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National bee journal. Vol. IV, No.7 August, 1873

Indianapolis, Indiana: [s.n.], August, 1873

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THE NATIONAL BEE JOURNAL AND MAGAZINE.

VOL. IV.]

INDIANAPOLIS, AUGUST, 1873.

[No. 7.]

NORTHERN DEPARTMENT

"What of the Night."

"What of the night" in apiculture? Are we to continue rearing bees in the summer, but to lose them in the winter and spring, or have reason to hope for the success of former years, when stocks that were good in the fall came out good in the spring? If the future is to be as the last two winters, then apiculture may be set down as a *grand failure*.

But I am not prepared to believe that this, the most fascinating of all branches of rural economy, and one that once was quite profitable, is to be a failure. Experience and observation have demonstrated to me, that in apiculture as in all other pursuits, the old saying is equally true, "no lane so long that has no turn." I have had enough "ups and downs" in the bee business to satisfy me on this point, and I presume the experience of hundreds has been similar to mine.

In the winter of '68 and '69 I had eight strong stocks, and lost them all. In the fall of '70 I put ten stocks in my cellar, and the ensuing spring brought them *all* out, with the loss of only five and one half pounds of honey to the hive, and of

less than a pint of dead bees to the whole ten stocks. In the season of '71 I increased my colonies, by artificial divisions, from fifteen in the spring to seventy in the fall, besides taking from them in the months of May and June, over six hundred pounds of extracted honey. During the winter of '71 and '72 this number dwindled down to twenty. From that twenty I again went up last season to about seventy, besides taking a considerable amount of honey, and raising and sending out a large number of queens. Last fall I went into winter quarters with fifty-five, came out in March with over forty, and now have only fifteen with fertile queens. This I call *up and down*, with a little too much of the *down*.

But I presume that the period of time embraced in this narrative, has been fraught with greater fatality to the bee than any other known in the history of apiculture. It seems to me we have about reached the "turn" in the "lane." For some mysterious reason Providence permits maladies of various kinds to spread over the land, but none of them prevail for any great length of time. The Asiatic cholera or small pox may rage awhile among mankind, but the fury of the plague

is soon spent and usual healthfulness returns; the "cholera" among the fowls and the hogs, the murrianian with the cattle, and the "epizooty" with the horses, may cut down the former flocks and herds for a time, but they in turn pass off, and the flocks and herds resume their accustomed life and vigor. Why may we not, with equal reason, look for the maladies that carry off our bees, to pass away, and for their former health and vigor to return.

We can not look for uninterrupted success in apiculture, any more than in any other business; nor should we in this, more than in any other pursuit, for continuous failure. We should be prepared for either success or failure. Success should give us renewed confidence in apiculture; failure should but nerve us to put forth greater efforts to make apiculture a success. If we fail this season, we should try again; the next season may be the most prosperous and successful. The man that has not nerve to stand up against occasional adversity will fail in any pursuit in life.

I drop these random thoughts for the benefit of novices in apiculture; the veterans do not need such encouragement. My advice to all that have lost heavily during the last two winters, is to "pick your flints and try again."

M. C. HESTER.

Charlestown, Ind.

The above article should have been printed two months ago, it was omitted, first for want of space, and overlooked when our last number went to press.

Ed.

Facts vs. Theories.

In my previous articles, which appeared in the NATIONAL BEE JOURNAL under the heading of "My Failures," I endeavored to state what the facts in the case were, although in my efforts at success I had followed the fine theories of older bee keepers to the letter, but in each instance it resulted in failure, nevertheless I am determined to give bee keeping another trial.

In looking over the back numbers of the Journal, I found that our leading apiarians agree that to winter bees safely, they must not have too much honey, as the bees suffer more with the cold. They also say that there must be empty comb in the center of the hive for the bees to cluster on, and to have strong colonies to gather honey, we must feed early in spring, to induce breeding, and to secure early drones place drone comb in the center of the hive, and make the queen lay by feeding.

On the point of ventilation there is some difference of opinion. One wants upward, another wants lower ventilation. Now all this is sound *theory*, and looks on paper as though success were certain, but facts are stubborn things. I propose to state some facts in regard to these points, that are in opposition to these theories. Last fall I examined my bees and made a record of their condition, those that were marked *full of* honey, wintered safely on their summer stands undisturbed through the season.

Some strong colonies and some weak ones, were put in a warm *dry* cellar. I began feeding in February,

and kept it up until the middle of May. Those in the cellar were set out of doors once or twice during a thaw, and placed on their summer stands as soon as spring opened. One strong colony I gave drone comb, trying to have Italian drones before the blacks appeared, but no drone eggs were deposited until after black drones were flying from a hive made from an old hollow tree. The cause can not be that the blacks are earlier breeders, for my Italians that were not fed, had drones as early as the blacks. Then I placed empty combs in the center, and put the full ones on each side, the bees always carried the honey over to the center again. Now I conclude the facts are just this: First, if you want early drones, or early workers, you must have a large supply of honey in the hive in the fall, winter feeding will not do. My neighbor, who had his bees in an old log four feet long and one foot and a half across the hollow, had no trouble in getting his bees to breed early, for they had 150 lbs. of honey, and did not fear that the *feed* would fail, neither did the "cold wall of honey cause them to freeze to death." Next, if the bees needed empty comb in the center of the hive, they would not remove the honey from the outside to the center.

Now one word on ventilation. I find that when bees are left to themselves, they always ventilated the hive by "hanging out" in warm weather. I follow nature and open a ventilator in the *bottom* of the hive, covered with wire cloth, they will not wax this, but any opening near the top they will stop up. I find as cool weather approaches,

they use more propolis and close every crack, top and bottom, except the entrance. I also notice that the bees in the middle of the cluster, with their heads in the cells, will live, while those at the edge of the cluster, that receive the benefit of the ventilation die. Should we not follow the teachings of their instinct, and close *all* ventilation in winter except the entrance?

DICK.

A Letter from Ohio.

Thinking it might be interesting to the readers of the JOURNAL to hear how I have been managing bees the present season, I will say that I have bought a large number of colonies of black bees, of various bee keepers, mostly with the privilege of their remaining where they were until fall, most of those colonies I have increased to three colonies in the following manner. Nearly all the bees bought were in common box hives; I drummed out enough bees, with the old black queen, to make a colony, and let them go in another hive full of comb, and let this hive take the place of the old one; set the old one on a different stand a little to one side; I then immediately introduced an Italian queen in the old colony as follows: I turned the hive bottom up, and thoroughly drenched the remaining bees and combs with peppermint water, by taking it in my mouth and blowing it on the bees and combs, also on the queen, then I let the queen go in, set the hive right side up on the stand. Two weeks after I went through the same operation with the old hive again, draining out the Ital-

ian queen with a sufficient quantity of bees to make another colony, and let it take the place of the old one, as before giving the old colony another Italian queen. In this way I increased each colony to three colonies. Now in a few days I shall go the rounds again, and as many of the first colonies, containing black queens, as have gathered stores sufficient to winter, I will drum out the old black queens with bees and make another colony with the black queen, giving the old hive an Italian queen. If this last colony, having the black queen, gathers sufficient stores to winter, I shall, later in the season, give them an Italian queen, in this way I will increase one colony to four. In the above way of managing I have a laying queen in all the hives all the time. Bees have done finely here this season so far.

AARON BENEDICT.

Ohio.

P. S.—Owing to the good season for raising queens, I will soon have my orders for queens filled. I have had to use a large number of queens in making colonies. I consider a fertile queen worth five dollars, and almost indispensable, as a young fertile queen will lay nearly enough eggs in the old colony, in three weeks, to make another colony; the old colony in natural swarming is without a laying queen about that length of time, hence the advantage.

A. B.

An Easy Way to Introduce a Queen.

Take the black queen from the hive you intend to Italianize, leave it queenless twenty-four hours at least, take a cupfull of water, sweet-

en it a little, add ten or fifteen drops of peppermint essence, sprinkle well from the top of the hive, on and between the frames, after a few moments wet the queen with the same liquid and let her go in at the entrance. I have practiced this method for years and never lost a queen.

