Dr. A. V. Conklin, Bennington, Ohio.

2:00 P. M.—Remarks on Foul-Brood, and other Bee Maladies. Speaker, E. Gallup, Osage, Iowa; Alternate, R. C. Otis, Kenosha, Wisconsin.

3:00 P. M.—Remarks on the Italian Bee. Speaker, L. L. Langstroth, Oxford, Ohio; Alternate, J. M. Marvin, St. Charles, Illinois.

4:00 P. M.—Remarks on Summer Management. Speaker, Wm. Beal, Rollin, Mich.; Alternate, Adam Grimm, Jefferson, Wisconsin.

7:30 P. M.—Consideration of National Bee Convention. Addresses by A. F. Moon, President of the Association; M. Quimby, New York; D. L. Adair, L. L. Langstroth.

THURSDAY, MARCH 24TH.

9:00 A. M.—Remarks on Natural Swarming. Speaker, J. G. McKee, Laingsburg, Mich.; Alternate, W. Campbell, Royal Oak, Mich.

10:00 A. M.—Remarks on the Mel-Extractor. Speaker, M. M. Baldridge, St. Charles, Illinois; Alternate, D. L. Adair, Hawesville, Ky.

11:00 A. M.—Remarks on Alsike Clover. Speaker, J. H. Thomas, Brooklyn, Ontario, Canada. Alternate, J. H. Townley, Parma, Mich.

1:30 P. M.—Remarks on Queen Raising. Speaker, J. H. Townley, Parma, Mich.; Alternate, Dr. Jewell Davis, Charleston, Illinois.

2:30 P. M.—Artificial Swarming. Speaker, D. L. Adair, Hawesville, Ky.; Alternate, Rev. J. G. Portman, Dowagiac, Mich.

3:30 P. M.—Remarks on Transferring. Speaker, E. Rood, Wayne, Mich.; Alternate, C. J. Balch, Kalamazoo, Mich.

4:30 P. M.—Remarks on increasing the interest in Apiculture. Speaker, M. M. Baldrige, St. Charles, Illinois; Alternate, A. J. Cook, Agricultural College, Lansing, Mich.

7:30 P. M.—Lecture by N. C. Mitchell, Indianapolis, Ind., Editor ILLUSTRATED BEE JOURNAL.

Each subject will be discussed, after the prepared address is given. Also, any other topics of interest can be discussed during the meeting.

As the subject of a National Convention is to be considered, and as this is a matter of general interest, we hope to see a full attendance from all of the States, and Canada. Any speaker who can not be in attendance will confer a favor by informing his alternate of the same.

A. J. Cook,

*Sec'y of the Association, Lansing, Mich.*

## HONEY-EMPTYING MACHINE,

Many of our subscribers are anxious to know something about the Honey-Emptying Machine, who has them for sale, etc. It would be well for those having them for sale to advertise in the ILLUSTRATED BEE JOURNAL; and for their benefit we have added the following description of one from the *American Bee Journal*:

In the February number of the *Bee Journal* I noticed a description of a Honey-Emptying Machine, but it was so inaccurately described that when I attempted to make out by the directions I found that it would be necessary to bore an inch hole through a three-quarter inch stick, and divers other things just as impracticable. So I gave

it up, and made a machine on a plan of my own. I hand you a description of it below, and if any person will make one like it, he may depend upon having one that will do its work to perfection, and be smaller, neater, stronger, cheaper, and in every way better, than the one referred to. Mine cost me altogether about three dollars.

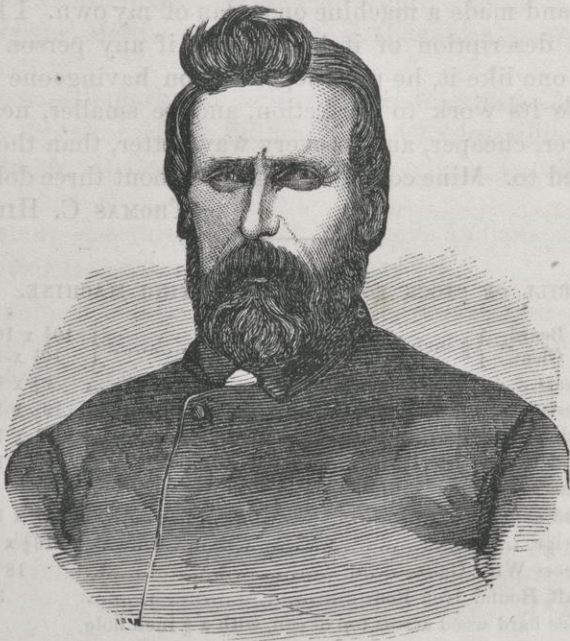
THOMAS C. HILL.

BILL OF STOCK FOR HONEY-EMPTYING MACHINE.

Bottom Board, } $\frac{5}{8}$ inch hole in center.....	}	10 $\frac{1}{4}$ x 10 $\frac{1}{4}$ x $\frac{1}{2}$
Middle Cleat, } $\frac{5}{8}$ inch hole in center.....		
Two Cleats.....		9 $\frac{1}{4}$ x 1 $\frac{1}{2}$ x $\frac{1}{2}$
Four Posts.....		19 $\frac{1}{4}$ x 1 $\frac{1}{2}$ x $\frac{1}{2}$
Four Side Cross-Bars.....		10 $\frac{1}{4}$ x 1 $\frac{1}{4}$ x $\frac{3}{8}$
Four End Cross-Bars.....		11 x 1 $\frac{1}{4}$ x $\frac{3}{8}$
Two Braces, halved together, hole in about centre, with pointed ends.....		12 $\frac{1}{2}$ x 1 $\frac{1}{4}$ x $\frac{3}{8}$
Four Strips.....		16 $\frac{3}{4}$ x $\frac{1}{2}$ x $\frac{3}{8}$
Two Pieces Wire Gauze.....		18 x 10 $\frac{1}{4}$
One Shaft, Round Iron Rod.....		30 x $\frac{5}{8}$
One Piece hard wood across top of can, with a $\frac{5}{8}$ inch hole in the centre, for the shaft to revolve.....		18 $\frac{1}{2}$ x 2 $\frac{1}{4}$ x 1

The lower end of the shaft is pointed, and rests in an indentation in a piece of iron soldered to the bottom of the can. The shaft has a hole through it, two inches from the bottom of the can, through which is put a piece of stout wire 1 $\frac{1}{2}$  inches long to sustain the frames. This wire is let up into a groove in the cleat so as to turn the frame. The posts are let into the sides of the bottom board, flush, side and end. At each of the two opposite corners of the bottom board is made a mortise,  $\frac{7}{8}$  inch deep, 1 $\frac{1}{4}$  inch long, and  $\frac{3}{8}$  inch wide, to receive the projections on the ends of the comb frame. The can is 21 $\frac{1}{2}$  inches deep and 15 $\frac{1}{2}$  inches in diameter; and the ends of the End Cross Bars (top and bottom) are rounded off, to make the frame fit into the can.





AARON BENEDICT.

ENGRAVED FOR THE ILLUSTRATED BEE JOURNAL.

We take great pleasure in presenting our readers with a true portrait of Aaron Benedict, of Bennington, Morrow County, Ohio. And to-day we look upon Mr. Benedict as one of our ablest contributors; having had many years of practical experience, knows whereof he speaks. We have had the pleasure of calling upon Mr. Benedict at his home, and looking upon his beautiful bees, and saw the numerous *nuclei boxes*, each containing royal cells or young queens, just emerging from the cells, of which he is very proud, and takes great pains to rear the best and purest queens.

Should any of our bee keepers pass that way, call upon the old Quaker, and we will insure them a hearty welcome.

## HOW TO ITALIANIZE AN APIARY OF BLACK BEES.

FOR THE ILLUSTRATED BEE JOURNAL.

In order to do this readily, the apiarist should have his bees in movable comb hives, one of which should contain an Italian queen of undoubted purity, with considerable drone comb in the centre of the hive. Now examine every hive in the apiary and cut out all the drone comb, and insert good worker comb in its stead. This should be done early in the spring before any drones hatch. They should be watched and see that no drones hatch in them; then, as soon as drones begin to emerge from the cells in the Italian colony, place an empty hive near it, take out one frame of comb containing eggs and larvæ, see that the queen is not in it, place it in the new hive, place an empty frame in its stead, and close up. Now remove the new hive to any desired location in the apiary. Then go to any strong colony that has plenty of young bees hatched out, and take out two frames containing honey and bees, but no eggs or larvæ; place one on each side of the frame in the nucleus hive, insert a division board to confine the bees to the comb. If there are not enough bees to cover about the three pieces of comb, go to any colony again that has plenty of young bees, take out a frame or two of comb with the bees adhering, and swing them off in front of the nucleus and let them crawl in. The result will be that most of the old bees will return to the old stands, the young ones will adhere to their new location, and construct from three to ten queen cells, more or less. In this manner there can be as many nuclei formed as desired. On the ninth day after forming these nuclei, examine them and ascertain the number of queen cells constructed; then immediately remove as many black queens from their respective hives as there are queen cells.

On the next day, which will be the tenth day after the nuclei were formed (if left any longer than this one may hatch and destroy the rest), carefully cut out each cell so as not to injure them; cut a corresponding piece out of the comb in each of the queenless colonies, and insert their cells in the same position they were formerly, or as near as may be, the little end down. Those cells will hatch in a few days, or before they can rear one from the native queen's eggs, giving each colony a pure Italian queen; and if the hives that contained the native queens have been properly watched, and no drones allowed to mature in them, the young queens will be most likely to be purely fertilized by the Italian drone. To ascertain this fact, however, the hives should be examined on the thirtieth day after the cells were inserted, as the young will begin to hatch by this time; if any of the queens produces bees that do not have three yellow bands, they should be immediately removed and another queen cell inserted, and try it over again. In this way a large apiary can be purely Italianized in one season.

As I have in the above partly explained my mode of making artificial colonies, I will here just say that by leaving a queen cell in each of the nucleus hives, and let them change stands with any of the queenless colonies, and both will do well. This should be done on the tenth day, or before the young queens hatch. But more of this in a future number.

