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Moon's bee world : a guide to bee-keepers. Vol 1, No 12 December, 1873

Rome, Georgia: A. F. Moon and Company, December, 1873

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MOON'S BEE WORLD,

— A GUIDE TO —

BEE-KEEPERS.

VOLUME I.

NOVEMBER 1874.

NUMBER 12.

CORRESPONDENCE.

REVIEW.

BY JEWELL DAVIS.

MR. EDITOR:—My friend, S. D. McLean, in his "Sketches from Tennessee," urges the necessity of a suspension frame, as the Standard Frame, since that kind of frame is more generally used than any other, and since, again, the people err by running to extremes. He chooses the medium ground for the size of the Standard Frame—say 15x10 inches, exactly, outside measure. This, he says, is suggested as a compromise for the Standard Frame. Think of it, bee-keepers. He says he is situated so far South as not to require the labor of housing his bees in winter; that is quite a desideratum. His locality is also favored with a great variety of honey plants, another great advantage in bee keeping. And he thinks Tennessee should claim the promise made to ancient Israel of

a "land flowing with milk and honey," and that it should be worthy of a place in the minds of all wishing to engage in bee culture. Everywhere, both North and South, apiarians will consider the matter.

My old friend Kellogg, commends the view of Rambo relative to "all correspondence about bees," that it ought to appear in the bee journals, with but few exceptions. Well, this may all be right, provided, always, if the correspondent gives his postoffice address. I am like friend Argo, I want to know where my correspondent lives. I may suggest, for the benefit of Mr. Kellogg, that Connoisseur lives in Maryland. Mr. Kellogg says many report the honey harvest as past in their localities, but says his case is different—being in the midst of a splendid harvest—we want to know when that was? There it is now, Mr. Kellogg prefers a square frame in the place of the 15x10 inch mentioned by McLean. Study his reasons for choosing a square frame, and note if his experience is like yours.

He argues the preference of extractors over that of honey boxes for surplus honey. Well, friend Kellogg, we are happy to learn that your old hat reached terra "firma again," notwithstanding you say it must go higher than ever in honor of the buckwheat honey harvest and the extractor. For mercy's sake do not excite us "novices" so about the kettles, tubs and pails full of honey that is running down from Oneida, Ill. Surely that is a land flowing with milk and honey, equal to McLean's central valley of Tennessee.

Yes, wake up the farmers to their interest in buckwheat, both for the reneering of their land, and for bread and honey. Hold on, friend Kellogg,—don't begin to praise the black and hybrid bees, as better to handle than the Italians, or you will ruin the Italian queen breeder's business. Hold, don't be so free with your experience—the Italians are our pets.

I will answer my friend Rush, that we have always advised feeding the bees during every dearth of honey, but with us we never found it necessary to feed during a plenteous honey harvest, even if transferring; and we should never transfer during a scarcity of honey, without feeding liberally.

My experience concerning the loss of queens by moths is very limited, since the moths never gave me any annoyance in that direction, if I used full colonies for the purpose of raising them; but perhaps his location is more infested with moths, or his bees do not protect their combs as well as ours do. I must confess that it is not necessary for Dr. Davis to guess why Dr. Rush's bees robbed each other. They are naturally acquisitive, and will add to their already ample stores whenever

they have an opportunity, and will do the work on a large scale if not prevented, hence never let them pass from under your guard when they first begin to fly in spring, or after the forage fails in autumn. No, friend Rush, I am not disposed to contradict your position that more honey is obtained in boxes partly or wholly filled with empty combs; and particularly is this true if the entrances to the boxes are large. Of course you have the right to locate where there is an abundance of the best bee pasturage. But if you have good fresh land where you are, perhaps you can better cultivate pasturage for your bees than to move elsewhere.

Will Dr. Rush inform us who his Bee Guides were that led him into such failures? Hurrah for the Bee Journals, if they are better Bee Guides than those which led him astray.

Dr. Rush wants more evidence that 11x13 inches is not the proper size for the standard comb frame. Who will give it? I have not always found that wet weeds or wet grass and the contracted entrance were sufficient to prevent robbing, but often am compelled to stop the entrance entirely and move the colony away where the robbers cannot find it.

Friend Stone has finally given his chapter on the use of Buckwheat, both as a honey plant and a fertilizer of the soil. Every farmer and bee keeper ought to receive his remarks into their supervision and practice what friend Stone advocates, as we know they will if they seek their own interests.

Read Sherendon's defense for not cropping his queen's wings. He may open your eyes to see clearly. Friend Knight calls in question Mr. Dadant's conclusion about honey dews. Per-

haps Dadant can defend his point.— We shall see.