KATE.

Another Way to Introduce a Queen.

First capture and remove the old queen from the hive, and leave the colony queenless some six or eight hours, then take the cage containing the queen you wish to introduce and insert the cage between the frames where the queen can reach the honey, and let her remain there twenty-four hours, at the end of this time take her out, and if you find the bees will leave their comb readily you can then liberate your queen, but should the bees adhere to the comb and appear to be unwilling to leave it, put the cage back and let it remain a few hours longer and then liberate your queen.

H. B.

Letter from E. M. Johnson.

MRS. ATKINSON:—Yours of July 21st at hand. Will give you a little statement of the operations of the last four weeks, which I think will excuse somewhat the delay in sending queens. I wrote you about a month ago that queen weather had come at last, but am sorry to say that it did not stay, and I have devoted my whole time for nearly three months, with an assistant part of the time, and with about sixty full stocks of bees and over one hundred nuclei hives. I have accomplished literally nothing, and

was about to think that I could not raise any queens this summer. For some reason not known to me, the bees refused to build queen cells until this week. I fixed up swarm after swarm with brood from the choicest queens, but only got from one to three cells per hive, and sometimes they would even nurse up and seal over every egg and not start a single cell. But this week they are doing much better, some of them having as high as twenty-five fine large cells sealed now, and I now think that I can get all orders filled very soon. I am as well aware it don't pay as anybody can be, but can't help it after all. In the past ten years I think there has not been so bad a season for raising queens as the present, I almost envy you your privilege of going to Florida, I would like very much to go there myself, but can not at present. In haste, E. M. JOHNSON.

Mentor, O., July 24, 1873.

Good Advice.

In looking over the NATIONAL BEE JOURNAL, of December, 1872, I found on page 530 the following good advice: "Put your hand in your pocket and send in your renewal," which I shall cheerfully do by inclosing to you two dollars, the price of subscription for another year. I also take pleasure in being able to send you the following names to your JOURNAL, with the cash accompanying each, for one year's subscription, which names you will please pass to my credit, and as you advertise, will entitle me to one of your pure Italian queens. As there are no Italians in this part of the country, I desire to try them.

I shall take great interest hereafter in trying to increase the subscription of your JOURNAL here. My attention was first drawn to your valuable paper in the spring of 1872, by Mr. A. J. Hoover, who brought the first light of improved bee keeping into this section of the country, since which time I have been a subscriber to your work, and with the assistance of the JOURNAL and the premium work on bee culture you send to subscribers, I have succeeded admirably in the lower branches of *apiculture* — particularly artificial swarming, a method entirely new and astonishing to the old brimstone bee keepers here. We have not the best honey district here, although it pays to keep a few swarms of bees, and keep them right. Send queen to my address, as below. I remain, gentlemen, respectfully your most obedient servant. EDWARD RIEBSMEN.

Wilkes Barre, Pa., July 19, 1873.

Reader, do thou likewise, send for the NATIONAL BEE JOURNAL, and get as many subscribers as you can. For every three subscribers you get one pure Italian queen.

LOOK OUT FOR TOADS.—I have seen them hop along among the hives until they got in front of them, and pick up several bees that were on the ground, and if the alighting board be near the ground they will eat up the bees as fast as they alight.

If you would relish your food, labor for it; if you would enjoy clothes, pay for them before you wear them; if you would sleep soundly, subscribe and pay for the NATIONAL BEE JOURNAL.

SOUTHERN DEPARTMENT.**Experience of a Southern Novice.**

Permit me, through your valuable *JOURNAL*, to give the experience of a Southern novice. I am called, among our home folks, a youth of eighteen, favored with good habits and a desire for scientific bee culture, thanks to my most excellent uncle and guardian, who on my last birth-day presented me with eighteen colonies of black bees, one colony for each year of my life, saying as he did so, they will keep you pleasantly employed while at home with us this summer, and Sam will assist in taking care of them. Sam is an old family servant and uncle's right hand man among the bees—having no less than one hundred and fifty stocks, and sometimes as high as two hundred and fifty. After presenting thanks for the gift, I thought it rather queer that bees should keep me employed all summer, when everybody knows that bees take care of themselves. But I suddenly recollected what I had seen at the Memphis Exposition last fall, the display and interest in the bee department being of considerable importance. So on the spur of the moment I addressed Mr. Atkinson—whom I met with there—he, in return, sent me a copy of your interesting *JOURNAL*, which I read with profit as you shall see; also terms for bee hive, extractor, etc. The *JOURNAL* proved to be just what I wanted, I have learned many useful lessons from time to time, and the reliable little work that accompanies it on subscription, and think every one who keep bees must find

it of as much importance as a good hive, and I would not keep bees without a movable comb hive of some kind.

Our sample of the Queen arrived, and Sam, who is something of a carpenter, concluded he would try his hand at making some. This was on Feb. 10th, and in a short time thereafter I had a hand in the job, and had twenty-five of as fine well made hives as you could wish for. Uncle looked on smiling his approval, knowing that in bee keeping as in other branches of industry, rapid progress was being made. When the hives were done I watched my bees very closely, a deeper interest for the little fellows growing day by day. In the January number I learned through an article written by S. W. Cole, of this State, how to feed my bees artificial pollen, feeding them rye flour as described. They worked as only bees can, busy, busy, ever busy carrying in the flour. One fine day I thought to try my hand at transferring, so, calling Sam to my assistance, I told him what I was going to do, yet warning him that he must do just what I told him, to this he replied yes, Mass Jack, but looked as if he would rather be excused, and would, if need be, prepare to run. Uncle and Sam had some earnest conversation in regard to my proceedings, but although they both agreed that the boy was beside himself, as uncle termed it, concluded it would be best to allow me my own way. Just what the bees and I wanted, you see. I believe that I forgot to mention that uncle kept his bees in the old square box or gum hive, having no knowledge of the modern style

of hives or their management. I reckon the old gentleman began to think that I was spending more time and money than was necessary on my birth-day present, but as usual kept his opinion to himself, so I was left to go my own gait, as they say up North. With smoke in hand, I sallied forth to conquer or be conquered, but of the fate decreed I came off victorious. After driving out the bees and transferring the comb all right into the new hive, and placing it on the stand, I shook the bees in front of their new home, and in they went, pell-mell, singing merrily all the way as they went along. Now when this was done didn't I breathe free, I think from the feeling that I must of held my breath all through the operation, and Sam was as pale as a nigger could be—beg pardon, Sam, colored individual is what I meant to have said. Poor uncle's excitement was so great that he wore off at least two inches of his favorite walking cane in bringing it down on the ground so often, in astonishment if not in admiration. Then came the time for dividing, which was easily done, next arranging for surplus honey.

Now for my first experience in the apiary up till July. I have one hundred strong stocks; have extracted three hundred pounds of honey, and should reckon double that amount of box honey now on hand, but have not weighed. Will send you a report of the exact amount when my bees are done gathering.

Will say just one word about uncle's bees, having said enough for one time about my own. Sam says

Massa John, Massa Jack has done charmed your bees to fly into his bee gums, and dey carries all de honey in dar too.

Gentlemen, I am yours, most truly,
MIDDLE TENNESSEE.

Mexican Bees.

The bees of Mexico, like its climate, physical features, and all its forms of life, are closely allied to those of South America. On account of its more favorable location, however, we know more of the natural history of the former country than of the latter, and hence are enabled to present a more satisfactory account of its bees.

Immense quantities of wax are annually consumed in the ceremonies of the innumerable Catholic churches of that country, and on this account alone great attention is paid to the domestication and culture of bees. The honey is remarkably rich and of a beautiful color, and more recently, large quantities of it has been shipped to the New York market, where it meets with ready sale, at figures which enable it to compete successfully with that of home production.