If the apiarist should find in the following spring that any queen produced workers that had not the desired markings, they should see that no drones hatch from her eggs, and remove her as soon as a substitute can be given in her place.

To Italianize an apiary of bees in common box hives, it would be necessary to have one or more movable comb hives, in order to procure the queen cells. Drum out the queens and insert the cells, which will give each colony a pure queen. Let them get with whatever drone

they please. The next year go over them again with a pure queen, and so on till they are bred up to a good standard; but the better and quicker way would be to transfer them into good movable comb hives; then proceed as in movable comb hives.

My mode of making artificial swarms next month.

*Bennington, Ohio.*

AARON BENEDICT.

P. S. On page 108, last JOURNAL, F. Brewer says: "I proceed to cut out a sheet of brood comb," etc. He should have said, I proceed and set an empty box on the hive and drum the bees up into it, and set them aside until I get the combs transferred to the new hive. I then spread a cloth at the front, empty my bees on it and let them run in. In this way but few bees need be sacrificed or besmeared with honey—the queen never.

Page 109, he says (which I heartily endorse): "I repeat there are so many subjects of interest in the culture of the honey bee, that I feel like suggesting to bee keepers the possibility at least of being individually and collectively benefitted by the free interchange of ideas and experience in the business. The columns of various journals can be had for all interesting articles on the subject." Bee keepers, what say you? We say, yes, of course, and the ILLUSTRATED BEE JOURNAL is one of them. Let us hear from you frequently, on all subjects pertaining to bee culture, through its columns. Let us all contribute to its pages our "mite," that all may know of our successes as well as our failures in bee keeping.

A. B.

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### BEES—SOUTHERN ENEMIES.

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In the South no care is taken to supply bees with sources of honey. Not one in a hundred who keeps them, probably, ever dreams of sowing clover or buckwheat specially for them. The abundance and variety

of the floral kingdom, together with the long-protracted season of fruit-bearing, render such care unnecessary. In the winter the gums are apt to remain just as they were in the summer. No one thinks of moving them into cellars or dark rooms for the season of hibernation.

Among the enemies of the bee in the South are the Bee Martin, a small bird which has won its *soubriquet* by its cruel destruction of the little honey-makers. Perched near the hive, chirping out a shrill, saucy, defiant note, it will suddenly swoop down in swallow-like flight and catch the bees on the wing. It measurably redeems its character by its resolute assaults upon the hawks which catch the chickens. It will fight them with persistent fury, and greatly annoy, if it can not severely wound or destroy them. It is very skillful in its attacks, keeping above the hawks, when near to them, so that they can not strike it with their talons. It is not quite so large as the merry, chattering martins which enliven our reviving gardens and groves in early spring. It is not so dark in color either, and one sex has a deal of dingy white in the breast.

Chickens sometimes fall into the fatal habit of eating bees. Recently I saw a hen, with a brood of young chickens, standing by a gum and catching them fast. Of course confinement in a close coop would arrest the bad habit, but I should always prescribe for such a case a *sudden twist of the neck*.

I have heard of another instance of bees working through a hole in the weather-boarding of a building, depositing their honey between the outside and inside ceiling. This is in Orange, N. C. I remember to have heard years ago of a very large rock in Tennessee or Kentucky in which bees had been working for a number of years. They entered through a fissure in the rock, and the hole being too small for a person to enter, and there being no way to get to their stone-bound palace, they have lived in security, free, unsubdued, and

unmolested. I mention this here with the hope that some reader may be able to give the truth of the matter.

—A. W. in the Rural.

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## EXPERIMENTS WITH BEES' EGGS.

FOR THE ILLUSTRATED BEE JOURNAL.

MR. EDITOR:—Much has been said and written about bees—much remains *to be* said and written on this subject. Permit me, through your columns, to suggest a *plan for experiment* the coming season. Let all apiarists everywhere experiment. The subject of *drone* laying has puzzled bee-keepers in all parts of the world.

Now, what I propose is—if it is possible—after the queen has laid eggs in worker cells and drone cells, for the apiarist to *change the eggs* from a *drone* to a *worker* cell, and from a *worker* to a *drone* cell, and report the result to you for publication. Also, if it can be done, put an egg from a drone cell into a queen cell, and note *that* result. I think that such experiments will solve the problem whether the cell has anything to do in determining the sex of the bees. My philosophy is, in regard to queens laying drone eggs without copulation with the male, that the drone cell contains the seminal product of the male, left in it by the young bee before it makes its exit from the cell; hence, a queen laying eggs in it, the egg seizes on this semen and is fructified; whereas, in the worker cells no such deposit is left, and hence workers can not be produced only by the queen coming in coverture, so to speak, with the male.

If these experiments are made on the above plan, I think that some light will be shed on this mooted subject. If it be a fact that the young drone fructifies his own cell before he leaves it, then this great mystery is solved.

THOS. J. O. MARSON.

Breesport, Chemung Co., N. Y.

## HOW TO PREVENT HYBRID.

FOR THE ILLUSTRATED BEE JOURNAL.

MR. EDITOR:—Those who want to transform their common bee colonies into pure Italians, many times ask the question how to prevent them from becoming hybrids; and if some of their colonies already had changed into hybrids, how to manage them to change them again into pure Italians.

For a man who has got money enough, it would be a very easy matter to buy for every colony one pure fertile Italian queen, and be done with it. But not everybody is rich, and even in spite of his money could get hybrid queens in the place of pure ones. The best and cheapest way in this and all other cases is to learn and study the laws of nature referring to it.

Our grand master in bee culture, Dzierzon, is the ingenious man who first laid down the laws of propagation and fertilization of bees, and his doctrines, though seemingly in direct contradiction with the common laws of propagation had been found true by the careful microscopical experiments of the celebrated Von Siebold and Leuikart, and the careful investigations and experiments of Berlepsch and Kleine. So we may consider ourselves on a good foundation and follow their track safely.

By those experiments it has been stated that every worker bee and every queen bee is a female; that every female bee can lay drone eggs (male eggs) without fertilization; that the drones bred from those drone eggs will be common drones if coming from common bees, and Italians if coming from Italians, so that fertilization has nothing to do with the drone part; that a queen bee can be fertilized so that she can lay female eggs besides the drone eggs; that, therefore, an Italian queen fertilized by an Italian drone will bring forth pure Italian workers and pure Italian drones, that an Italian queen

fertilized by a common drone will bring hybrid (not pure Italian) workers and pure Italian drones; and that a common black queen fertilized by an Italian drone will bring hybrid workers and common black drnes.

Now, let us apply that to practice. Say you have one pure Italian colony, and several common ones, the first step would be to raise as many Italian drones, and destroy as many black drone breed as possible. Then take your Italian queens out, so your Italians would build new queen cells; as soon as they are wrapped over, they are ready to be transferred to your other colonies, from whom, a couple days previously, you removed the queens and queen cells. In all probability those black bees will hatch out the Italian virgin queen, and it depends from it if she will be fertilized by an Italian drone or a common one. In the first case, you will get a pure Italian colony in the course of six or eight weeks; in the second case, the colony will consist of hybrid workers and pure Italian drones. So it may happen that you would have several pure Italian colonies, and some in which the workers are hybrids; but you have now in your apiary nothing but Italian drones, and by taking the queens away from your hybrids, and replacing them by new virgin queens or queen cells, you soon will have your whole apiary changed into pure Italians.

By the by, if I am not mistaken, did I read from a gentleman who understands a process by which a queen can be fertilized by an Italian drone with safety; and if I am not mistaken again, I think that same gentleman promised to have an article on this subject in the February number. I wish Mr. Mitchell could find out who it was, and go with a sharp stick after him.

*Nashville, Tenn., Feb. 10, 1870.* DR. R. KNAFFL.



## SURPLUS BOX ROOM.

FOR THE ILLUSTRATED BEE JOURNAL.

MR. MITCHELL—*Dear Sir:* As you wish bee-keepers to write for the JOURNAL, I would like to say a word in regard to surplus box room. We are all aware that men are liable to go to extremes in many things; and my experience during the year 1869 has taught me that it is possible to give too much surplus room in some seasons. To be successful in bee culture, we must not only understand the nature and habits of the honey bee, but must bear in mind that the difference in localities requires, in some cases, a different style of hive. While bee-keepers may be successful with the shallow form of the Langstroth Hive in warm latitudes, we find in the more Northern States that for early breeding and wintering on summer stands, a deeper frame is required. The reports of the successes and failures of bee keepers from East and West, the past season, show that we must not confine ourselves to one beaten track, but be governed by localities and the state of the temperature. Probably there has not been a season like the past for many years in this country, where even among practical bee-keepers there has been such a difference in results; and that alone should actuate bee keepers to give to their brethren in the business a true statement of the result of their labors.