Well, if Dr. Davis would like ever so much to have Connoisseur change his name, it seems the Doctor will not be gratified, because his present cognomen means "an expert," and of course if he wishes to live and die an expert, he will wear that name while he lives an apiarian life; but he owns that his expertness has already brought him into notice by Mr. Nesbit, and to look upon Mr. Argo with a jealous eye, for fear of getting a "hit." It leads him to lock horns with Harry Goodlander on the revolving can extractors. Yes, we that are not so great experts can tell how to keep the robbers away while extracting honey. Take one half barrel of good sugar syrup and put it into one of J. S. Harbison's big trough feeders, one half mile away from the apiary, and let the bees all get fairly to work carrying the syrup home, then begin to use your extractor in a tight room where the bees cannot find you, and you are safe from robbers.

If you wish to invest in patent hives it may pay you to read Fletcher's remarks on that subject, and you will notice that he makes one point stand out very plainly, which, with all, is quite important. But while you are looking over friend Fletcher's article to find the point he made so clear, do not forget to look at Uncle Harry Goodlander's article upon the same subject. If you want to know how to introduce fertile queens, read Frank Benton's article, telling that it is "more the method than luck," for safety.

Next, we find friend Argo reviewing Mr. Nesbit on the purity of Italian bees, and their pure fertilization, and finally approving his remarks upon the brushing process, and patent hives.

Then we find Mr. Bryant also taking

exceptions to Dadant's origin of honey dews. We look for Dadant to maintain his position.

Who can answer "P. L. V." about their claims to patent hives? He further wants to know if the hive he makes and uses is covered with patent claims. Who can tell? He will find the spacing supporters invented by Dr. Davis a better arrangement than his U shaped wire spaces are. I have also grown weary of nails to space the frames below, as they are always in the way. You choose 12x10 inch frames for the Standard, because you can handle them better.

I prefer that Mr. Chas. Dadant and Dr. Brown figure out which is right about the home of the Italian bee. Friend Young, with a discouraging prospect before him, does not give up the apiary, but is trying to succeed. Success attend him.

Rivera informs us how to cure bee stings. Let those that are suffering try it.

Dr. Brown thinks the long, or "new idea" hive will give us one third more honey than the double story hive, because the "new idea" hive gives more room for the queen to display her powers in laying eggs, and gives the colony less disposition to swarm, and is inconvenient to handle. He then tells us how to manage such a hive in early spring, which is one of the important points in the use of such hives. The Dr. prefers the Langstroth frame as the Standard for the sunny South. Yes, Dr., be plain and tell them to their face why they lose so many bees by robbing, transferring, moths, desertion of their hives and artificial swarming. Can they show that they were always vigilant, watchful, and never careless?

Charleston, Ill., October.

MORE BROKEN PIECES—HONEY DEW, ETC.

BY KINCHIN RAMBO.

MR. EDITOR: I see that my "Broken Pieces" published in your September number have come under review by the Doctor. And I may feel very comfortable that they have fallen into such good hands, and been so tenderly handled. The Doctor asks me "why not feed at once?" What! feed bees in August! No sir, that will never do for me. I can barely afford to feed my two swarms that were transferred late in July. The best I can do for the balance is to promise them a little buckwheat pasturage next summer and fall. Let it be understood, once for all, that I am not raising bees or honey for market. Neither do I expect to benefit the regular bee raiser by anything that I could write. But my intention is to keep ten or a dozen stands of bees, so as to save three or four hundred pounds of honey, which would otherwise be lost around my farm every year; and also to induce my brother farmers generally to subscribe for the BEE WORLD, and do like wise.

As to artificial swarming, I expect to commence noticing my bees very closely about the 10th of April, and when I see them lying out pretty heavily about the mouth of the hive, I shall examine frames for a queen cell capped over, and if I find one, I shall take that frame and one more from that hive, and put them and two more from another hive into a new hive, filling it up with four more empty frames; also putting empty frames where the full ones come from. How will that do, Doctor? I can also somewhat restrain the propensity for swarming by giving

them plenty of store room, which I can do by a box on top, or by cutting honey out of the frames; or both, if necessary, as my frames are eighteen inches deep, with two cross bars. And I may take a notion to destroy young queens, if nothing else will do. Yet, after all, they may steal a march on me once in a while; but I am satisfied my plan will mainly, if not entirely, prevent natural swarming.

The Doctor's caution about using saltpetre was doubtless prompted by his kind feelings, and should be received as such. But I have never apprehended the least danger whatever, when using it in the manner stated in my article, vs. dipping about one-fourth of my rags in a weak solution; and since that time I have increased the strength of the solution, and yet fear no danger with a smoker, ventilated as smokers usually are. I sometimes add a little rotten, dry pine wood. It makes an excellent smoke. I can do wonders with it. But I am too much afflicted to write more at this time. Honey dew, and a cat's tail in my next.