There are many large apiaries in Yucatan, rivaling in numbers and profit, the most celebrated of our own country. These all consist of the natural species, which have been subjected to domestication. Hernandez, in his account of New Spain, describes several kinds—one resembling our own, which is domesticated, and hived in the hollows of trees, by the natives. Another species is described as stingless, and so much smaller than ours as to be called "winged ants." These are

undoubtedly identical, or nearly so, with the South American species described in a former article. Their nests resemble those of wasps, and are built in the rocks or suspended on the branches of trees. The honey is dark, but of good flavor. The cells are smaller than those of our species, and like the South American, contain brood only, the honey being contained in large vessels or cups. Hernandez states that the natives regarded the larvæ as a great delicacy, and when roasted and seasoned with said, had the flavor of almonds. There are other species, small and stingless, that build underground, but their honey is of an inferior quality.

The following graphic account of the species first mentioned, is abridged from the detailed descriptions of Captains Beechy and Hall, English travelers in that country:

"In domesticating their bees, the Mexicans lodge them in hives formed of short logs of wood, from 2 to 3 feet long, hollowed out about five inches in diameter, having the ends filled with clay, or wooden doors removable at pleasure; and a hole for entrance bored on one side, about halfway between the ends. They are suspended in a horizontal position from the branches of trees, or from the cottage eaves. The hive which Captain Hall examined was made of earthen ware, ornamented with raised figures and circular rings, and was hung in the verandah of a dwelling house. The interior of a hive presents, like that of the humble-bee in our own country, a confused and irregular appearance. The combs, which have but one series of cells, are placed, some in a

vertical position, and others horizontal—the latter, superior to the other in regularity of form, and of distance from one another. They are propped together in an oval mass, and occupy nearly half of the internal space, while the other half is stored with the honey cups. The cells which are destined solely for the rearing of the brood are like ours, hexangular, though the angles are not so sharply defined, nor is the mouth of the cell, strengthened by an additional ring of wax. The diameter is the same with that of ours, but the depth less by one-fifth. It is singular that the young bees are found in the cells with their hinder parts directed towards the mouth; in being hatched, they will of course, make their exit through the bottom, not having the impediment to encounter there which would obstruct the issue of the European bee. The honey, as has been stated, is deposited in small globular bags, hung round the sides of the hive, or placed at the bottom; some of these receptacles are more than $1\frac{1}{2}$ inches in diameter; and in many instances are so connected together that, in the case of cells of common honey combs, one side serves for two cups, thus combining economy and strength. And these magazines of honey being altogether apart from the brood-combs, and noways connected with them, great facility is afforded in depriving the bees of their stores. The honey is thin in consistence, but of agreeable flavor, and gives out a rich aromatic perfume. The wax is coarse, and of a brownish yellow; propolis does not appear to be used.

"The Mexican Bee is smaller by

one-fifth than the European, and exhibits that difference in the anatomical structure of the posterior tarsi, already noticed, and also in the cubital cells of the upper wings, which has been thought a sufficient reason for regarding the Mexican species—and indeed the South American species generally—as distinct from that of Europe, and to which has been given the denomination *Melipona* or *Trigona*. Many of these species are, as we have seen, described as having no stings, or at least so feeble a weapon as to produce no sensible injury, and from this circumstance they are known in the Spanish colonies by the name of *Angelitos*, or “little angels.” The population of a hive is generally under a 1,000. Like their congeners in Europe, they have enemies to guard against; and the Black Ants occasionally put their vigilance and prowess to the proof, sometimes successfully, but more frequently coming off with the worst. One of the community, accordingly, is constantly stationed as a sentinel at the mouth of the hive—keeping her post unrelieved for a whole day; and as the entrance is wide enough only for the admission of one bee at a time, the sentinel has to withdraw into a small cavity formed with the threshold, as often as a bee enters or leaves the hive. Captain Hall remarks that “the office is no sinecure.” Fortunately for the one on duty, the population is small; were it equal to that of a European hive, the task would be harder by twenty-fold. Like the domestic bee, they are fond of keeping their premises clear of all extraneous and offensive matter. A little

paint was dropped at the entrance of a hive; the sentinel carefully examined it, seemed to dislike it, and retreated into the hive. In a few seconds it returned with a troop of companions, each loaded with a portion of wax,—probably a scale in a half liquid state;—this they deposited on the soiled spot, repeating the operation till it was entirely covered, and the nuisance abated.”

It may be added that the honey of this species does not ferment readily, but remains sweet long after its importation to this country.

—*Exchange.*

The Bee Desertion Disease.

In so important a matter as this, I am unwilling to commit myself this early to any explanation of the cause. I have, in former articles in your excellent paper, said that the bees act as if insane. Perhaps they are. I have discovered in dead bees, of these hives thus dying in summer, the larvæ of an insect occupying the abdomen. Perhaps the cause is an insect. In many attempts to discover the cause of the disease, last winter I could discover none. But of late I have almost daily cut bees dying, or dead, longitudinally. This divides the bees—a section is easily made, and presents the head, thorax and abdomen cut into halves. There for some time occurred, while doing this, nothing to explain the matter. But at last a bee that had fallen dead before my eyes, a few inches from the entrance of its hive, presented this appearance: The head was darker and dryer in its centre than in a healthy bee. The usual light or pale flesh-colored muscle (as I

consider it) that occupies most of thorax, was nearly gone—only a few fibers left of it. The back of the abdomen of a healthy bee is a mass of tissue, either muscular or similar to it. But in this bee it was entirely empty and black. The honey sack was black, but full of honey. I then said to myself, I have the solution of this Kentucky Bee Disease, which is not confined to either summer or winter, has spread east until it has reached me, and is in all this vicinity destroying more bees than all other causes put together. It is a disease of these muscles, so large and powerful, which move the wings of the bee in its flight.

But right here my just born discovery received a rude check. The next bee that fell dead from the hive alluded to in my article on page 327, of May 22d, *Country Gentleman*, flew to a barn some sixty feet off, lighted, and slowly died. I cut it open as described, and failed to discover the discoloration of the muscles, or either loss by the disease. Again I was in the dark. But to make a long investigation short, I will say that subsequent dissections lead me to say that I am now inclined to think that though the bees rarely stay in the hive until the muscular tissue is turned black and decayed, yet the muscular tissues of the flying muscles and intestinal tissues, will be found diseased. In the bees that fly the longest distances after deserting the hive, the muscular tissue is flesh-colored or red; in those scarcely able to fly, it has dark spots or dark threads: and in those not able to fly, it may be almost gone. The difference from dysentery (the com-

mon cry of the press, and of unobserving men,) is that in the latter there is no such change in the muscles that I have discovered. Often bees fall dead from a hive, perishing of this disease, with so little muscular change that one needs to look closely to discover it.

Now, Messrs Editors, and those who in all parts of the United States, Europe and elsewhere, copy so much without a word of thanks, do not say that I commit myself to the idea that I have discovered the cause of this disease, or that I assert that it is new, or that it is beyond a doubt muscular degeneration. But this is the only thing I have as yet seen to explain it.

Most of the bees have their honey sacks now (May 23,) full of sweet, clean, pure honey, which they seem unable to digest. The symptoms of the, as I suppose, Kentucky disease (because first complained of there) with me are—dysenteric discharges—no foul smell to the combs or hive. But as they are gorged with clean, pure honey in the honey sack, the hive smells of nice, sweet honey perfume. There is a large surplus of honey in the hive after all the bees have left it. There are few or no dead bees in the hive. A few bees each day, be it hot or cold, wet or dry, what it may, fly out, light on any object, and there usually stay until they fall dead. And the last symptom is the disease of the muscles internal to the bee, in a greater or less degree.

Let me farther say that if I am correct, the disease, is like Asiatic Cholera, not in discharges, but in one thing. It is *endemic*, or so contagious that it spreads by infection,

yet does not attack all hives in an apiary in which it prevails. Half or two-thirds of an apiary may have it, while the rest escape without a sign. As thousands of hives in this vicinity have died and the honey has been eaten, it seems that the honey is not the cause of the disease in the bee, nor is it injurious to man. For months such honey has been on sale here in my own town—brought in by farmers who have lost hives—taken out of the honey chambers of hives, and no complaint has been heard of any human disease caused by its use.