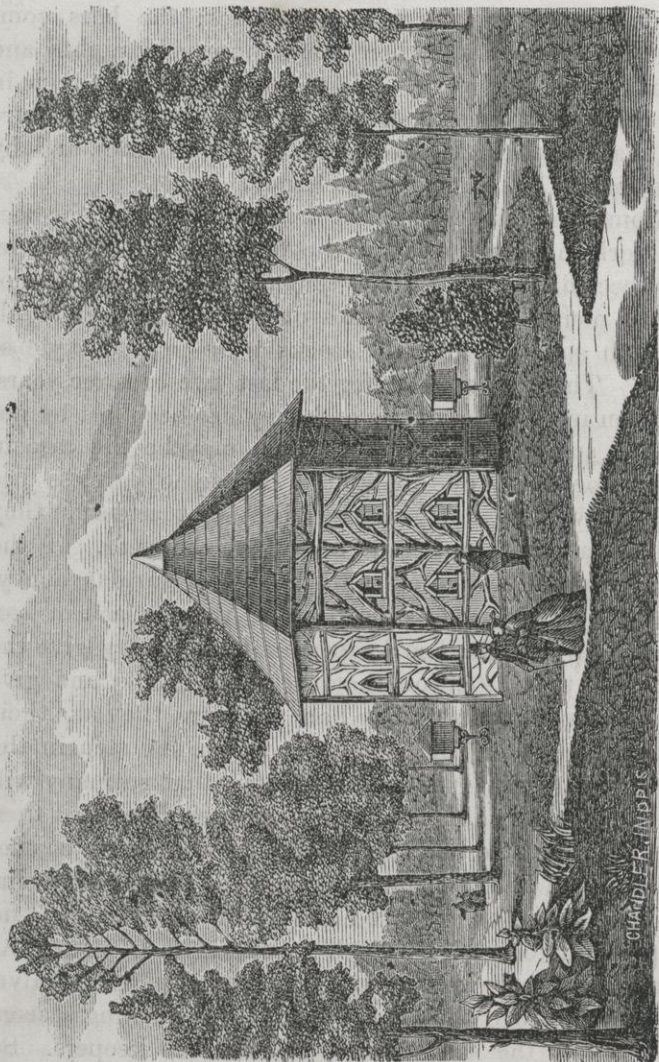
I am using the deep frame Langstroth hive, with eighteen boxes on each side of the brood chamber, which I think is useless labor and expense. The style I am making now I think much better, as it is much less expensive and more compact; it has but eighteen boxes, all on one side of the brood chamber. The boxes when full weigh about three pounds each; and if a swarm of mine fill eighteen of those boxes, I shall not complain. Last season, when the bees should work in boxes, I put

in twenty of the three pound boxes; the bees commenced in them all; then came those cold nights, and that ended their work. There were not bees enough in an ordinary swarm to sustain the required temperature to make comb. I removed half of the boxes, and by that means got some surplus honey.

Some bee keepers say that it is more natural for bees to work in boxes on top of the frame than on the side. My bees filled the first ones they came to, and I did not get a pound stored in boxes on top of the frames, although some of my best stocks were in that style of hive. The cry has been for the last two or three years, that an immense quantity of honey has been lost by not giving sufficient box room. Such may be the case in some localities, no doubt, and by some careless bee keepers who do not give their bees that attention they should at that important season of the year. If the matter was investigated as to the loss of surplus honey, it could be traced to other sources than a lack of box room. When the bee keepers of this country give the business that attention that the work merits, and give these busy little workers half the care they do their other stock, then they will have taken one step in the right direction. It is to be regretted that so many will plod on in the old track, neglecting their bees, and then say they have no luck. They need not expect to be successful, and it is a shame to keep bees under those circumstances. For my part I am for improvement, and do not intend to confine myself to one style of hive. At present I have tried the American and Langstroth hive, and shall prove the Buckeye hive this coming season, and report the same to my brother bee keepers. So wade in, friends, and see what we can do next summer in increasing stocks and surplus honey.

*Amesburg, Feb. 14, 1870.*

A. GREEN.



APIARY OF THE SOCIETY OF ACCLIMATION OF THE BOIS DE BOULOGNE, PARIS.

MR. MITCHELL—*Dear Sir:* I send to you a small engraving of the Apiary of the Society of Acclimation of the Bois de Boulogne, Paris. The bees of Italy, Egypt, Corinth, etc., are kept there under the care of M. G. Pelatan, Editor of the *Journal des Fermes a des Chateau.*

CHARLES DADANT.

## SALT FOR THE BEES.

FOR THE ILLUSTRATED BEE JOURNAL.

MR. EDITOR:—I concur with the ideas expressed by Mr. G. W. Zimmerman, in the February number of the ILLUSTRATED BEE JOURNAL, page 162. The bees should have salt as regularly, nay more regularly, than farm stock; but my method is quite different from his.

Every one has observed the bees seeking for salt around the dunghills, the water closets, and the farmer's pits. If the bees overcome their repugnance to the bad odors and the filth, in order to obtain the salt, we can certainly infer that salt is indispensable for their health, or the health of their brood.

Three years since, guided by these ideas, and seeking to spare my bees the trouble of extracting salt from such filthy sources, I had resolved to give them salt water. The result was such as I had anticipated. From that time forward not one bee was seen hovering around the dirty spots. But I had to study the quantity of salt, for if the water was too much salted, it was refused by the bees. The conclusion seemed to be a small handful of salt to a gallon of water; this quantity is for one hundred hives, and is easily drunk every day from March to October. A gallon jug inverted upon a low earthen plate, maintained upward by some contrivance. The water is upheld in the jug by atmospheric pressure, and flows very little at a time. If the mouth of the jug is well beveled, the bees can not be drowned. I have put these places of salt in a sheltered spot a few feet above the ground, for the chickens are as fond of the salted water as the bees. I also give to my poultry the salted water in the same way. Bees and chickens go to their respective spots without annoying one another. Therefore, I do not hesitate to affirm that the salt water is necessary to the welfare of the brood. CHAS. DADANT.

## BEE-KEEPERS' CONVENTION, AT URBANA, O.

On Friday, the 21st, we left the Union Depot on the Central Railroad for Urbana, Ohio, to attend a Bee-Keepers' Convention, passing through Knightstown and the city of Richmond. Soon after leaving Richmond we passed the State line into Ohio, our native State. Hurriedly on we sped through Greenville, Covington, Piqua, and finally arrived at St. Paris, where we stopped for the night, to call upon George W. Zimmerman, a bee-keeper that we have long wished to take by the hand. We found his carriage in waiting to convey us to his residence, some four miles in the country, where a most hearty welcome and genuine hospitality awaited us, such as makes one feel at home. Our expectations were fully realized in Mr. Zimmerman, in regard to the subject of bees. He is indeed a live bee man, fully up with the times. We spent the evening very agreeably, and so rapidly did time pass that 1 o'clock A. M. found us still chatting. After a sound and refreshing sleep, we were awakened by the cheery voice and welcome step of our host, who, according to previous engagement, had come to escort us over the premises. After some preparation, we were soon among the attractions of a well appointed country home. Chief among them were forty colonies of our little friends standing around promiscuously. We were sorry to see our little friends left out in the cold another year. Our host informed us that he intended to build a suitable house for their especial accommodation. He has both the Langstroth and American Bee-Hives in use, but prefers the American Hive, which he has improved to suit his own notion, to any other that he has used; and from what we saw of it think it a very good hive. He is now manufacturing some three hundred hives for next year's use. After a most sumptuous breakfast we soon found ourselves on the way to

Urbana, to attend a County Bee-Keepers' Convention, where we met a host of friends, none of which we had ever seen except B. F. Shoots. Among the number were Capt. Collins, Hiram McClellan, Mr. Matthews, and many others, all alive upon bee culture. The meeting was soon called to order by the President, Captain Collins, and organized by electing officers for the ensuing year. We were promised minutes for the February number, but we had to go to press without them. We will say, however, that a pleasanter or more agreeable party never convened.

A letter was received from Colonel Joseph Leffel, of Springfield, Ohio, and read to the Convention.

G. W. Zimmerman read an essay on Bee Culture, after which we were called upon to talk to the Convention.

The members requested us to discuss, first, the superiority of movable comb hives over the old box hives; secondly, the superiority of the Italian bee over the common or black bee; thirdly, the new process of fertilizing the queen bee without allowing her to fly out to meet the drone, as is her custom. After talking to them a little over one hour, the Convention adjourned, to meet once a month.

We shall ever regret our inability to accept the numerous invitations tendered us to visit the apiaries of the members, and we do assure them that at some future time we will avail ourselves of the pleasure and happy privilege of visiting them at their homes. We trust that all present will accept our heartfelt thanks for the many kindnesses extended us, and, during the remarks made before them, their courtesy and deep attention will long be remembered. And let us here remark, that it would be well for every county in the United States to do as Champaign county, Ohio, has done—organize a bee-keepers' association. Half past one A. M. was the time for our departure, whereupon we immediately

stepped upon the train of the Atlantic and Great Western Railroad, and were not long in finding out the great and desirable changes that had taken place since our last trip over that route. Well do we remember the slow, rumbling rate, jolting one's life half out of them in our former ride. Now, as if with fairy magic, the engine moved off as a thing of real life, moving with the fleetness of the winds toward the great metropolis, losing passengers here and there, and gathering more as they journeyed on. Great indeed is the age in which we live, when the genius of man can transform a conveyance for traveling into a luxurious and home-like parlor. The engine whistles, and once more we find ourselves among familiar scenes and our own fireside. Dear old Marion, the home of our childhood!

We are sorry to have to go to press before receiving the proceedings of Champaign County Bee Association. At a former meeting, Captain L. S. Collins, of Tremont, Ohio, raised this question, "Does the honey bee by natural instinct supersede its queen after she has become superannuated, or past her prime?" and Colonel Joseph Leffel, of Springfield, Ohio, was invited to lecture upon that subject at the February meeting of the Association. The Colonel did not attend, but sent a paper to the Chairman to be read, of which the following is a copy:

"DOES THE HONEY BEE, BY NATURAL INSTINCT, SUPERSEDE ITS QUEEN AFTER SHE HAS BECOME SUPERANNUATED, OR PAST HER PRIME?"

"In answering questions of this kind we can only express our opinion, based upon evidence which is too frequently of an intangible nature. I think, however, that the honey bee *does* sometimes destroy the old and superannuated queen, that her place may be filled by a young and more fertile one. The queen is usually lost in the breeding season, when there is worker brood to rear another from, and when drones are abundant, that the vir-

gin queen may not fail to become impregnated. Some bee-keepers suppose that under such circumstances the queen dies from exhaustion. Possibly she does, but I would ask, *may not this matter be determined by the workers themselves?*

"I will cite a single case of supposed supersedure. In the swarming season of '66 a friend of mine found, lying in front of a hive that had not swarmed for several years, the queen in a dying state. She had been carried out by her workers, and could not have got there by accident. The hive had been closely watched for some days, and no swarm had issued. The queen found was an *old* one. The workers reared a young queen, and the stock afterwards did well. "I, myself, have little doubt that this was a genuine case of supersedure. Yet, there is room for questioning, and I think it unwise to take a decided stand until we get more light. Who will furnish it?"