Floyd Co., Ga., October.

THE ITALIAN BEE.

BY DR. J. P. H. BROWN.

MR. EDITOR: In the last number of the BEE WORLD I see an article on "The Native Land of the Italian Bee," by Mr. Ch. Dadant, in which he has taken the liberty to quote from a business letter of mine, written to the firm of Dadant & Son.

In the first place I wish the reader to bear especially in mind that I am not interested in the sale of imported queens. In order to get the best I have spent much money and time, and while I have obtained many fine and

reliable ones, I have often received others whose progeny did not all show the three bands, and were perfectly worthless for breeding purposes. These difficulties led me to make many inquiries and more investments, and to extend my observations and experiments. The result was embraced in my letter to Messrs. Dadant—that the bees of Italy were not all pure Italians, particularly in the southern portion and along the Adriatic sea; that, in my judgment, the finest type of the Ligurian bee was found in the northern portion, particularly in the Rhetian Alps.

While I do not seek a discussion of this question, I desire truth and facts; for it is a subject in which many beekeepers, besides myself, are interested.

As space forbids my making any quotations from Mr. D's article referred to, the reader will refer to it. The substance of it is: "The true Italian exists in all its purity from the Alps to the southern point of Italy."

To prove this sweeping assertion, he speaks of his travels in that country, his experience in purchasing queens from different places, and quotes several authorities to sustain him. Unfortunately, one of his authors, Mr. Mona, is very much interested in the sale of queens, and it may be his vision is not so clear.

In the Summer of 1872, (see Bee-Keeper's Journal and N. A., Vol. XII, page 60), Mr. Dadant was employed and sent by the Italian Bee Co. to Italy to buy queens; and while there he wrote letters to the different bee journals published in this country. In his letter dated, Milan, Italy, August 8, 1872, (see Vol. 8, page 86, American Bee Journal), he says: "I saw the bees of Palanza, of Bellinzona, of Co-

mo. I could have bought some at Bellinzona, but neither the bees nor queens pleased me. The queens that I saw had some black wings instead of leather color that we like even when it is dark. One of the queens that was shown to me was so dark that she seemed to be exactly similar to a black queen. Sartori says that there is some black blood mixed with the Italians on the frontiers of Italy." Again he writes: "Lombardy is, so far, the country where I saw the nicest and mildest bees. * * * I saw the bees of Varese; they are no better than those of Mona of Bellinzona. The keeper of the royal palace, who was born and raised in Turin, says the bees of Piedmont are blacker and crosser than those of Milan. Count Castalani, who is from the vicinity of Naples told me also that the bees of Milan were more yellow than those of the southern part of Italy. * * * I am now wondering why Mona wrote in an article (the reader will please observe that this is the article Mr. D. quotes to disprove my position. Comment is unnecessary.) in *Le Journal Des Fermes* that all the bees of the Italian peninsula were pure Italians, *when he ought to have known that there were such enormous differences in their color and character.*"

What motive prompts Mr. D. to declare now, in the face of what he saw and wrote in 1872, that all the bees in Italy, from the Alps to its extreme point, are pure Italians, is difficult to conceive.

In the summer of 1871 Mr. H. A. King made a trip to Italy, and among the apiaries he visited was that of Maj. Hruska. This is located near the Adriatic. Here he saw several hives of bees that he pronounced impure.

Hruska made the remark that they might be impure, as he purchased them from other parties. This remark, no doubt, was made with a knowledge that there were impure bees in the neighborhood.

Mr. W. Carr, an English gentleman, and an apiarian writer of ability, who has spent hundreds of pounds sterling in procuring queens in Italy, and who has, no doubt, one of the purest and finest stocks of Ligurians in England, thus writes when speaking of the bees of the Rhetian Alps: "The farther we go down into Italy, they merge into black bees again." This gentleman is no dealer in queens—has none for sale—has no mercenary interest nor object to misrepresent facts.

During the years 1863 and '64 I traveled in Europe, myself, and while both in England and on the Continent, I came in contact with many intelligent bee-keepers who were as fully posted in regard to the bees of Italy as Mr. D., and I heard but one opinion, and that was that the bees in Italy were not uniformly marked, nor the same in color—some were black.

Virgil, who wrote more than two thousand years ago, speaks of two varieties of bees—one "ugly," while the other looked like gold.