Gentlemen of the Hive! You will have ample time and occasion to contemplate this disease, as I believe it will continue to spread. It came to me in one hive soon after the Kentucky loss. It has steadily and persistently held its course. I have lost half my bees by it in two years past. Others near me, who use less care than I do, have lost in the ratio of 60 hives out of 100 or 90 to 100, and some even more. Do not listen to the old familiar explanation of familiar diseases—or too much to mine. But observe, detect for yourselves, and publish for others' good. In Kentucky its work was rapid. As it spreads it seems to be less violent, but none the less sure. It is certain that it is a disease of summer and winter, and all seasons; but is usually more apparent in winter, because then the recuperative powers of the bee are less active than in summer. Indeed, the power to recover is suspended in winter.—S. J. Parker, M. D., in *Country Gentleman*.

Rape Seed.

As a honey producing plant, rape seed is considered one of the best. Farmers and bee keepers should give attention to the following:

The experience of the past year, not only with respect to price, but especially the long settled fact, that growing wheat year after year on the same land, impoverishes the soil, ought to have led thinking farmers to the cultivation of other products, which would put a stop to the total enervation of the soil. There are various products of agricultural industry which not only *do not* weaken, but on the contrary, strengthens the soil and secures to the farmer just as good, and even a better return, than wheat. Among these, and best understood, are the breeding of cattle and the production of butter and cheese, than the raising of leaf crops, such as clover, peas and rape seed, which, by covering the ground in mid-summer with a thick cover of leaves, increases the fertility of the soil. It may be said that all localities are not adapted to the breeding of stock, especially in newly settled regions. But clover, peas and rape seed can all be raised in new ground as well as wheat, and with equal or greater profit. It is the cultivation of rape seed in particular, to which I wish to call the attention of my fellow farmers, for this branch of agriculture has not as yet received the attention which it deserves. The reason for this may be partly found in a want of knowledge of the method of cultivation, and partly in the belief that soil and climate are not favorable; but soil and climate *are*

favorable, as may be seen in the town of New Holstein, Calumet county, where many thousands of bushels of rape seed are grown yearly. The cultivation of this crop is also extending in the neighboring towns. The price of rape seed has remained steady at from two dollars to two and a half per bushel, and the average yield per acre varies from ten to eighteen bushels, at times reaching from twenty to twenty-five bushels. It seems to me that my fellow farmers will be pleased at having their attention called to a product which always finds a ready cash market, for the reason that the production is insufficient for the demand, and must be for many years. Again, it is a product which does not weaken the soil, and helps the farmer to bring the land to such a state of cultivation and fertility as will insure good crops for several years. I will now give some directions in regard to the cultivation of rape seed for those who are not acquainted with it. The time for sowing it is from the middle to the end of June. This gives the farmer time to prepare his land, after the rest of the sowing is done. The harvest falls from the beginning to the end of September, a time when all the other harvesting is finished. It may be cut with a cradle or reaper; then raked into bundles, but not bound. After ten or twelve days it can be thrashed either in a barn or on a floor made of boards in the field. May be trodden out by oxen or horses, or thrashed with a flail. It can be cleaned in an ordinary fanning-mill. To make sure of a good crop, put on 100 to 150

pounds of plaster to the acre. The plaster can be sowed with the seed and dragged in. A piece of land producing rape seed one year, will certainly yield the following year from five to eight bushels more of wheat to the acre than it will after any other kind of grain. Two quarts of seed is sufficient for an acre. Rape seed can be had at Hamilton & Foster's Oil Works in Fon du Lac, Wisconsin. The oil is valuable for machinery, and can be used in woolen and cotton mills. The oil-cake makes a splendid food for cattle.

Obtaining New Varieties of the Strawberry.

New varieties of the strawberry may be very easily obtained. All that is necessary is to select a few of the largest and best strawberries, press out and plant the seed. They will come up in a short time and make considerable growth the present season. Another season the plants will commence yielding fruit, and no two will be of a similar quality. The best varieties can be saved for propagation and the inferior kinds destroyed. The young plants will make more rapid growth if planted in shoal boxes or pots, with rich earth and kept well watered. They should be protected from extreme cold in the winter.

The easiest method of cultivating the strawberry, is to set out a bed every year or two in rows or hills and keep down the weeds with the hoe till the runners prevent, and when the patch becomes too much overgrown with weeds, plough in. It is less work to set out a patch occasionally than to keep the weeds out of an old bed. Strawberries to grow large and yield, will require rich land.

LADIES' DEPARTMENT.

The Old Woman's Story.

(Continued.)

I hope so, for I intend to give them care and attention if that will help the matter any, and I have been thinking of having a bee house built for my bees this winter, and try wintering in that, for I told you before there is all kinds of vegetables in our cellar, and as you say, I don't believe it is very good for bees to winter in such a place. If you will give me the address of the man that has the double ventilated house, I think you said his name was Falkner, I intend to send for a plan, and instructions how to build one, unless you can give me the information needed, on house-building, as in bee keeping.

I can not give you a description of Mr. Falkner's bee house, but will give you his address, and by what I can learn from reliable persons the house is a good one for wintering bees—the arrangements for ventilation is such that the temperature can be regulated with little trouble to the apiarian—and many of our skilled beeists are seriously thinking it may be best after all to build a house sufficiently warm to keep their bees from freezing to death, as in the past winter. Some say, "why can't our bees winter out of doors as they used to?" There is more attention paid to bee keeping now than formerly, and when we lose our bees we know it. For, as in your case last summer, some build castles in the air, and when they fall great is the fall thereof. Just so with beginners, they take hold with a will to build up, and leave their house

unfinished, never thinking that the winds of winter will destroy the half finished work, but wonder why others succeed better than they. A person who understands bee keeping will examine well the condition of their bees early in the fall. First, that they all have good prolific queens; next that there is plenty of sealed honey, and if not, feed plentifully of syrup made from the best coffee sugar. While the bees are busy storing their winter supplies, the queen is not idle, but steadily keeps on depositing eggs as if the honey was gathered from the flowers. Then, when the warning winds tell you it is time to put them under shelter, you will find not only honey plenty but the hives filled with young bees, in which case we would not be afraid to risk our bees. Beginners often think if they have a hive of the most approved plan, the bees will take care of themselves of course. You ask them if their bees had plenty of honey for winter and they will say, "I guess so, they were transferred two months before cold weather, and suppose they had plenty of time to gather what honey they needed." "Are you sure they all had queens?" "Don't know, didn't look at them, but I saw them flying out and in, supposed they were all right, so I put them in the cellar." When very likely, the two months that they had to gather their winter supplies, there was not honey enough in the blossoms to live on, and that of poor quality.

Such is the way that some unsuccessful bee keepers manage, then wonder why their bees die or leave the hives.

You ask if I ever wintered my bees out of doors? Yes, and like it well. Even there you will find few that will take the necessary trouble, but leave them out in the storm and bitter cold, wholly unprotected. I take my hives, place them close together, two rows back to back, put a rough fence around them and cover them well with hay. I mean, make a regular hay-stack over them. This way, I think, is good, for they get the benefit of the pure fresh air when they get any, instead of the pleasant aroma of decayed vegetables, as in your case, for you admit the vegetables in your cellar were half or two-thirds decayed before you looked at your bees in the spring.

Another thing that is quite as disastrous as the cold winds, is the first rays of the sun which strikes the unprotected hives, the bees become uneasy, and feel, after the long months of confinement, the necessity of flying out to discharge themselves. If the entrance to the hive should be open, they come out while the snow is yet on the ground, the air outside is cold, they become chilled, fall on the snow and perish. On the other hand, if shut up, they become uneasy and discharge in the hive, the consequence of which is disease and death. While protected from the cold bleak winds they are also shielded from the warm rays of the sun, consequently there is no undue excitement in the hive. Then when the time comes to warrant their safety, it is an easy matter to remove the hay from the entrance of the hive and let them fly out. Then how grateful the little bee-ings seem to feel, they hum and sing,

alight on your hand, and appear to fondle it, to all appearance quite unconscious that they have a sting, and you would be pleased to see the ever busy thing set to work cleaning up, taking out all the dead bees and rubbish that has accumulated during their imprisonment. And here let me tell you what I do, for I believe in helping everything that have a disposition to help themselves. I like a hive with a false bottom. No, I will take that back, I like nothing false, I mean a hive with a bottom that can be easily removed, by which I can clean in a few moments what would take them hours of labor. They work first, then play, you know, and this gives them a chance to play in the few short hours of a winter or early spring day, but be careful to shut them up snugly for the night, as day succeeding day even into weeks, may pass before another comes. With this, my out-door wintering plan, I have succeeded well.