After which our friend, George W. Zimmerman, of St. Paris, read the following paper:

FELLOW CITIZENS:—There are many inducements to cultivate the honey bee. They gather and store away that which otherwise would be lost. They work for nothing and board themselves, contributing to our purse and palate the richest products from the face of the whole earth. Milk and honey was the type of physical perfection in the chosen land. In this we are blessed, and is it not our privilege, nay, our duty to save what God has not only given and placed within our reach, but has furnished organized and effective laborers to gather this harvest home, without labor or price? Much of the wealth of our country and nation is annually lost by this neglect. There is no branch of agriculture from which so much money can be realized, upon the same investment, as from intelligent bee culture. "But," says one, "the moth; bees sting!" We may as soon expect that



gravitation will cease to act, and perpetual motion be obtained, as to get a moth-proof bee-hive.

Having had considerable experience in the treatment of the disease called, "Bee on the Brain," I propose saying a few words, by way of advice, to those who may be attacked with it. Whenever you find yourself suffering from an attack of "Bee on the Brain," you should subject yourself to the following treatment, and if the directions are carefully followed, I guarantee a speedy and healthy reaction: First, procure some practical work on bee-keeping. If I may be allowed to recommend one, I should say, the Bee-Keepers' Text Book. Read it carefully over three or four times this winter, and, as soon as spring opens, purchase two or three colonies, not over three, if possible, get them in good movable comb hives. As I do not wish to attack any man's invention, would say, get the hive that is conceded to be the best by good apiarists. Purchase new hives to put the swarms in when they commence swarming, or get some apiarist to divide them for you, and commence bee-keeping on your own account. Spend at least one-half hour every day with your bees, and compare your observations with what you have learned or read in your text book, following all its instructions as carefully as you can, and the result will be that your experience will keep pace with the increase of your bees, and at the end of the year all the alarming symptoms of the disease will have disappeared, and you will find yourself a sound and healthy bee-keeper, and far in advance of many who have kept bees for 30 or 40 years. But, remember if you allow the disease to rage until, in your ignorance of the nature and habits of bees, you fancy you can manage 50 or 100 stocks, and accordingly set about it, and purchase that number, your bees will increase faster than your experience; and the chances are, that at the end of a year or two the disease will terminate fatally. You will be left with a few confused ideas,

and you will ask your neighbor to give you a sheep for what is left, and you die an unsuccessful bee-keeper. I should like to speak more fully of the causes of failures and successes, but know my failure.

I will endeavor to give satisfactory answers to all questions so far as my experience and observations have gone.

I remain yours in the love and fellowship of the bee-keepers' fraternity,

G. W. ZIMMERMAN.

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## REMARKS ON PATENT BEE-HIVES.

FOR THE ILLUSTRATED BEE JOURNAL.

MR. EDITOR:—I still find strange things in my reading about bees. For instance, I find in the last JOURNAL a quotation from H. A. K., in which he calls attention to Mr. Quinby's article on the moth. (See page 161, JOURNAL for February.) Any one who has read Quinby's "Mysteries of Bee Keeping," must have noticed his hostility not only to moth traps, but to *patent* hives of all kinds. If Quinby's arguments have any weight against moth traps, they have just as much weight against patent hives. H. A. K. is willing to demolish the moth trap with Quinby's argument; but is not anxious to quote Quinby on patent hives. Why? Because Mr. H. A. K. is the inventor of a patent hive, but is not of a moth trap. Let H. A. K., or any other inventor, show in the JOURNAL in what respect their hive is superior to the one with a moth trap attached, and if there is any superiority the bee keeping public will adopt it. The pages of the JOURNAL are free to all by invitation of the Editor. Now, about patent hives in general: Mr. Quinby is opposed to ALL patent hives, H. A. K.'s among the rest; but while I think Mr. Quinby is one of the best writers

on the honey bee in the world, I think his hostility to patents is carried too far. The impulse that has been given to bee culture within a few years is due mainly to patent hives. Shall we condemn them all, because some are faulty? As well might we condemn all reapers, because a few of the first were bungling machines. Four years ago, I made my hives according to Mr. Quinby's plan, and I will say this, I had much better have paid twenty-five dollars for a farm right to make a good first class patent hive. Let every inventor of a hive enjoy the thought that his is the best, without trying to damage any other; for every hive will have its admirers, who do not care to be called fools by those who are interested in some other hive. I am interested in no hive only to the extent of a farm right in the Moth Trap (Buckeye) Hive.

E. S. T. also tries to demolish the moth trap (see page 150, February number,) and accuses the inventor of telling a "deliberate falsehood." Not long since I was reading an article from the pen of E. S. T. to an old foggy, who is opposed to all patent hives, and carries his opposition so far that he will use nothing but the old GUM, and he pronounced it a lie, and said E. S. T. was interested in some patent hive, which I could not deny, though I did not know; but "my Yankee origin will sometimes show itself," and I guess E. S. T. is interested in the American hive.

Now, Mr. Editor, my advice will cost you nothing, and perhaps it will be worth it. You are publishing a journal for the interest of the bee-keeping public; just give (as you proposed to do in your prospectus), all a chance to show the benefits to be derived from using their particular hive, and let H. A. K. and E. E. T. throw dirt if they wish to.

Now, a word to Mr. "Gallup-the-world-over." He is an old *beeist*, and probably knows more about bees than I shall for some years to come. But (I write for informa-

tion) if it is true that "at certain seasons of the year, and under certain circumstances, nearly all new frames filled at one time, where the old queen is mistress, will be drone comb." Why were we not bothered in the old box hive in that way? The old queen went with the first swarm into a new hive, where all the combs had to be built at one time, or within a short time, and I never discovered any great surplus of drone comb. I have divided my bees about as you direct on page 70, January number, and have had no trouble in having too much drone comb built. I shall continue to divide swarms that way until I can hear of some better way. Perhaps Mr. G. can give us some better plan. I hope we shall hear from him often through the pages of the JOURNAL. His plan of having surplus honey stored in small frames I never saw advised before, but had intended to try it myself next season, as I had come to the same conclusion he had, which proves that "great minds run in the same channels."

Yours truly,

*Atkinson, Henry Co., Illinois.*

JONIDAB.

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## HOW EARLY DOES A QUEEN HOLD HER WEDDING EXCURSION?

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FOR THE ILLUSTRATED BEE JOURNAL.

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It is a difficult task to answer this question definitely. If a young queen is allowed to issue at the time when she is capable to bite off the cover of her cell, she comes out so weak that she can hardly crawl, and it takes, in most cases, two days before she attempts to fly, even if chased. In small nuclei, a young queen will nearly always be allowed to hatch at pleasure, and will, when the weather is very warm and fine, make her first excursion on the fourth day. I have seen many queens hold their

wedding flight when only four days old, but, with the exception of one case, have not seen any come home with marks of impregnation. Most of them show marks of impregnation on the seventh day of their age. If a queen hatches in the spring, when the weather is cool and drones are scarce yet, impregnation is sometimes delayed for a long time. I had once a queen that became fertile on the forty-third day of her age. Others, however, that are reared in hives that naturally swarm, are kept prisoners in their cells for many days, in some instances as long as ten days. If cells with such prisoner queens are opened, it is common that the queen takes wing a moment after hatching, proving that she is as strong as if she had hatched a week or so before. Such queens will hold their excursion flight as soon as their rivals are destroyed, sometimes the very day when they issue with a swarm, and commence laying on the third day. Therefore, if it is intended to secure the fertilization of a queen by a selected drone, under the Koehler or any other process, it will be necessary to shut up the queen quite early, or it may prove too late.

HOW EARLY AFTER HATCHING AND IMPREGNATION DOES A  
QUEEN COMMENCE LAYING?

If a queen is impregnated the seventh day of her age, provided she was not kept prisoner in her cell, she will commence laying on the end of the ninth day; if, in such a case, she get impregnated before the seventh day, she will not lay any earlier. In no case have I found a queen laying under three days after impregnation. I have to report this in spite of the assertion of other bee keepers that the queen will lay next day after impregnation.

A. GRIMM.

*Jefferson, Wisconsin, February 21, 1870.*

## WHEN TO TRANSFER BEES.

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As many of our friends are asking when is the best time for transferring bees from the old common hive to a movable comb hive, we answer that we transfer as early in the spring as possible, say as soon as the bees commence to gather honey. If done at this time, there will be usually but little honey in the comb, also not so much brood as there would be later in the season. It is true some bee keepers understand the method of transferring; but there are those who are anxious to know how to get the bees out of the hive—an easy matter if done properly. We would get everything ready for work—a table, a box, with two or three thicknesses of woolen cloth laid upon it, on which to lay the comb when taken from the old hive. Next get an empty box or hive. Everything being ready, stop up the hive so as to prevent the bees getting out; then with a hammer or stick drum the hive about two or three minutes; then invert the hive, set the empty hive or box in it—no matter if the bees can get out or not, as they will be found perfectly docile; then drum as before, until all of the bees and queen have passed up in the empty box or hive; then set where the old hive stood, and remove the old hive to some building beyond the reach of the bees; then with a long knife cut comb loose from one side of the hive; pry that side off, then another side loose.

We will now suppose the hive to be lying in a horizontal position. We have now the complete control of each comb. Cut out one comb at a time; lay it easily upon the table, or box previously covered with woolen cloths; lay the frames upon the comb; mark off the comb so they will fill the frames, remembering always to let the comb stand as it did in the old hive, top up. The novice should bear in mind that if they should get it in any other way it would be useless, as the bees would be compelled to cut it out, as they could not use it.

As soon as the comb is properly cut, then lay the frame on it, and press it gently to its place to keep the comb to its place until the bees fasten it. We use hickory or other splits, very thin, as thin as they can be made, and tack with the smallest size tacks, two splits on each side; that will hold the comb to its place, and as soon as the bees have fastened it in remove the splits very carefully with the young brood; set them in the centre of the new hive, and as soon as full, carry the hive to where the old one stood, and place your bees within the same as you would had they swarmed naturally. In transferring we can not be too careful in handling the brood, as it is of the utmost importance to save all the brood or larvæ.