In Mr. D.'s concluding letter (A. B. J., VIII, page 231), he observes: "My travels in Tessin, Upper Italy, Piedmont and Lombardy permit me to form an opinion on the origin of the Italian bee. To my judgment this race did not originate from a cross between the black and Egyptian bee, but is the result of the improvement of the common race by the climate and natural selection. * * *

The mildness of the climate of this part of Europe has necessarily had,

during a long period of time, an influence on the black race by perfecting it. The inhabitants could not help noticing this change, and comparing this new race with the other. And the authors having praised the new race, it is naturally probable that every bee-keeper preserved from brimstone the quietest and brightest bees."

If the Italians originated from black bees in Italy by climate and selection, it is also "naturally probable" that there is black blood there yet.

To sum up: The true Italian does not "exist in all its purity from the Alps to the southern point of Italy." Mr. D. fancies the bees in the plains of Lombardy; others admire the bees in the Rhetian Alps. The Rhetian Alps and the Lombardian province are contiguous, and it is in this upper portion of Italy that they seem to be the finest. As you descend down the peninsula the bees become blacker.

Many queen breeders in Italy do not rear all their queens, but go into the country and purchase them of the peasantry, without much regard to selection. We can easily understand why the progeny of some imported queens differ so much in appearance. The progeny of some may have the dorsal bands very prominently marked, while in that of others the markings are more or less imperfect. And according to Mr. D. even if a black worker should occasionally be found it is no sign of impurity. (See Mr. D.'s reply to a correspondent in A. B. J., Vol. X, page 61.)

As the bees in Italy differ so very materially in different localities in corporeal markings, and even in physical nature it is impossible, in a scientific sense, to apply, consistently, the term Italian indiscriminately to the bees of

that country; for there are bees there that fail to come up in physical characteristics to the standard of a special variety of bee, which is only found in certain sections of that country. Hence the term Italian is a misnomer, and calculated to deceive. The use of the term Ligurian may also be improper for the same reason; but as other names have been given to the part of Italy formerly termed Liguria, and as this is no longer found in our modern geographies, I see less objection to the use of Ligurian than Italian. Mr. D. says Capt. Baldenstein was the first to apply the term Ligurian to this variety of bees; in this I think he is mistaken, as he will see by reference to Mr. Langstroth's book on the Honey Bee, page 318, where Mr. L. says in a footnote: "The Rev. E. W. Gilmer of Bangor, Maine, has directed my attention to Spinola's '*Insectorum Liguriæ species novæ aut ratios*,' from which it appears that Spinola described all the peculiarities of this bee, which he found in Piedmont in 1805. He fully identified it with the bee described by Aristotle, and called it the Ligurian Bee, a name now very generally adopted in Europe."

Capt. Baldenstein simply introduced this bee into his apiary in 1843, and called public attention to it through the *Bienenzeitung* in 1848.

The above is offered with no desire to detract from the merits of the Ligurian bee—these are too well known and established. What is wanted, is, the greatest care in making importations, and in the selection of queens for breeding. Experiment and trial will govern this for a long while yet. But with a careful selection and a knowledge well directed, I think it is possible to bring the Ligurians in the

South up to a very high degree of perfection. In many sections of our country the climate resembles the Italian, and if climate and selection have wrought such wonderful changes in the common black bee of Italy, we can expect great results here.

It is my intention, if time will permit, to follow this subject up in future numbers of the BEE WORLD.

Augusta, Ga., October.

CHIPS FROM SWEET HOME.

BY D. D. PALMER.

This season with us has hardly been up to the average. White clover did not bloom but little and that afforded no honey. Basswood gave an average yield. Elbow brush done better than usual, and of the Mississippi autumn flowers our bees done fine for two weeks then heavy rains and cool nights cut that short a month sooner than usual. The above are our main sources for honey. Bees commenced to gather honey early, and up to the close of the season they had three days lost time. From 95 hives we had 35 to commence with in the spring, increased them to 100 hives and procured 3,000 pounds of slung honey and 600 pounds of box honey—3,600 pounds in all.

We divided our hives in the spring for surplus, expecting one-third box honey and two-thirds slung honey, boxes were well supplied with comb guides, and the slinging hives were well supplied with two set of combs, but we received, as seen by the above, only one-sixth in boxes and five-sixths in slung honey. For the last four years we have been increasing our slung honey and diminishing the comb honey. So far we have found our sup-

ply of slung honey gone first. In getting box honey there are some objections, getting bees out of them, and many boxes are nearly or partly filled and have that much honey left on hand till another season. Some bee-keepers use these pieces or partly filled boxes for home use, as comb costs us fully double that of the honey it contains, or in other words a pound of honey and comb, selling for 30 cents, costs us 20 cents for comb and 10 cents for the honey. It is extravagant to eat comb filled with honey and very wasteful to use partly filled boxes.