I expect to have the advantage of you in the future, for in the fair sunny south we have no need of such precaution. During our stay in Tennessee, we never needed to put our bees in house or cellar, nor even sheltered out of doors, and the amount of honey they would gather you would hardly believe were I to tell you. And from what Mr. A. says I am inclined to believe that Florida is better still, and will test it ere long, no preventing providence.

Now let us go to the apiary. Here is the Southern gray bee, this swarm has traveled with Mr. A. over fifteen hundred miles. They came right side up, but not with

care, for they met with two accidents, and when opened here there was not more than half a dozen dead bees, and the colony was as strong as you see them now. They are large and of a gray color, you see, very quick in motion, neither are they disposed to be cross. Another good trait have they, they remain on the comb while we examine them, like the Italian, this is not the case with the black bee, for they will run all over, down to the bottom of the comb, then drop off.

Well, well, I should think they were a nice bee to handle. How strong they are, aint you afraid they will swarm?

Oh, no, they have no queen cells, I see, poor things. I wonder if they know they are in a strange country, among the yankees, as the Southern folks call us. Well, little pets, welcome to our clime of short summer, with your almost ceaseless industry. Yes, welcome, even if your coat of gray proclaims you a rebel bee, nature gave you that, and we accept the color.

Now there is the queen, she is very large and not quite as light colored as I should expect, to look at her bees. I wouldn't mind to have some of them next spring myself. This hive you say, has one of your best breeding queens. I think mine are as fair to look at as that, but you told me once before that it was not always the best looking queens that proved the most prolific or the best to breed from. Her worker bees are beauties, I am sure. I would like to see some of the young queens you raised from her. Is that one of them? Why that is just like her for all the world, I could not tell

them apart; the workers, too, are just alike, I think it impossible to find nicer bees than them if one should try. The six that I have at home are fixed just like yours, only the frames are in the center of the hive, and a dividing board on each side of them, to economise the heat, you know. Some would think that I could not get much honey against the Fair time, but I think I will, you see my bees are on the edge of a low piece of land, I sowed a large patch of Alsike clover there last spring was a year, and it does look beautiful now; then there is plenty of mustard catnip, sweet clover, bee plant, golden rod, and every kind of flower that I thought would yield honey, planted or sowed right around them. I don't think there have been a single day that my bees has not gathered honey this season, while last year at this time, if you remember, the bees did nothing but eat up what honey they had made. Then the buckwheat done well with us last fall, and take it all together, I have great hopes of my bees making a pile of honey yet for the Fair or Exposition.

(To be continued.)

A Successful Woman.

MRS. ELLEN S. TUPPER, THE BEE CULTURE AND HER WORK.

[Des Moines Letter to St. Louis Globe.]

Mrs. Tupper was born in Providence, Rhode Island, in 1822. She was a daughter of Noah Smith, afterwards a prominent politician in Maine, and for fifteen years First Assistant Secretary of the United States Senate. Her mother was a sister of Henry Wheaton, author of

the well-known treatise on international law.

Mrs. Tupper was educated at Providence, having all the advantages that wealth could give; and with that practical turn of mind characteristic of her, she studied many subjects not usually taught then to girls, but which since have been beneficial to her. She made good use of her opportunities, for at the age of sixteen she wrote an essay to compete for a prize offered by a leading and popular magazine, and won it over many competitors. The motto which actuated her then, has been her beacon through life, "to win success."

In 1843 she married Mr. Allen Tupper, a successful lumber merchant at Houlton, Maine, her father having already moved there and engaged in the lumber business. There she resided ten years, enjoying all the luxury that wealth could give, when her husband removed to Newton, Massachusetts, where her health failed and she became a confirmed invalid. Her physicians pronounced her heart diseased, and her stay on earth very short. Thinking a change of climate might be beneficial, the family came to Iowa, in 1851, locating at Brighton, Washington county, she so feeble as to be unable to leave her bed. The fresh and invigorating air of her new location soon revived her wasted energies, and she regained her health. Her husband in the meantime had invested his money in a tract of timber land and saw mills. His health soon failed, and being unable to attend to business, his wealth melted away like the dew before the sun, and poverty and

bankruptcy came upon them. Thrown thus upon her own resources, Mrs. Tupper sought some way of relief. She had never done a moment's manual labor. Necessity stared her in the face, and several small children, one a babe, rang their demands in her ears. She engaged as a teacher of a school three miles distant at twenty dollars a month, and with her babe on her arms she, on horseback, daily went to her task, attending to her household duties when out of school. After the close of this school, she established a school in her own house; she loves little children, and soon she had a house full of pupils. Thus she managed to support her family until 1857, when she turned her attention to bees. She purchased two colonies, and began to work with them, meanwhile reading everything which she could find relating to bee culture; but she soon learned that theory and practice were two quite opposite matters. Her two colonies increased rapidly. She bought improved hives as fast as she could afford them. She soon after became interested, in Italian bees, and procured a few. She then began to write about bees, giving the result of her practical knowledge. Her first article was published in the Burlington *Hawkeye*, she receiving pay therefor. In 1865 she wrote an essay on bees for the United States Agricultural Report, which was pronounced by good judges to be the best essay ever published by the department, and a Washington paper said of it, "Though written by women, it is a model for efforts of that kind. She knew what she wrote about, and told it—not one

waste word in sixteen pages." Her reputation soon began to be established; she was sought out by various journals, and she now writes regularly for the *National Agriculturist* and *Bee Keepers' Magazine*, the *New York Tribune*, *National Bee Journal* and *Colman's Rural World*. She also has the position of lecturer on bee keeping, natural history of bees, etc., in the State Agricultural College at Ames, whither she goes regularly. With the officers of that institution she has visited different parts of the State, holding Farmers' Institutes, and wherever she goes never fails to elicit much interest in her subject.

In the spring of 1872, she, with her family, removed to Des Moines, in order to gain a more central location. She formed a partnership with Mrs. Annie Savery, thereby adding abundant capital to her practical knowledge, and the firm was known as the Italian Bee Company. An agent was dispatched to Como, Italy, to procure queen bees, and the business was rapidly increased. In the fall of that year she purchased the interest of Mrs. Savery in the business, and placed her bees for the winter in the cellar of her own house, at Cottage Grove, about one mile from the city.

Early this spring, while she was in the city, with her family, her house took fire and her two hundred hives of bees were destroyed. Writing to a friend she said: "I came home to night to find my house a wreck and the two hundred stocks of bees ruined. Is it not hard sometimes, to believe, that 'all things work together for our good?' I have worked so hard and am so

tired, that I can form no plans for the future. It was an hour of trial which would have discouraged many a brave man. After years of toil and labor with a large indebtedness to her late partner, a large family, an invalid husband, thus to find herself almost where she begun, was soul-trying, but with the indomitable will she possesses, she marshalled her energies for a new battle of life, and amid all her misfortunes there was not a shadow on her face. Moneyed men came forward and tendered her means, but she refused it, choosing to paddle her own canoe. With two hundred dollars she purchased four Italian queens, and with a few stocks of bees which she secured elsewhere, she started again. Soon after a farmer from a distance offered her fifty colonies of common black bees, to be paid for when she pleased and at what price she pleased. Mr. James Smith, the well-known horticulturist, who resides a mile south of the city, and two miles from her residence, offered her the use of his fruit farm, on which to set up her new colonies, and she accepted the kind offer and removed her bees there, and immediately set about removing them to movable comb-hives and Italianizing them.