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### THE CHAMPAIGN COUNTY BEE-KEEPERS' ASSOCIATION.

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The Association assembled at the office of W. A. Humes, Esq., on Saturday, pursuant to adjournment. Quite a lively interest was manifested. The committee appointed at the last meeting to report a Constitution, presented the same at this meeting, which after some discussion was adopted, article by article. The principal points of the Constitution are that it styles the organization the Champaign County Bee-Keepers' Association, has a Board of Officers and Managers, consisting of a President, Vice President, Secretary, Treasurer, and five Managers. The fee for membership is one dollar annually. The Association elected the following Board for 1870:

President, W. A. Humes; Vice President, S. N. Matthews; Treasurer, J. S. Funk; Secretary, H. McClellan; Managers, Jacob Sarver, P. W. Gunckle, T. S. Collins, Geo. W. Zimmerman, and Perry Daniels.

An essay was read from the pen of Col. Joseph Leffel, of Springfield. Mr. Geo. W. Zimmerman read a very elaborate essay on Bee Culture. Mr. N. C. Mitchell, editor of the ILLUSTRATED BEE JOURNAL, of Indianapolis, entertained the Association for an hour and a half on the same subject, and showed that his long experience in raising bees was very valuable information to those just commencing the business, and the fascinating manner in which he presented the subject was so attractive that the Association did not weary in listening to him, and at the close of his address the Association unanimously voted him an *Honorary Member*. After transacting some minor affairs, the Association adjourned to meet the first Saturday of March, unless sooner called together by the President.

This Bee Association bids fair to be a very lively and interesting organization, and those of our farmers who are interested in that business should not fail to avail themselves of becoming members of the Association, and partaking in its discussions and actions, and learning all there is to be known of that wonderful little insect, the Honey Bee.



## EDITOR'S SANCTUM.

## FERTILIZING THE QUEEN BEES.

Our readers are constantly asking us to give the new method of Fertilizing the Queen Bee without letting her fly out, as is her custom. Dr. Jewell Davis, of Charleston, Illinois, was the first to call our attention to it, asking us to try it, and see if there was any merit in it.

Early last spring we selected an old glass hive, that was made entirely of glass, except the corner posts. We then opened a hive, and selected a few Italian drones, putting them in the glass hive. Next we went to a nuclei box and selected a queen that had just returned from her nuptial trip, without having met a drone. We then introduced her to the drones in the glass hive in the presence of a number of gentlemen; and we must say that we never saw anything that was half so demonstrative in affection as she was to the drones, bestowing her caresses and love in the most endearing manner conceivable. But with all her coyness and affection she could not accomplish her purpose—the drones seemed to be too young to appreciate her manifestations. We saw enough, however, to convince us that this plan was feasible, and all that was wanting to insure success were some kind of quarters for the accommodation of the queen and drones, where they would be free from the annoyance of the worker bee.

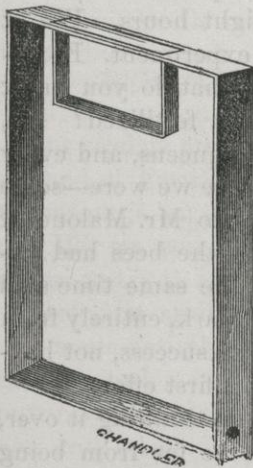
About this time we received a letter from A. Malone, Esq., of Garden Island, Canada, giving us some hints upon the same subject. We wrote to Mr. Malone to give us his plan, which he did as follows: Make a box

of wire cloth, six inches square by eight inches high; set them upon the frames immediately above the bees; then take a piece of honey in the comb, and lay it in the bottom of the cage in such a way that the bees from below could not reach it; then put in the virgin queen and eight or ten drones—the queen to be put in when four days old, and let her remain forty-eight hours. We at once made four cages, and tried the experiment. Forty-eight hours after we opened up, and what do you think we had—four beautiful virgin queens fertilized? No, gentlemen, but we *did* have *four dead* queens, and every drone had shared the same fate. There we were—some one had made a mistake. We wrote to Mr. Malone of our mishap. He wrote in reply that the bees had undoubtedly stolen the honey, and at the same time said that the queens should be kept in the dark, entirely from light. He also informed us of his own success, not having lost but one queen, and that in his first effort.

During all of this time we had been thinking it over, and making discoveries, but they were far from being satisfactory, except in one instance—we succeeded in getting a drone or male that did copulate with the queen in our presence. We saw several attempts of the kind, but noticed one peculiarity about the drone, in making the attempt it proved as fatal as though he had succeeded; invariably they perished, almost instantly. In all of my experiments there seemed to be something wanting.

Late in the season we again heard from Mr. Malone, and he again assured us that it was a success beyond the shadow of a doubt, and again spoke of it being necessary to keep them in the dark. On another occasion we selected a few queens and tried it over, and succeeded with *one* out of four, and *why* we did not succeed with all we can not tell, but nearly always lost them. Our observation led us to believe that Mr. Malone was right in keeping his drones and queens in the dark. But that

the novice would soon lose the most of his queens in attempting to have them fertilized, led us to think of the propriety of getting up something that would secure the virgin queen and the drone against any danger of loss whatever; and we here submit our plan to the beekeepers, asking them to test it:



Queen Fertilizing Cage.

Make a cage the exact size of the frame, with the exception of its being full three inches in the clear, so that it would occupy the place of two frames; in the top of that mortise or cut out about nearly the full length of the frame, making it fully two inches wide, so that the small frame containing the comb and honey can be withdrawn at pleasure, without brushing off the queen or drones. And now to prepare it for practical use: Tack on the sides woven wire, so that the worker bee can not pass through; cut a piece of comb just the size of the small frame, and fit it in the frames; drop it into the fertilizing cage. Now put in your drones; then let your virgin queen go among them; then set in the centre of the hive, and we will warrant you success, and not fail one time in a hundred.

We will go further than that: Make a cage as above described, with the exception that you cover the sides with glass or wood, ventilating at the top. Now put the drones and queen in a dark room, with the proper temperature, so that it would not chill them; and we would have no hesitancy in warranting them to copulate as well there as they would in the hive. Our experiments have led us to the following convictions:

First. That the reason the virgin queens leave the hive, is the want of room to woo her lover. After see-

ing what we have, we have not a shadow of doubt that hundreds of queens have paired in the hive, without ever flying out; and, in our opinion, all that we want is to give them plenty of room, away from the worker bees, keeping up the proper temperature, giving them all they want to eat, and we will hear no more of failure.

We have applied for a patent on the above fertilizing cage; not that we expect to make a fortune out of it; yet, if upon trial it be found as good as we have every reason to believe it will prove after trial, the proceeds will be devoted to the interests of the ILLUSTRATED BEE JOURNAL. As soon as our subscription list reaches a certain number, we will publish the JOURNAL on the first and fifteenth of every month. We say to all try, and let us hear how you succeed; and if our invention is not good, we want no pay for it. N. C. M.

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### RYE OR BUCKWHEAT FLOUR.

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As soon as the warm days in early spring approaches, the little busy bee may be seen emerging from the hive, and flying away in search of pollen, which is very necessary for the bees to have at this season of the year; without it the colony could not recruit its numbers, as this *pollen* is converted into food for the young larvæ. In order that our bees may be strong and ready to cast early swarms, as soon as they begin to fly the bee-keeper should have ready rye or buckwheat flour for the bees to roll up in little *pellets*, which they will readily do if placed where they can get to it. The queen is now busy depositing her eggs, and if the bees have not enough of bee-bread their larvæ will soon perish for want of it; hence, the necessity of giving them rye or buckwheat flour. "But," says one, "I never could get my bees to touch it." We will tell you how to get them to work it.

Place the flour in vessels of any kind, laying upon the flour *shavings* or *chips*, so that the bees will have something to light upon. Set them away from the hives, at different points in your grounds; drop a little sweet annis upon the shavings or chips, and we will hear no more about the bees not working upon the rye flour. Some drop a little honey upon the flour, and in that way the bees are attracted to it. All very well if the bees stop there, but such a course might ruin an apiary, as it is likely to set the bees robbing, and end in the destruction of many valuable colonies. I have known beekeepers, after transferring bees, throw out the scraps of honey-comb for the bees to gather up what little honey was left in them. Far better throw it in the fire than do that. If the bee-keeper wished to excite and sow discord among his bees, then such a course would be commendable. There is but one safe way to dispose of such waste honey, and that is to deposit it in the surplus boxes, and let the bees remove it, which they will soon do.

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#### A WORD TO OUR PATRONS.

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Our patrons will remember that we published in our Prospectus that we would issue a journal of forty-eight pages monthly in the interest of Bee Culture, and beekeepers were asked to come forward and aid us; and we must say that from every quarter and every State, beekeepers have responded handsomely, and far above our expectations. The many ladies and gentlemen that have been engaged in getting up clubs will accept our sincere thanks for their kind efforts in our behalf. Already many are soliciting the publishing of the JOURNAL twice a month, which we too, after due consideration, deem advisable. Therefore, our friends will in future receive

thirty-two pages, instead of forty-eight, beginning with our next number; and after that to publish the ILLUSTRATED BEE JOURNAL on the 1st and 15th of every month, each number to contain at least thirty-two pages of reading matter. This arrangement will enable us to present our readers with two JOURNALS per month, giving our readers sixty-four pages a month instead of forty-eight, as heretofore. We say to our friends and bee-keepers generally, to send in your subscriptions, get up clubs, and let us have a good club from every post-office.

We have concluded to continue our premiums as heretofore, and will give to each subscriber, sending us \$2.00 for one year's subscription to the ILLUSTRATED BEE JOURNAL, one of the following premiums:

	NAMES.
No. 1—One Italian Queen, worth.....	\$5 00 .....
No. 2—Mitchell's Guide to Bee-Keeping...	50 .....
No. 3—Mitchell's Bee-Feeder .....	50 .....
No. 4—Model Cage for Fertilizing Queen..	50 .....
No. 5—Adair's Annals of Bee Culture....	50 .....
No. 6—Italian Queen.....	\$5 00 .....
No. 7—Mitchell's Guide to Bee-Keeping...	50 .....
No. 8—Mitchell's Bee-Feeder .....	50 .....
No. 9—Model Cage for Fertilizing Queens	50 .....
No. 10—Egyptian Queen .....	\$5 00 .....