A few days since a friend in town wishing some honey asked us our prices, to which we answered, 20 cents nett or 25 cents gross, i. e. box, glass, comb and honey. He took a 16 pound box, and since told us it was good except some old comb (guide pieces) and that he sliced down and let the honey run out, which made it all right. Then, said I, you had slung honey of that, but the comb looks nice, etc. Those who go on fine looks will have to pay for it. I had sold the druggist, just mentioned, some cakes of bees-wax weighing once ounce each, with a piece of ribbon put in while warm, at 50 cents per doz. or 60 cents a pound for wax. A stranger, standing by, said that he made his own wax. I asked where he lived, how many hives, how his bees had done and what kind of bees he had. He said about forty hives, had not done very well, did not know how much, had not had much time to look at them, some were Italians, the pure ones had one band of yellow about them, the blacks would beat the Italians every time, the Italians were awful cross, etc. It will be needless to add that he was not posted, and did not take a bee journal.

Give queens plenty of room to lay. We had one this summer fill with brood nineteen Langstroth frames. Bees usually fill too much of their brood space with honey when storing in boxes, as they will store honey more readily in combs already made, and when cool they cannot build comb. To give the queen plenty of room keep the honey slung out and much more brood will be raised, and the golden rule of bee keeping complied with, viz: keep your hives strong if you wish surplus honey. Raise all the brood you can and the honey will come.

SENDING QUEENS BY MAIL AND EXPRESS.

We have always sent our queens by mail and expect to do so as long as Uncle Sam will allow us. As for safety, I find but little difference. By mail we can send to any postoffice, and by express parties in the country have to be notified by mail of their arrival. By express it is much the slowest, and costs much more. I paid \$1.40 expressage on a queen from D. A. Pike, Smithsburg, Md.; the cage was the poorest we have seen, and the honey was in new comb which was broken, and lying loose in the box, only the queen and three of the workers were alive. The queen was of a peculiar color, and the largest we have received. Getting her late we can say nothing of her qualities.

I will describe the box I use and the mode of putting up queens: I make of light wood (basswood or pine). The two end pieces are 1 inch wide, $2\frac{1}{4}$ long, and $\frac{1}{4}$ thick. The two side pieces are $\frac{3}{8}$ of an inch wide, 3 long, and $\frac{1}{8}$ thick. The top and bottom are $2\frac{1}{4}$ inches wide, 3 long and $\frac{1}{8}$ thick. We use cigar-box nails, nail the two sides on the ends and then the bottom. In the top put one nail in the

middle of one end which allows it to swing open. Cut from an old comb a piece of sealed honey 1 inch by $2\frac{1}{4}$, cut off the cells on one side near the base, lay it where the bees can clean off all the loose honey and no more, then place it in the box having the capped cells towards the inside of the box; then put two nails through the box in the comb to prevent its moving. Take the queen by the wings and slip her in, the cover being swung open a little; then put in fifteen or twenty worker bees from the same hive and nail. Put on the sides the address with a lead pencil, and a two cent stamp on the end, and drop in the post office and Uncle Sam will deliver it. The sides of the box being $\frac{7}{8}$ in. gives four small cracks for air.

Millers have troubled my hives but little this summer, for I, as well as R. M. Argo, have two fowls which make daily trips among the hives picking all millers, worms, roaches, drones and immature bees, but never a live worker. They look at the latter, but pass them as much as to say, I know you.

Eliza, Ill., October.

DESCRIPTION OF A NON-PATENTED HIVE—ARTIFICIAL HONEY—HONEY DEW.

BY P. L. V.

Allow me to correct one or two errors made by the printer in the description of the hive I use, on page 343: Line 11, instead of "I add," it should be "I cut;" line 27 instead of "under shade trees," it should be "shades built expressly for the hives to stand under;" line 31 instead of " $\frac{1}{8}$ of an inch;" it should be " $1\frac{1}{8}$ of an inch," etc. In sending you the description of my

hive I omitted to send the following, which you may publish if you think it may benefit some of your readers:

I use also section honey boxes without bottom, so that when placed together on the hive there is direct communication. I make my sections by nailing a top piece $7\frac{1}{2}$ inches long on two side pieces 6 inches long, all $1\frac{1}{2}$ inches wide and $\frac{1}{2}$ inch thick; and use a wooden comb guide. I place two rows of twelve of these sections on the hive, which rest on the side boards of the hive and in the middle on a strip one inch wide and $\frac{3}{8}$ of an inch thick, which lay on the brood frames. I shut the two ends of these section honey boxes with two boards, one inch thick, projecting $\frac{3}{4}$ of an inch on top and sides and the bottom resting on the two end boards of brood chamber. To hold these two boards in their place and to keep the sections tight together, I make corresponding notches in the boards to insert spring wires, by which means all the sections can be taken out together to examine brood chamber.