This colony will this season increase from fifty to one hundred and two, and will produce over seven thousand pounds of honey. So that before the year is gone she will have recovered very much from her loss. At her home she has twenty colonies of royal blood, from which she supplies her trade, together with importations by each ocean steamer. She will soon be able to fill all or-

ders again. In reply to a question the other day as to what hives she used, she replied, "The cheapest I can get; they do not cost over a dollar and fifty cents each; but I want one side so it can be removed, a movable cap, and the inside filled with movable frames.

"Well," said I, "how about moths and worms?"

"I don't have any about my hives, as I will show you," said she, and she removed the side comb filled with honey and covered with bees, standing the frames around outside the hives, inspecting them carefully. This she does nearly every day, to find the queen and any bug or worm that may get in. These frames she has filled with the comb which she saved from the ruins of the fire, and the bees are filling it nicely.

What a lesson does this resolute woman teach the women of this country? She might, as might a thousand others, have been a useless woman despite her education and mental attainments, and yet she might have been obliged to sit down and be helped, but for the advantages which her early education gave her, and which gave her the first money she ever earned. Realizing this, she has given her eleven children the best opportunity possible to acquire an education. One of them, her eldest daughter, is now filling a pulpit as preacher, at Webster, Mass., at a salary of \$5,000 a year—a noble woman, as talented and eloquent as she is quiet and unassuming.

Mrs. Tupper in person is of small stature, dark-blue eyes, thin features, well developed brain, somewhat bent with toil and the weight

of years, nervous sanguine temperament, speaks rapidly and uses no superfluous words, modest and unassuming in manner, and what would be called in plain terms homely. To a casual observer, she is the last person you would select as Tupper. She as an active member of the Baptist Church, and her special pride in church is the Infant Class in the Sabbath school, to which she devotes much of her over-burdened mind, and she has the satisfaction of knowing the children love her.

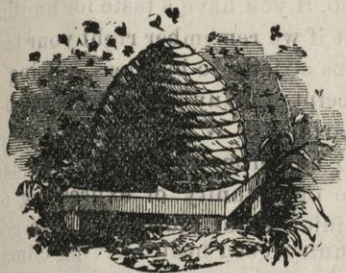
As a business person she is one of the most active and resolute in the city. She fits into the business of the Capital City and fills her place just as fittingly and nicely as anybody. Business men accept it courteously and admire her modest demeanor and perseverance. She attends personally to all shipments of bees, honey, extractors, hives, etc. There was not a day during the last severe winter and the cold, wet spring, that she was not in the city attending to business.

LOOK OUT FOR MOTHS.—A correspondent writes us that he traps them by the thousand, by placing small dishes around the apiary filled with sweetened water and vinegar. Try it, who are troubled with the pesky things.

ONE great and kindling thought, from a retired and obscure man, may live when thrones are fallen, and the memory of those who filled them is obliterated.

We will be pleased to hear from all our lady friends interested in bee culture, through this department.

EDITOR'S TABLE.



INDIANAPOLIS, AUGUST, 1873.

WE publish E. M. Johnson's letter which will explain to our readers the reason that some of our queen orders yet remain unfilled, and would say that we have filled all orders but those that were sent to him, soon as we learned that it would be impossible for him to furnish early queens. We sent to apiaries north and south, and have made extra effort in our own apiaries to supply the late orders, unfortunately some of the most important, or in other words, orders of the longest standing, were sent to him, but likewise unfortunately for those whose names were sent, for Mr. Johnson, and for us, the season has been most unpropitious for raising queens in that section of country. We would like to have all our orders filled by Mr. Johnson, for his queens has given great satisfaction, hence our reason for sending him as many as he can fill. But where orders for queens are sent to an apiary we can do no more, as in some cases last summer, in our anxiety to fill the orders we sent out queens, and before we could countermand the others were sent, con-

sequently some received two queens instead of one.

In the many hundred queens that we have shipped last year and the present, we have sold but one queen outside of our subscription list, and that by mistake, so by this you may understand, you who are disappointed, the delay has not been caused by carelessness or speculation on our part. The season with us has been good for bees and honey both, the reports from most parts very good, the bee keepers are much encouraged after viewing the stores of beautiful honey gathered by their faithful little laborers, and last, but not least, the amount of money it brings.

OUR friend J. W. Winder reports that he has extracted eight hundred pounds of honey from his nucleus hives alone, others say they have not weighed their's, but should think they will average between 200 to 300 pounds per colony. A correspondent from Tennessee writes the season has been unusually good. Our friends will confer a favor upon us and the readers of the JOURNAL, if they will report how the honey season has progressed in the different parts of the United States, and report the amount of swarms made and condition of same.

WE find by examining our books that some of our patrons are in arrears for the JOURNAL, please send your dues gentlemen, for positively it takes money to keep up a paper. Pay us, and we will pay you in return with interest.

Send in your subscriptions and receive a premium queen.

J. W. Hosmer Still Ahead.

In a private letter written July 31st, Mr. H. states that bees wintered poorly. On June 1st, had eighteen colonies; set two out for honey, sixteen for increase, but so weak in numbers it appeared as if they would all die out. He did not have one stock but could go between two combs in cool weather. They began to breed up and came out all right at last, for such small colonies. In the same month, (June) he sold nine old stocks and thirty young ones; in July, sold three old stocks and four young ones—thirty-six in all, besides queens, and has now on hand one hundred and twenty, besides the honey producers. He says he will not speak of what they have done yet, but there has been one continual flow of honey. He also says, "The loss in winter is so severe, I would like to know something about Florida, if suited for our business."

We cheerfully answer you, old friend. Excuse, I do not mean old in years, but the acquaintance of sixteen years is quite awhile after all, you know. We think there is no country better adapted to bee culture than Florida. There is a continual garden of flowers, from which the bee gathers honey, and almost perpetual summer; a ready market for honey, and a country that can hardly be excelled for beauty; an abundance of soft water, beautiful lakes filled with trout and other fish equally as fine; the deer and antelope roam free in the forests of tall pine trees, whose branches tower sky-ward; cedar and cypress in abundance; the best chance

imaginable for the lumber trade. So, friend Hosmer, we would advise you to take your mill and go—gun also, if you have a taste for hunting, but if we remember right your taste runs strictly to business. Being in receipt of many letters from the best aparians, J. W. Winder and others too numerous to mention, we take the opportunity of expressing our opinion about Florida. It is a good country, good health-giving climate, and every opportunity for an energetic man to get rich.

BAD news from the little bee man of our State, Peter McPhatridge by name. Eight colonies of bees to begin with in the spring, has now twenty-four—thirty-one hundred pounds of honey on hand—bees still busy gathering more, with fair prospect of doubling that amount. Go to Florida, Mc.

MERRITT & COUGHLIN, WOOLEN FACTORY,

West end of Washington St., south side,
INDIANAPOLIS, IND.,
MANUFACTURE

**JEANS,
CASSIMERES,
TWEEDS,
SATINETTS,
FLANNELS,
REPELLANTS,
STOCKING YARNS,
BLANKETS, &c.**

We are now Retailing these Goods at
Wholesale Prices.

Buy your Goods at our Factory and
Save 30 Per Cent.

250,000 LBS. WOOL WANTED

For which we will pay the HIGHEST
MARKET PRICE in cash or goods.

Don't sell your wool until you have
seen us.

**CHOICE QUEENS,
FOR 1873.**

My prices for Italian queens for the coming season, will be as follows:

For Warranted Pure Queens.

- 1 queen.....\$2 50
- 3 " each 2 25
- 6 " and upwards, each..... 2 00

Tested Pure Queens,

- For 1 Tested Pure Queen.....\$3 50
- " 3 " " " each... 3 25
- " 6 and upwards, each..... 3 00

Queens will be bred from none but the choicest stock, and no drones will be allowed to hatch except from the purest mothers. Should any warranted queens prove impure, they will be replaced.