Postmasters, or any one filling up the above certificate, and sending us \$20, will receive for their services one *Pure Italian Queen*, or for a club of twenty and \$40, one Italian and one Egyptian Queen. The club will please determine for themselves, by lot or otherwise, the premiums that each are to receive, by writing their names to right of each gift. Any number, or all of the club may change to Italian Queen by inclosing \$2.50 extra.

Send money by money order or registered letter to N. C. MITCHELL, Indianapolis, Ind. Purity of Queens and safe arrival guaranteed.

## MITCHELL'S BEE FEEDER.

The accompanying engraving represents Mitchell's Bee Feeder. It is made about the size of a common tin-cup, with a tube made out of the finest woven wire, and soldered to the bottom of the cup. The tube may be made one or more inches wide, and but one-eighth or one-fourth of an inch through; just so as to let the honey pass through it. To prevent the honey from passing through it too fast, we would recommend the wrapping of the tube with twine. The bee-keeper will at once see that the tube may be slipped in between the comb, so as to reach the bees in the coldest weather. We have concluded to give our feeder to bee-keepers, and will not apply for a patent. As many of our patrons are entitled to the Bee Feeder as premiums offered thereby, we have concluded, inas-



much as the express charges on one would be much more than any tinner would charge for making three or four, that we would add Mitchell's Guide in place of Bee Feeder, and permit any one who desired have them made. We would also recommend every one entitled to Mitchell's Fertilizing Cage to have them made at home in place of having model sent. Then we will forward Farm Right, or the use of it, as soon as patented. They can be made at home for much less than it would cost to send them by express. If this does not meet the wishes of our patrons, then we will forward them.

ARTHUR'S HOME MAGAZINE for March is upon our table, and needs no commendation from us, as it is recognized as one of the leading magazines of the nation. Send 20 cents for sample copy, or \$2.00 per annum. Address T. S. Arthur & Sons, Philadelphia, Pa.

OPINIONS OF THE PRESS.

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The *Illustrated Bee Journal* for February, is at hand. It is a neat and ably edited monthly, published by N. C. Mitchell, Indianapolis, Ind., at \$2 a year. The number before us, as those which preceded it, is handsomely illustrated, and contains a large amount of useful matter for the apiarist.—*Journal of the Farm, Philadelphia and Chicago.*

The *Illustrated Bee Journal* is a monthly of great interest to our apiarist friends. N. C. Mitchell, publisher, Indianapolis, Ind.—\$2 a year. *Christian Advocate, Nashville, Tenn.*

The *Illustrated Bee Journal*, N. C. Mitchell, publisher, Indianapolis, at \$2 per annum, discusses every possible phase of the bee question and honey-making—*Christian Advocate, Cincinnati.*

The *Illustrated Bee Journal* is an excellent work, of forty-eight pages, published monthly by N. C. Mitchell, at Indianapolis, Ind., price \$2.00 per annum, or 15 cents for a single copy, with reduction to clubs. It contains many articles of great interest to those who keep bees, or who desire to do so. The publisher thoroughly understands the business of profitable bee-keeping, and his book is destined to become popular. Address as above.—*Eagle, Reading, Penn.*

The *Bee Journal* (N. C. Mitchell, Indianapolis, Ind.) is a monthly publication, in pamphlet form, of forty-eight pages per number, and telling everything that is known about bees, hives, methods of raising, treatment, etc.—*Morning Star, published at New York and Dover, N. H.*

*Illustrated Bee Journal*, is the title of a monthly magazine, published by N. C. Mitchell, of Indianapolis, for \$2 per year. The second number is just received, and contains much valuable information on the subject of bee-keeping.—*Crawfordsville Journal.*

The *Illustrated Bee Journal*, Vol. I, No. 1, Indianapolis, Ind., \$2.00 a year. It will be valuable to our bee fanciers.—*Farm and Garden, Clinton, S. C.*

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WE have just received Kidder's *Secrets of Bee Keeping*, fourth edition, published in 1868. It is a practical work, and will fully repay for its perusal. See advertisement. Sent post-paid for fifty cents. Address K. P. Kidder, Burlington, Vermont.

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WE have received a number of contributions that came too late for the March number, and will appear in our next issue.



MICHIGAN BEE-KEEPERS' CONVENTION.—We would call the attention of bee-keepers to the published programme of the Michigan Bee-Keepers' Convention, which is to assemble on the 23d and 24th of March, at Lansing, Michigan. We deem it a privilege and duty to urge upon all bee-keepers the propriety of turning out *en masse*, as many questions of vital importance will be fully discussed by our ablest apiarists. Mr. A. F. Moon, President of the Michigan Bee Association, and others, want a National Bee Convention; we will second the motion. Turn out, and let us have a good time. We would be glad to meet bee-keepers from every State in the Union.

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ILLINOIS AND OHIO.—The Buckeye Hive is fast gaining the confidence of bee men in Illinois and Ohio. During the past month Mr. Wm. T. Gibson, the owner of valuable territory in these States, has had orders for and sold a large number of Farm Rights and Model Hives, and has also sold several townships to active, experienced bee raisers. Mr. Gibson will send to any person in his territory a very fine full sized Model Hive, with Moth Trap, and Deed for Farm Right, to use and manufacture, on receipt of \$15, or the bill for same will be sent, collect on delivery. Since our last issue, Mr. Gibson has purchased and added to his territory in Illinois, Cook, Du Page, Lake and Will Counties. See his card on inside back cover.

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WE have just received two numbers of the *Youth's Visitor*, published monthly by the American Millennial Association. We can assure the little folks that it will please them. Send 25 cents and take it for one year, and read for themselves. Address "Youth's Visitor," Boston, Mass.

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ALSIKE Clover Seed for sale by A. J. Pope, at the ILLUSTRATED BEE JOURNAL office.

TO THE PUBLIC.

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Many of our correspondents have written us that they contemplate visiting us. To such we would say, come and we will give you a hearty welcome. We might notice many that called upon us the past month—among the number was J. L. Hubbard, of Bricksburg, New Jersey, Capt. T. S. Collins, Dr. H. Senseman, of Tremont, Ohio, W. A. Banks, Mr. Scott, of Laporte, Ind., and Dr. Hathaway, of Muncie, Ind.

Every traveler interested in bee culture is invited to call and see us, and learn more of *our* system of bee culture; and as Indianapolis is recognized as the great railroad centre, with railroads leading in every direction, we would suggest the propriety of travelers interested in bee culture to purchase tickets by the way of Indianapolis, as it will cost no more by that route than by any other, as trains are constantly leaving Indianapolis that would allow passengers to stop over one train, so as to lose but little time. And that passengers may see and know for themselves, we have published an Indianapolis Railroad Directory, giving time of arrival and departure of trains on all railroads leading to and from Indianapolis. Again we say, purchase tickets by way of Indianapolis; stop off at the Union Depot, and you will find us three squares north, No. 74 West Washington street, Bates House Block, over Singer Manufacturing Company Sewing Machine Office.

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WE are to-day in receipt of Photographs of the celebrated Apiarists of Germany, Baron and Baroness Lina of Berlepsch. We have also in our possession, and on the way, *photos* of all the noted Apiarists of Germany, Italy, and France, which will appear in the JOURNAL regularly. We are indebted to our friend and contributor, Mr. Charles Dadant, of Hamilton, Illinois.

# CLEVELAND, COLUMBUS, CINCINNATI & INDIANAPOLIS RAILWAY COMPANY,

(Formerly Cleveland, Columbus & Cincinnati Railroad, and Bellefontaine Railway)

GOING EAST THEY RUN

## Three Express Trains Daily from Indianapolis.

Over the "Bee Line," on arrival of trains from Louisville, Evansville, Lafayette and St. Louis.

Direct Connection at Crestline with the Pittsburg, Fort Wayne & Chicago Railway, to Pittsburg, and through that line with the Pennsylvania Central Route, to Harrisburg, Baltimore, Washington, Philadelphia, Allentown, New York, etc.

Each and every train also has direct Connection at Cleveland with the Lake Shore Railway, to Erie, Dunkirk, Buffalo and Niagara Falls, and through that line with the New York Central and Erie Railway Routes, to Albany, Troy, Springfield, Worcester, Boston, Providence, Elmira, Great Bend, New York, etc.

*Trains Leave Indianapolis.*

Fast Express.....	3:20 a. m.
Accommodation .....	7:50 a. m.
Eastern Express.....	10:05 a. m.
Night Express .....	7:40 p. m.

*Trains Arrive at Indianapolis*

Western Express.....	2:30 a. m.
Night Express.....	8:00 a. m.
Accommodation.....	3:15 p. m.
Day Express .....	7:50 p. m.

## Jeffersonville, Madison & Indianapolis RAILROAD.

Direct Route to LOUISVILLE, NASHVILLE, CHATTANOOGA,  
MEMPHIS, MOBILE, AND NEW ORLEANS,

AND ALL POINTS SOUTH & SOUTHWEST.

## Three Trains Daily, Morning, Evening and Night.

*Trains Leave Indianapolis.*

Jeff. and Mad. Exp.....	2:55 a. m.
Jeff. and Mad. Mail.....	10:15 a. m.
Express.....	7:00 p. m.
Sunday Train.....	8:30 a. m.

*Trains Arrive at Indianapolis.*

Night Express .....	3:05 a. m.
Jeff. and Mad. Mail.....	12:10 p. m.
Jeff. Mad. and Chic. Ex.....	7:15 p. m.
Sunday Train.....	7:15 p. m.

## Cincinnati, Connersville & Indianapolis JUNCTION RAILROAD,

VIA RUSHVILLE, CONNERSVILLE, OXFORD & HAMILTON,  
TO AND FROM CINCINNATI.

This Road is completed from Rushville to Indianapolis, running

## Two Passenger Trains each way every Day,

BETWEEN CINCINNATI AND INDIANAPOLIS.