I have noticed the same odor as Mr. Murray in my hives from September to October the 12th. or 15th. I attributed it from the pollen gathered during that period by the bees on the flowers which belong to the large family, "Compositæ."

I have read in the Pharm. Journal, London, Dec., 1870: "Tinted honey, of great beauty and delicacy, has been produced. The comb is virgin, the wax almost white, the honey limpid, pure, and of the color of pale red currant jelly. The secret of its production is not revealed, except that it is the result of artificial feeding." Does any body know anything about this honey? I shall try some experiments

next season and shall report.

Since I have been keeping bees I never saw honey so abundant as it is since about the 15th of September, and now, 23d of October, the bees are hard at work storing an immense quantity of very fine white honey, which they gather on a white flower growing all over the fields here, which belongs to the *Compositæ* family, and I think it is a kind of centaury.

For the benefit of Mr. Knight I will give an extract from Mr. Vilmorin: He says that the name of Honey Dew is given to a viscous and sweet matter which most generally covers the superior surface of leaves and gives them a brilliant, varnished aspect. It is generally seen in the middle of spring, and in the summer. The trees which are the oftener covered with it are the *Tilea*, the *Salix Caprœa*, the Orange, the Lemon and great numbers of herbaceous plants.

Many chapters have been written on Honey Dew, though with its cause under the eyes, the explanation of it has been searched on the vitality of plants, and the atmospheric variations, which are entirely strangers to it. The Honey Dew is the accumulation of the juice the aphids eject by the two horns which are on the posterior part of their abdomen. The superior surface of the leaves are generally covered with it, because these insects always keep themselves on the inferior surface of the leaves and their ejections naturally fall on the surface of the leaves situated immediately under it. By the same reason, if there is any plants under a tree covered with the aphids, their leaves will be covered with Honey Dew, etc.,

Bayou Goula, La., October.

CHEAP QUEENS.

BY R. M. ARGO.

On page 336 of last number of BEE WORLD I gave my views of cheap, or dollar queens. I find in same number, page 329, Connoisseur says: "We do not see any difference between a one dollar queen and a five dollar queen." There is no difference, if the queen met a pure drone and came from an honest breeder. He then says: "No honest man will risk his reputation for one dollar." Thus far he agrees with me that the one dollar queen business won't do because some men are dishonest, and a dishonest man could take advantage of it.

But he says: "If we were raising queens for sale we would not only raise them for one dollar, but would test them before selling them. It only takes a little longer, and does not cost any more, and it will pay to sell tested queens at that price." Here is where we differ. I can raise three untested queens in the same hive in the same time it takes to rear one tested one, by sending them off as soon as laying, which is the dollar queen rule. As to selling them at one dollar, I would say to him that if he will try it next season, he will find it a losing business, unless he is in a location where there are no black or hybrid bees within three miles of him, and the season a good one, and his stocks all strong very early in spring. In this fix he would about pay expenses.

But he also says there is less trouble in getting queens fertilized right than a great many think. That he Italianized his whole apiary when there were thousands of black drones flying, and only had two fertilized by black drones.

"In fact, we never had but those two hybrid queens." Why! Why, this beats all the most noted and prominent bee men who ever went before him. Does the secret rest with Connoisseur? Has he discovered the true secret of fertilization in confinement? He merely says, "If they are managed right they do not often fail to be fertilized right." Why don't he tell us how to manage right? What else is the use of writing for this journal, but to give all the instruction we know, how to manage bees right? If Connoisseur has had such astonishing success where thousands of black drones were flying, in Italianizing a whole apiary, and only had two queens to meet black drones, then he is certainly far above us all. For not one of us, including Langstroth, Quinby, Moon, Tupper, Nesbit and others, ever had such astonishing success. Now, Connoisseur, will you not tell us, in the next number the BEE WORLD, how you manage to accomplish such success? Until then you will find us a pack of Doubting Thomases. Friend Nesbit, on page 305, September number, after having told us his very best mode of management, so as to secure the pure fertilization of his queens, says: "I cannot get more than one out of twenty purely fertilized, and I permit none but Italian drones in my own apiary." I have seen friend Nesbit's location and apiary, and I do not believe there are thousands of black drones around him flying, though it may have been so when he wrote. We have had considerable better success at different times, though not more than about one-tenth as good as our friend Connoisseur.

We think Connoisseur lives somewhere South, where he can have test-

ed queens ready in April that we have here in June. So he can set our name down for ten purely tested Italian queens, to be sent by mail, April 14, at one dollar each, that is ten dollars; and I will guarantee that friend Nesbit, Davis, Hester, Fletcher, and a great many others will take the same number at same price and time. So, if you will try your hand at raising purely tested queens at one dollar each, you cannot raise as fast as you can sell. After you make the attempt to rear tested queens at one dollar, you will find that your scribbling on one dollar tested queens was all moonshine.