Orders will be filled in rotation, therefore, the sooner they are sent in the sooner the queen will be received. Queens will be sent by express or mail, as I may deem safest at the time of shipment. In ordering, give plainly the name of express and post office, if different from each other. Always be sure to give the county and State in every letter.

How to Send Money.

Small sums of money may be sent in registered letters. Larger sums by post office order on Painesville, O., office. All letters answered on the same day that they are received, so that none are forgotten.

Bee Feeders.

I have invented a bee feeder, which for convenience in filling and handling, I think can not be surpassed. Samples, holding 3½ lbs., will be sent by mail, postage paid, for 50 cents each. Per dozen, by express, not pre-paid, \$3.00. Address all orders to

E. M. JOHNSON,
Mentor, Lake Co., O.

HOOVER & BARTHE,

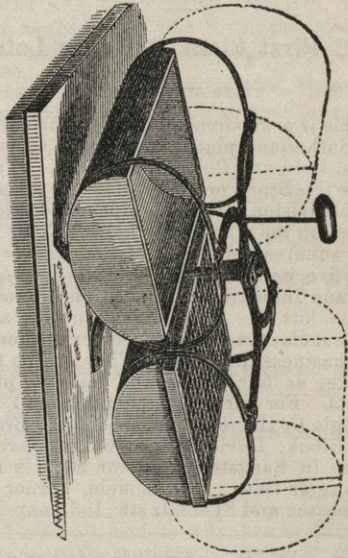
Dealers in

PURE ITALIAN QUEENS AND BEES.

All kinds of Aparian Supplies on hand. Also A. J. Hoover owner of the State of Pennsylvania, will act as agent for the Celebrated Queen Bee Hive, Pat. by Thos. Atkinson, also the Extractor and National Bee Journal, for the Eastern and Middle States. For information address

HOOVER & BARTHE,
Plymouth, Pa

THE ATKINSON



**H O N E Y
EXTRACTOR.**

This machine is the most simple, cheap and durable that has come before the public. It will empty large combs or a number of small pieces can be laid on at a time. It works very easy, as the whole weight revolves on a pivot. The principles applied in this machine are the simplest in nature, being the combination of gravitation with centrifugal force.

PRICE, \$8 00.

Address,

ATKINSON & CO.,

National Bee Journal,

INDIANAPOLIS, IND.

I dont want anything better for me.
A. K. Brown, St. Louis, Mo.

I am well pleased with the extrator. For simplicity and ease of management, it could not be improved.
A. S. PORTER, Ohio.

It is all that a man can desire for a honey extractor, and only eight dollars.
J. FINLEY, Tenn.

SCHOFIELD, HARRISON & CO.'S

ADDITION TO INDIANAPOLIS.

232 First Class Building Lots.

This is a subdivision of that portion of the Sutherland place east of the Indianapolis, Peru and Chicago Railroad. It adjoins the Bruce property, now in process of subdivision into a magnificent addition. It lies on the line of the I. P. & C. R. R., four squares north-west of the car works, and five north-east of the State Fair and Indiana Industrial & Exposition Grounds. These lots are free of incumbrance, and are first class in every respect for residence and business purposes. They are on the market at fair prices and on easy payments. For further particulars call on Temple C. Harrison, rooms 8 and 9 Brandon Block; David B. Schofield, at his residence in Sangster, Harrison & Co.'s addition; or Wm. A. Schofield, corner of Tennessee and St. Clair sts., Indianapolis.

FOR SALE AND EXCHANGE.**Farm Lands,**

Improved and Unimproved,

In the following States:

INDIANA,

ILLINOIS,

MISSOURI,

IOWA, and

TENNESSEE.

Also for sale or trade,

CITY PROPERTY.W. A. SCHOFIELD,
National Bee Journal Office.**TO ADVERTISERS.**

Everybody having property to sell or exchange, should advertise in the
NATIONAL BEE JOURNAL.

Having a large circulation throughout the Union renders it one of the best advertising mediums through which to reach the people.

BEST THING IN THE WEST!!ATCHISON, TOPEKA & SANTA FE R. R.
Lands!**Three Million Acres**

Situating in and near the Arkansas Valley, the Finest Portion of Kansas.

Eleven years' credit. Seven per cent. Interest. 22½ per cent. reduction to settlers who improve.

A FREE PASS TO LAND BUYERS.

THE FACTS about this Grant are—Low Prices, Long Credit, and a Rebate to settlers of nearly one fourth; a Rich Soil, and Splendid Climate; short and mild Winters; early planting, and no wintering of Stock; plenty of Rainfall, and just at the right season; Coal, stone and brick on the line; Cheap Rates on Lumber, Coal, &c.; no land owned by Speculators; Homesteads and Pre-emptions now abundant; a first-class Railroad on the line of a great Through Route; Products will pay for land Improvements.

It is the best opportunity ever offered to the public, through the recent completion of the Road.

A. E. TOUZALIN,
Manager Land Department,
Or W. A. SCHOFIELD, | Topeka, Kan.
Indianapolis, Ind.

ARKANSAS VALLEY.**FARMERS.**

Or others going south-west to enter lands in the beautiful Arkansas Valley, through which runs the great

**Atchison, Topeka & Santa Fe
RAILROAD,**

will get all the necessary information by addressing

W. A. SCHOFIELD,
Indianapolis, Ind., Agent.

Mr. S. is about to get up a grand excursion to come off sometime in August, due notice of which will be given through the NATIONAL BEE JOURNAL and other papers. See Railroad advertisement on this page.

THE LADIES', OR, QUEEN BEE HIVE.

THE UNDERSIGNED HAS ON HAND FOR SALE, AT THIS OFFICE, THE far famed LADIES' HIVE, (better known as the Queen Bee Hive,) made of the best material, well painted, and put up for shipping for the sum of Three Dollars each. Large or small orders filled at that price.

Our rapidly increasing business enables us to offer to Bee keepers a Hive well adapted to all persons and changes of climates, and with many advantages over high priced Hives.

Also, Honey Extractors, Honey Trowels, and Clover Seed for sale.

Please send stamp for information to

Mrs. T. ATKINSON,

Editress National Bee Journal, Tilford's Building, Indianapolis, Ind.

EXTRACTS FROM LETTERS RECOMMENDING THE QUEEN BEE HIVE.

Mrs. T. Atkinson, Indianapolis, Indiana:

ESTEEMED FRIEND:—I have used thy Hive now three years, and it gives me pleasure to say to thee that thy Hive is all thee recommend it to be, and I would cheerfully give information to its superior qualities to any one wishing to learn.

Truly thy friend, JENNY MERRIT, Milton, Wayne Co., Ind.

My Dear Mrs. Atkinson, Indianapolis, Ind.

Having recommended your Hive to many of my friends, although at present I am not in the bee business, I will still recommend it to all, and to lady bee keepers especially. Having closely observed the difference in the working of the many different hives I have had in use, would say without the least hesitation, the Queen Hive is the best for ease of management, and economy of time, the last of which I consider of great importance to bee keepers. Will call at your office in a few days, with a lady friend, who is going extensively into the bee business. Excuse this note.

From your friend, KATE BEDFORD, Indianapolis, Ind.

Mrs. T. Atkinson, Editress National Bee Journal, Indianapolis, Ind:

DEAR MADAM:—Please send me a sample of the last improved Queen Bee Hive. I have been using it for the last two years, and like it better all the time; in fact, I would not look at any other.

SAMUEL N. REPROGLE, Hagerstown, Wayne Co., Ind.

Mrs. T. Atkinson, Indianapolis, Ind:

DEAR MADAM:—The improved Queen Bee Hive arrived here in good time, right side up with care. I am really astonished at the improvement. I thought it was perfect before, but this far exceeds in simplicity. I have used it for three years, and find, aside from the ease with which we can handle our bees, it is the best for summer and wintering I have ever owned, and the name of them are legend.

With respect, J. W. KIMBERLAND, Oakland, Ind.

Mrs. T. Atkinson, Editress National Bee Journal:

DEAR MADAM:—The Queen is ahead of anything yet, notwithstanding I have some of the latest so-called improved hives of the age.