*Trains Leave Indianapolis.*

6:45 a. m.....	Morning Express.....	8:45 a. m.
2:05 p. m.....	Accommodation.....	1:15 noon
3:45 p. m.....	Mail .....	11:15 p. m.
2:05 p. m.....	Rushville Accom.....	8:45 a. m.

*Trains Arrive at Indianapolis.*

# INDIANAPOLIS, CINCINNATI & LAFAYETTE RAILROAD.

## THE GREAT THROUGH EXPRESS AND MAIL ROUTE

### From Indianapolis to and from all points East and West.

**CINCINNATI TRAIN.**—Three Trains Daily from the Union Depot for Cincinnati, and connecting at Cincinnati with all the Great Eastern and Southern Railroad Lines and the Ohio Steamers.

**LAFAYETTE AND CHICAGO TRAINS.**—Two Through Express Trains Daily for Chicago, with the most direct connections in Chicago to and from all points in the North-West.

**LAFAYETTE, QUINCY & ST. JOSEPH TRAINS.**—Two Through Trains Daily, via Lafayette for and from Springfield, Quincy, Keokuk, St. Joseph, and all points in Iowa, Kansas, Nebraska and the Gold Regions.

#### CINCINNATI DIVISION.

<i>Trains Leave Indianapolis.</i>		<i>Trains Arrive at Indianapolis.</i>	
Express .....	2:50 a. m.	Express .....	3:10 a. m.
Mail .....	10:05 a. m.	Mail .....	10:15 p. m.
Express .....	6:50 p. m.	Chicago Express .....	7:50 p. m.

#### LAFAYETTE DIVISION.

Toledo and Quincy Accom .....	3:50 a. m.	Chicago Express .....	2:30 a. m.
Chicago Mail .....	12:30 p. m.	Toledo and Quincy Express .....	9:50 a. m.
Chicago and Quincy Ex .....	8:05 p. m.	Chicago Mail .....	6:15 p. m.

#### MARTINSVILLE DIVISION.

Accom .....	1:50 p. m.	Accom .....	9:50 a. m.
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# Terre Haute & Indianapolis Railroad.

## FOUR PASSENGER TRAINS DAILY EACH WAY,

BETWEEN

### TERRE HAUTE AND INDIANAPOLIS.

Making close connections at Indianapolis with

**Trains for Boston, New York City, Philadelphia,**

**BALTIMORE, WASHINGTON CITY, CINCINNATI, LOUISVILLE,**

And at Terre Haute with Trains for

**ST. LOUIS, CAIRO, VINCENNES, EVANSVILLE,**

And all points West, South-West and North-West.

#### *Trains Leave Indianapolis.*

#### *Trains Arrive at Indianapolis.*

Fast Line Express .....	3:20 a. m.	Fast Line .....	2:40 a. m.
St. Louis Express .....	8:30 a. m.	Mail and Express .....	10:00 a. m.
Ev. and Cairo Ex .....	1:25 p. m.	Accommodation .....	6:10 p. m.
Night Express .....	8:30 p. m.	N. Y. Express .....	6:45 p. m.

# PITTSBURG, CINCINNATI & ST. LOUIS RAILROAD.

#### *Trains Leave Indianapolis.*

#### *Trains Arrive at Indianapolis.*

Day Express .....	3:20 a. m.	Western Express .....	2:00 a. m.
Mail Express .....	12:50 p. m.	Night Express .....	8:05 a. m.
Richmond Accom .....	3:00 p. m.	Richmond Accom .....	12:50 p. m.
Night Express .....	7:20 p. m.	Day Express .....	6:50 p. m.
Sunday Express .....	7:20 p. m.	Sunday Express .....	8:05 a. m.

# INDIANAPOLIS, PERU & CHICAGO RAILROAD.

#### *Trains Leave Indianapolis.*

#### *Trains Arrive at Indianapolis.*

Toledo Express .....	6:10 a. m.	Chicago Express .....	6:00 a. m.
Mail & Chicago Express .....	12:15 p. m.	Mail and Tol. Express .....	10:00 a. m.
Chicago and Tol. Express .....	8:10 p. m.	Chicago Express .....	4:30 p. m.

## TO BEE-KEEPERS.

A new Book on the subject of Bee Culture, (fourth edition), called "THE SECRETS OF BEE-KEEPING." The book is got up in a very condensed form, to meet the wants of Bee-Keepers (for a little money) in any department of Apicultural Science. It contains more practical information, and treats upon more subjects, than any book of its kind yet published. It is also embellished with numerous cuts and engravings, and contains nearly as many words as a book that usually sells for two dollars. Published by K. P. KIDDER, Burlington, Vermont. Price, in paper cover, 50 cents; bound, 75 cents. Sent by mail on the receipt of price.

---

### 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.

CHAS. DADANT, Hamilton, Illinois.

---

### ITALIAN QUEEN BEES,

From Mother's American Breed, and Purely Fertilized. Safe arrival guaranteed. Also, some small swarms to build up or raise Queens.

Address A. SALISBURY, Camargo, Illinois.

---

### 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  
Address HIRAM McCLELLAN,

Cable, Champaign County, Ohio.

---

### 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.

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OFFICE OF J. H. CROPPEB,  
No. 66 South College Street, Nashville, Tenn. }

For the sales of Farm and County Rights, in the States of Tennessee, North and South Carolina, and Florida, for N. C. Mitchell's Patent Buckeye Bee-Hive and Moth Toap. Farm Right and Sample Hive, \$20; County Rights, from \$150 to \$1,500.

# BROCKLESBY'S COMBINED HAND TRUCK,

FOR SACKING GRAIN AND MOVING THE SAME.

A Great Labor Saving Machine. Patented April 13, 1869.

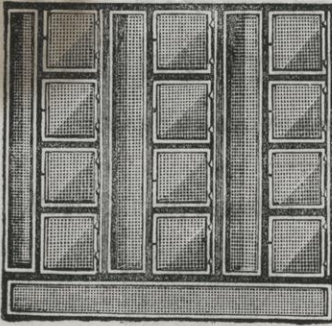


The above is a convenience that every Farmer, Miller, and Warehouseman should have; it saves a hand for holding sacks, besides the convenience of having the sack already on the Truck for conveying to the place desired. The above cut shows two positions—one with adjustable braces and foot-board, which may be used to advantage when in a stationary position, such as sacking grain from a threshing machine, &c.; the other stands without the aid of braces, and is more convenient when it is desired to sack and convey grain from one part of a barn (or other building) to another. It will be readily seen that the braces and foot-board fold up in such a position as not to interfere with the working of the machine. Every person that has grain to handle should have one, and would, if they knew the convenience of them, and the amount of hard lifting they save. A Farmer can sack and load up his wagon with grain without ever lifting a sack, by merely having a plank from the granary door to the wagon.

The Truck can be used for conveying other heavy substances if desired—the hopper and braces being adjustable can easily be removed. This invention is highly commended wherever introduced. The undersigned has for sale the whole United States, except a few counties in Ohio, which are disposed of. Territory sold very low. A Model furnished to each purchaser. For further information, address

WM. BROCKLESBY, JUN.,

Caledonia, Marion County, Ohio.



## 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

**DR. JEWELL DAVIS,**  
Charleston, Ill.

---

## PURE ITALIAN QUEEN BEES.

AARON BENEDICT, importer and breeder of Pure Italian Queen Bees Queens and Full Stocks constantly for sale. Bennington, Morrow County, Ohio.

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

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## AGENTS!

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

LITTLE BEE MAN,  
Springfield, Ohio.

---

## ITALIAN QUEENS.

Italian Queens, of the brightest colors, reared and tested in full colonies, and selected with special reference to the wants of those wishing to get the choicest mothers to breed from. Sent by mail, at my risk, at the following prices: Queens shipped in June, \$8. From June to the end of the season, \$5.

J. L. McLEAN,  
Richmond, Jefferson Co., O.

---

## ITALIAN BEES.

Full Colonies of Italian Bees, in movable comb hives, for sale—Price \$20. Also, Italian Queens for sale after May 15. Price of Queens, sent by mail, \$5. In no case will any but pure and fully tested Queens or Colonies be shipped from my apiary. Now is a good time to send in orders for Colonies, which I am prepared to fill at any time. Money to accompany all orders. Address,

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

# The North Western Farmer.

A SUPERB MAGAZINE OF RURAL LIFE.

Devoted to Agriculture, Horticulture, Rural Economy, Home Culture,  
and Family Reading.

ITS OBJECTS: The Education of the Working Classes, and Promotion of Rural Interests.

ITS MOTTO: Educated Labor the Hope of the World.

This Magazine is Royal Quarto in form, and containing twenty-four three-column pages to the number. It is beautifully illustrated, printed on fine book paper, and bound in tinted covers.

TERMS.—Only \$1.50 a year. Each new subscriber gets a copy of the Farmer's Annual and Rural Companion for 1869 (price 25 cents) free; also, two or three extra numbers of the FARMER gratis. Now is the time to subscribe and make up clubs. Sample copies sent free.

Address,

NORTH WESTERN FARMER CO.,  
Indianapolis, Indiana.

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## BUCKEYE BEE-HIVE.

Bee-keepers residing in the State of Iowa wanting to purchase farm or county rights, for the use of the well known Buckeye Bee-hive, should address Simon Klingensmith or Jacob Klingensmith, Agent, No. 478 North Tenn. Street, Indianapolis, Indiana.

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## BUCKEYE BEE-HIVES FOR SALE IN OHIO.

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

REV. ELI MILLER,  
Canton, Stark County, Ohio,

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## 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 Poultry.

COL. JOSEPH LEFFEL.



# Farming as a Profession;

OR,

HOW CHARLES LORING MADE IT PAY.

BY T. A. BLAND, Editor "North Western Farmer."

Loring, Publisher Boston, 1870.

This work of Dr. Bland's is a novelty in literature, being a most thrilling and romantic story, and practical essay on high farming. The most devoted novel reader will find it perfectly fascinating, while the staid old farmer declares it one of the best essays on agriculture he ever read. There is such a blending of the real and ideal; the romantic and practical, as to attract and inspire the old and young of every station in life.