QUEEN SHIPPING CAGES.

As there is considerable difference of opinion among bee men as to the best cage to ship queens either by mail or express, I think it would be of much benefit to the readers of the WORLD for those who have been in the business several years, to give their experience with shipping cages. We all agree that the cage should be as light as possible to save cost, especially by mail. Many a queen has been killed or fatally injured by careless postmasters pouring out the mail on the floor. A light box would not jar so hard as a heavy one. The lightest box I know of is that made by H. Ally, and I am told that he and a few others are entirely successful with it. The honey in the sponge being in contact with the bees, if there is too much they are apt to get daubed and so destroyed; and if there is too little they starve. The cage of the late Dr. Hamlin to protect the sponge from daubing the bees by wire cloth, is the best I ever used, as it admits of putting in plenty of feed and bees. I have also had very good success with

that of Adam Grimm, which is to fasten a piece of old comb with honey in it. But there are objections to this: the honey sometimes runs out and soils the mail matter. In using the latter we should be particular to fasten the comb secure, so it cannot break loose. I received a queen by mail over five hundred miles last August, in one of these, and not a dead bee. I shipped a queen in the same box ninety miles without changing the comb, and it broke loose and run out and killed the queen and all the bees. In sending by express I can put up half a dozen queens this way, in a box lighter than one queen was sent in six years ago, and perfectly safe, for I have had much better success by express. I never consider a queen safe by mail with less than twenty bees, and we have to exercise our own judgment as to the quantity of feed for that number, with regard to the distance they are to go. For this reason I can not make Alley's small cages suit me.

Lowell, Ky., October.

BEE ITEMS FROM ARKANSAS.

BY M. PARSE.

EDITOR WORLD: Thinking it might be interesting to some of your readers to know how bees have done in this locality, thought I would drop you a few lines to that effect. Bees wintered well on summer stands, and began carrying in natural pollen in the early part of January, but we had a cold, wet spring, rained nearly every day up to the last of April, which caused considerable loss, where there was a deficiency of stores and feeding was not attended to. I fed regular once a week and came through without the loss of a single colony. At the close of the

rainy season our fruit trees were done blooming, since then it has been too dry most of the time, we having only had one rain. The latter part of April and early part of May bees did well; but during this long drouth they stored but little surplus, (its a wonder they stored any), which was from cotton blooms and wild flowers that stood the drouth, while nearly everything else dried up. On the uplands forest trees died beneath the scorching rays of the sun.

The average increase of bees this season by natural swarming, has been about forty per cent, and my increase has been a little over 100 per cent, mostly by artificial swarming, which I prefer for several reasons, which have heretofore been given in the WORLD.

There has been a great deal said about a standard hive and a standard frame. Everybody wants to know what style of hive and size frame everybody else is using, and there seems to be a great diversity of opinion in regard to hives as houses, and I doubt the adoption of a standard hive. I am using several kinds; the Barber, Davis and others. Dr. Jewell Davis, of Charleston, Ill., sent me a hive last spring well made and painted, containing eight frames in brood chamber, 17 inches long by 13 $\frac{1}{4}$ deep, outside measure, with metal corners resting on metal rabbets, with spacing, which keeps the frames the desired distance apart, (by the way, Bro. Brown, this is just what you want), as either frames or boxes can be used on top. I prefer the former, which they fill much sooner than boxes, and the eight frames on top hold about fifty pounds of honey, and I have no trouble getting my bees to work in them, while I do in boxes. I am also using a one-story

hive 18x12 inches deep, with same frame; but this is too much room for some queens, while it is not enough for others. I notice that the bees in their anxiety to store honey above the brood frequently extend it down, cramping the queen, while there is end combs empty. These frames just fit my honey extractor, which was also made by Dr. Jewell Davis. It turns easy and runs splendid. Should you stand in need of such an article, I can cheerfully recommend the Doctor as a reliable business man and withal a clever gentleman, and is worthy the patronage of the bee-keeping fraternity in general. I am also using his queen nursery, which I find is all that is claimed for it, when used according to his instructions.

There has been more interest manifested here this season in bee-keeping than ever before, which is entirely due to the circulation of the BEE WORLD and other publications devoted to apiculture. I have frequent calls from persons who have read and heard of Italian bees, movable frame hives and honey extractors, and when shown them are perfectly astonished and delighted with the beautiful golden banded workers, their gentle disposition and the ease with which they can be handled, the frames removed from the hives, the bees brushed off, the honey extracted and the combs returned uninjured to the hive, to be again refilled. Speaking of brushing bees off the combs, I would say that I use green pine tops—try them.