Very truly, ALBERT TALBERT, Shelbyville, Shelby Co., Ind.

SCHOFIELD, KING & Co.,—DEAR SIR:—Please send me a good Extractor, one that you can recommend. I notice in the JOURNAL you advertise the Atkinson Extractor; if it is one-half as good as the Queen Bee Hive, patented by Thos. Atkinson, send it along. I have used his Hive for three years, and think it has no equal.

GEO. W. GREEN, P. M., English Lake, Starke Co., Ind.

Thee may add my name to the list. I know it is the best Hive I have ever used, and I have kept bees for forty years.

W. A. SCHOFIELD.

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Parties desiring to Purchase Italian Queens and Colonies, will find in this Directory the names of some of the most reliable Breeders in the Country.

Cards inserted in this Directory, and copy of the paper sent one year, for \$8 per annum, cards to be four lines or less. For each additional line \$2 per annum will be charged. A line will average six words.

FROM WEST TENNESSEE.—Full Colonies of Italian Bees or Queens, Extractors, Hives and Honey for sale. S. W. COLE, Andrew Chapel, Madison county, Tenn.

ITALIAN BEES for 1873. Full Stocks \$15.00. Tested Queens, \$5.00. Liberal discount on large orders.

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BEE-KEEPERS' Send for circular describing the **BAY STATE BEE HIVE.** Also, price list of Italian Queen Bees, for 1873. Address, H. ALLEY, Wenham, Essex Co., Mass.

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We can furnish everything needed in the Apiary, such as Italian Bees and Pure Queens, Honey Extractors, Knives, New System and Champion Hives, six styles, Bee-Feeders and Ventilators, Bee-Veils, the American Bee-Keeper's Guide, 244 pages, paper cover, 50 cts.; bound, \$1.00; Wax Extractors, \$3.00; Alsike Clover Seed, Black Spanish Chickens, &c. Send for our large illustrated PAMPHLET, containing information for Bee-Keepers, FREE to all. **E. KRETCHMER,** Coburgh, Mont. Co., Iowa.

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Those wishing good early Italian Queens would do well to send for my circular.

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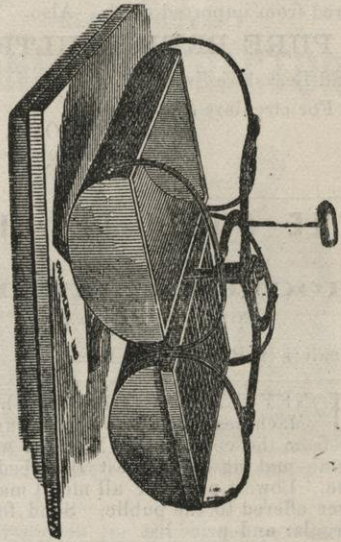
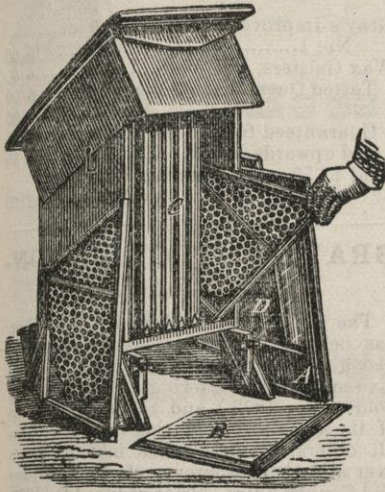
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FOR SALE, IN NICE PLAIN, MOVABLE COMB HIVES,

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ITALIAN QUEEN BEES.

I am now prepared to fill orders for a limited number of choice tested Queens, bred from imported stock. Also,

PURE BRED POULTRY,

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Reared on Kelley's Island, Ohio,

TWELVE MILES FROM NATIVE BEES.

I WOULD SAY TO MY FORMER PATRONS and others, that I have made arrangements to return to this Island, for the purpose of rearing pure and reliable Queens, and would solicit a liberal share of patronage.

My Queens will be bred from mother imported direct from Switzerland, Italy, where they are claimed to be the most uniform and bright in color.

This beautiful Island, (two by four miles in extent,) is situated twelve miles out in the Lake, opposite Sandusky City, Ohio, and as there are no black bees kept there, undoubtedly the Queens I shall rear will be as pure as though reared in Italy.

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After 5th month (May) 20th, to 9th month (September) 20th, address me at Kelley's Island, Ohio.

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Gray's Improved Honey Extractor, No. 1.....	\$16 00
Wax Geisters, complete.....	6 00
1 Tested Queen from Apiary No. 2	6 00
1 " " " " " " " 1	5 00
1 Guaranteed from either Apiary..	4 00
6 and upwards.....	3 00
50 at \$2.50 each, 1 imported Queen in June.....	12 00

GRAY'S IMPROVED HONEY EXTRACTOR.

The best geared machine in the market, has been in use for the last two seasons, and gives universal satisfaction. I could give many very flattering notices (See Bee Journal for 1872,) and recommendations of the superiority of this Extractor over all others. It has taken first premium over all others wherever shown, at State and County Fairs. Price reduced for 1873.

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This machine was imported and introduced by me, two years ago, and has proved to be just what the Bee-keepers need for rendering their refuse comb. The wax after passing through this machine, sells twenty-five per cent. higher than ordinary strained wax.

Imported and Home Italian Queens.

I shall this season have two apiaries for rearing queens, located eight miles apart, Home Apiary No. 1, stocked with those light colored Italians, and their crosses which has been the admiration of all visitors. Apiary No. 2, will contain nothing but imported queens direct from Italy, (not Italian Switzerland,) the young queens fertilized by drones from imported mothers. I shall make a specialty of importing queens this season direct from the best apiaries in Italy. For further particulars address with stamp.

A. GRAY, APIARIAN,
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HONEY EXTRACTORS.

We will supply Extractors to any person purchasing four at one time, for six dollars each. Farmers clubbing for the Extractor will thus save, on the four purchased, eight dollars. Address,

NATIONAL BEE JOURNAL,
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Italian Bees,

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Of all the leading varieties of Pure Bred Poultry.

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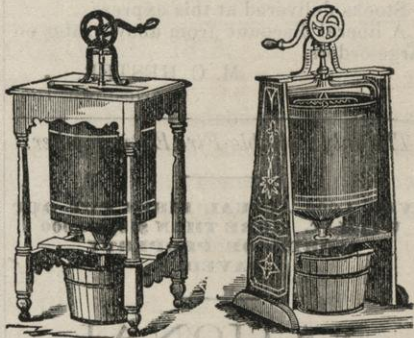
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Manufactured for the Patentee, under Letters Patent Granted January 7th, 1873.

For Extracting Pure Honey from old or new Combs, without breaking or injuring them, which are afterwards returned to the Hive, to be again refilled by the Bees.

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My facilities for manufacturing and furnishing Apian Supplies, for all kinds, are much increased for the coming season, and I will be able to fill all orders with promptness and despatch.

For the Geared Rotary Honey Extractors (Improved and patented for 1873). Wax Extractors, Safety Feeding Queen Cages, Frame Hives made complete, or cut ready for nailing, Glass Honey Boxes, Honey Knives, Bee Vells, Rubber Gloves, Bee Feeders, one, two and three pound Honey Jars, Corks, Foil Caps, and illustrated Gift Labels, to suit.

Pure Italian Queens, Imported and home bred, also, pure Queens, bred in Kelley's Island, in Lake Erie, 12 miles from bees on main land, from *Imported Mothers*. Aisike and white Clover-seed. Saccharometers, Atomizers, Copper-faced Bee Cuts, Bee books and Journals, also, Wood Cuts of Hives, etc., made to order.

For further information please send stamp for my 16 page Illustrated Circular, and *Apian Supply Price List*, and address all orders to

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After the first of June I will fill orders at the following rates:

Pure Queens, tested in my apiary, \$5.00
Full stocks in single chamber, Langstroth Hives, \$15.00.

Queens sent by mail, post paid. Purity and safe arrival guaranteed.

Stocks delivered at this express.

A liberal discount from above rates on large orders.

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