The book is as romantic as a love story; as practical as an essay on agriculture, and as a tribute to farm life, it is about the best thing we have seen. A capital selling book.

It contains 87 pages; paper covers; price 30 cents. Sent post-paid on receipt of price. Address,

NORTH WESTERN FARMER CO.,

Indianapolis, Indiana.

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## \$5 DUPLEX SEWING MACHINE. \$5

A triumph in mechanical science. Entirely new, and manufactured under the VERY LATEST United States Patents, with many important, superior, and valuable improvements, which render it, in its perfect completeness, a HOME NECESSITY. It is without a rival or EQUAL, and for beauty and strength of stitch, speed, durability, and elegance, surpasses every other machine. It is entirely original in its construction, and does not infringe on any others. This wonderful and extraordinary achievement of mechanical ingenuity works upon a table. It is perfectly noiseless, easy to learn, rapid, and reliable, makes the beautiful, strong, and regular DUPLEX STITCH; and will do all kinds of work with ease and neatness. Sews with all kinds of thread, double or single; can not get out of order, and is what is needed by every family. It has received PREMIUMS, and the full approval of the principal Journals, and of all those who have used them. "This machine works like a charm, and sews neat and rapid. It is what every family requires."—*N. Y. World*. "We have visited the salesrooms and examined the machines, and pronounce them well worthy of all the praise claimed."—*Illustrated News*. "A great triumph in mechanical science.—*Chronicle, Augusta, Ga.* Single machines, all complete, packed in box, sent free to any part of the country by Express, on receipt of price, \$5. Safe delivery guaranteed. Agents wanted. Circulars containing extra inducements, free. Address,

DALMERE, NORTON & CO.,

86 Nassau Street, New York.

Patented February 18, 1868

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**MITCHELL'S**  
**BUCKEYE BEE-HIVE,**

Persons desirous of purchasing

**FARM,**  
Township or County Rights  
For Mitchell's

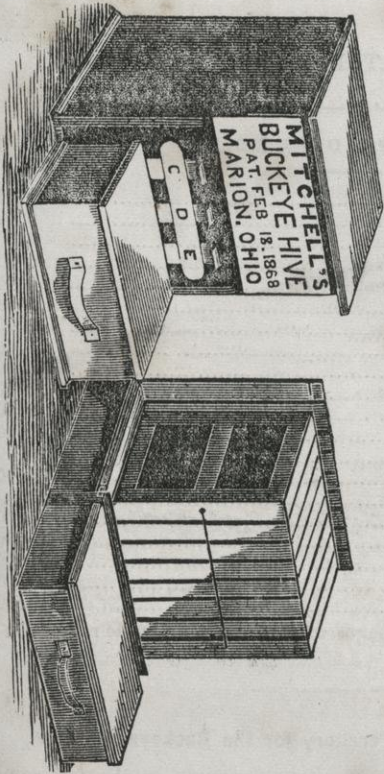
**BUCKEYE BEE-HIVE**  
AND  
**MOTH TRAP,**

Or procure  
**Italian Bees or Sample Hives**

In the  
**STATE OF MICHIGAN,**

Will please address

**DAVID CADY,**  
Indianapolis, Ind.



---

**ITALIAN QUEEN BEES.**

My customers are hereby reminded that I have removed from Walpole, N. H., to this place, where I shall continue to raise Queen Bees at moderate prices. Spring commences very early here, giving me an advantage of several weeks over my former location. I send by mail, having sent hundreds in that way. Satisfaction given. For Circulars address,

**J. L. HUBBARD,**  
Bricksburg, New Jersey.

# THE ILLUSTRATED BEE JOURNAL.

## RATES OF ADVERTISING.

One square, ten lines, one month.....	\$ 1 00
One square, ten lines, two months.....	2 00
One square, ten lines, three months.....	3 00
One square, ten lines, six months.....	6 00
One square, ten lines, twelve months.....	10 00
One-fourth page, one month.....	5 00
One-fourth page, two months.....	10 00
One-fourth page, three months.....	15 00
One-fourth page, six months.....	25 00
One-fourth page, twelve months.....	35 00
One-half page, one month.....	8 00
One-half page, two months.....	15 00
One-half page, three months.....	20 00
One-half page, six months.....	35 00
One-half page, twelve months.....	60 00
One page, one month.....	15 00
One page, two months.....	25 00
One page, three months.....	35 00
One page, six months.....	60 00
One page, twelve months.....	100 00

🐝 Advertisements on cover pages will be charged double rates. 🐝

### Names of Parties Owning Territory for the Buckeye Bee-Hive.

Any one wanting to use or purchase territory in the following named States, should address the owners as follows:

- Southern Indiana, Robert Dunavan, Indianapolis.
- Missouri, D. H. Chase, Indianapolis.
- Kansas, William Barnes, Indianapolis.
- Michigan, David Cady, Indianapolis.
- Iowa, Simon Klingensmith, Indianapolis.
- Kentucky, D. B. Helm, Antioch, Ind.
- Pennsylvania, D. H. Lintner, Lancaster, Pa.
- Alabama and Georgia, H. J. Shirk & W. W. Constant, Peru, Ind.
- Wisconsin, Minnesota and Nebraska, Joshua Webb & James Calvert, Indianapolis, Ind.
- Virginia, U. P. Fobes, Peru, Ind, or D. B. Helm, Antioch, Ind.
- Tennessee, Florida, and North and South Carolina, J. H. Cropper, Nashville, Tennessee.
- Texas, J. M. Hicks, Indianapolis.
- Massachusetts, E. H. Barber, Indianapolis.
- Arkansas, W. A. Scofield, Indianapolis.
- Louisiana and Mississippi, W. W. Constant, Peru, Ind.
- New Jersey, H. J. Shirk, Peru, Ind.
- West Virginia and Maryland, District of Columbia, and the two south counties in Delaware, U. P. Forbes, Peru, Ind.
- Illinois and Ohio, Wm. T. Gibson. See his card on inside of back cover.

## 50 Papers and 25 Magazines at Club Rates for Single Subscriptions.



1000 bushels Norway Oats: We are Ramsdell's General Agents.

500 bushels Surprise Oats: These Oats weigh 45 lbs. per bushel.

200 bushels Alsike Clover Seed: Western Grown and Imported.

50 bushels Early Rose Potatoes: From D. S. Heffron's stock.

100 Honey Extractors; *Wood or Metal*: New styles for 1870.

750 Colonies Italian Bees in Langstroth Hives.;

1000 Langstroth Hives: Improved for 1870.

*Descriptive Catalogue, Illustrated, 10 cents. Price lists free; SECOND EDITION, Illustrated, just issued. Write for it as soon as you read this, then you won't forget it!*

Address,

NATIONAL BEE-HIVE CO., St. Charles, Ill."

Read what is said of

## THE FARMER'S GAZETTE AND INDUSTRIAL INDEX!

FARMERS, ATTENTION!—The Richmond Whig asks, "Are you subscribers to the Farmer's Gazette, published by S. Bassett French, Richmond, Va., for one dollar per annum?" and adds, "It is beyond the very best Agricultural monthly published for one dollar in Try it one year." A correspondent from Dauphin, Pa., says your Gazette is not only equal but superior to anything published in the North or South."

AND OHIO.

## MOOTH TRAP.

Illinois, has purchased  
Bee-Hive and Moth  
Illinois and Ohio:—

ILLINOIS—Alexander, Bond, Boone, Cass, Christian, Cook, Clark, Clay, Coles, Kalb, Du Page, DeWitt, Douglas, Edgar, Effinger, Green, Grundy, Hamilton, Henderson, Hardin, Jones, Johnson, Kane, Kendall, LaSalle, Lawrence, Lake, Logan, McHenry, Macoupin, Marshall, Mason, Massac, Mercer, Marion, Montgomery, Moultry, Ogle, Peoria, Piatt, Pike, Pope, Pulaski, Putnam, Richland, Rock Island, Sangamon, Schuyler, Shelby, Stark, Stephenson, 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.

FOUR MONTHS FREE OF  
**The Bee-Keepers' Journal and National Agriculturist.**



It is a large Illustrated, double quarto, eight page paper, containing five different Departments, viz: Bee-Keeping, Agriculture, Home and Fireside, Ladies' and Youths' Departments, making it the cheapest and the best family paper in America, for only \$1 a year. One sample copy **Sent Free** to every applicant and to all enterprising Bee-Keepers. Address

H. A. KING & CO., 37 Park Row, N. Y.



It is a neat piece of furniture, a general purpose machine, suits everybody, can be built in any village, and meets with the quickest sale of any thing before the people.

OFFICE, 16 SOUTH PENN. ST.

Where a variety of styles, and a machine in operation, can be seen at any time.

To secure an interest, Address,

J. K. BOSWELL

**Italian and Egyptian Queens**



Reed

W. H. L. NOBLE, Indianapolis, Ind., second floor, Room No. 2.

**CINCINNATI & LAFAYETTE RAILROAD.**

**CHANGE OF TIME!**

On and after Monday next, February 21, trains on the above line will leave and arrive at the Union Depot, as follows:

*Trains Leave.*

*Trains Arrive.*

**CINCINNATI DIVISION.**

Express.....	2:50 A. M.	Express.....	3:10 A. M.
Mail.....	10:05 A. M.	Mail.....	12:15 P. M.
Express.....	6:50 P. M.	Chicago Express .....	7:50 P. M.

**LAFAYETTE DIVISION.**

Toledo and Quincy Accom.....	3:50 A. M.	Chicago Express.....	2:30 A. M.
Chicago Mail.....	12:30 P. M.	Toledo and Quincy Ex.....	9:50 A. M.
Chicago and Quincy Ex.....	8:05 P. M.	Chicago Mail.....	6:15 P. M.

**MARTINSVILLE DIVISION.**

Accom .....	1:50 P. M.	Accom .....	9:50 A. M.
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W. H. L. NOBLE, Gen'l Agent.

A. E. CLARK, Gen'l Ticket Agent.