I received an imported queen by express from the Italian bee company, recently, but she was dead and all the bees with her, probably by starvation. Those sending bees by express should be careful to supply them with plenty of food, as they are apt to be much longer on the way than by mail.

Pine Bluff, Arkansas.

SKETCHES FROM TENNESSEE.

BY S. D. MC'LEAN.

BEE-KEEPING.

MR. EDITOR:—Honey gathering for the season is over, and, notwithstanding the unfavorable prospect of the early spring, we congratulate ourselves upon the fact that we have made bee-keeping a success for this year; a success because we have made it self-sustaining, with a fair per cent. of profit. We live in a fine country, with flowers in almost numberless variety—many yielding honey in great profusion; yet, while the forest and fields combine in offering the tempting nectar feast for the simple act of taking, are we not stupid if we fail to recognize and accept the offered bounty, or refuse to avail ourselves of the opportunity, not only of supplying our tables with one of the richest luxuries, but, also, in neglecting one of the most lucrative of rural pursuits, considering the amount of capital invested? Although many persons are turning their thoughts bee-ward, yet, there is room for many more.

We venture to say that our own locality would amply sustain a score, rightly distributed, where there is one colony now, and that, too, without the least hindrance to the general welfare of each other. What a field is open to view, and what a prospect presents itself to the apiarian!

QUEEN REARING.

Our success this season has been varied in regard to queen raising. There is a goodly number of black bees kept in the country, which operates against us in getting queens purely mated. We are glad to say, however, that the prospect bids fair to be differ-

ent hereafter, as bee-keepers are growing more and more favorable toward the Italian bee. Having the advantage of Italian drones in our own apiary, we can succeed in getting about two-thirds of our queens purely fertilized. And he who can succeed in getting queens purely mated to Italianize a whole apiary (unless very diminutive), with scarcely an exception, and that, too, when there are thousands of black drones to contend with, is truly an expert, in the proper acceptance of the term.

Culleoka, Tenn., October.

CHIPS FROM SWEET HOME.

BY D. D. PALMER.

It is a good sign, to see, in any yard, a few, or many hives, well stocked with bees, and the ground covered with clean, or nice short grass. But it is a bad omen to see hives stuck away in some corner, almost hid by weeds and other rubbish. The owner of the former takes pleasure in his home, and has something to look at during his leisure hours, instead of being at the beer saloon. The former owner is usually found at home, with a cheerful family. If you wish to stop over night, you will find the house clean and tidy, and your evening will be well spent and instructive. Always look for a few bee hives, kept in good condition, and fully in sight; and there, my friend, you will find a SWEET HOME.

Eliza, Ill., October.

One of the largest honey raisers in the world is Adam Grimm of Jefferson, Wis. His crop for this year was 25,919 lbs., and his apiary consists of 1,158 Colonies.

SCRAPS FROM ILLINOIS.

BY W. M. KELLOGG.

TO MAKE FRAMES HANG TRUE.

Friend "P. L. V." says he uses "bent wires in the shape of a reverse U, to prevent the frames from oscillating together," and "so they will keep the regular $\frac{3}{8}$ inch space on the rabbeted boards." Every one to his own liking, of course, but I think if "P. L. V." follows up the business for any length of time, he will vote these same bent wires, tins, nails, etc., for keeping frames apart, an intolerable nuisance. When we first began, we bought the right (?) of the American hive, tins on side of frames, comb guides in center of frame, with all the rest of the "American" tom-fooleries. But, after two or three years trial at it, (and it was a great trial to our patience), we became disgusted with the traps and threw them aside. Nothing for us but the simple Langstroth frames, if we except "Novice's" metal corners, which are a good thing. We make our hives and frames all of a thickness, that is, all of the boards of the hive are of the same thickness, and each frame is of the same thickness, length and width. Our frames are put together in a mould board made for the purpose, and must go together square, so when being in the hive they hang true if the hive is tolerably level. What would Adam Grimm do with his 1,158 colonies if he had to use tins or wires on his frames? And as to moving hives, the wires will not fill the bill so as to keep the frames apart good, unless they touch one another clear through the whole hive, and touch the sides of the hive also, which would make the frames very unhandy to take out, as each would

grind its neighbor.

If you wish to move hives, I think the best device for the purpose is one I saw used by Adam Grimm. It is a stick about an inch square, with notches cut in it to correspond with size of bottom of frame, which is tacked to the bottom of the hive, and the frames set into them. Then fasten the frames at the top with brad-awl and brads. This would make a little more trouble in moving, but, on the other hand, does away with having the hive filled up with wires and nails. Friend "P. L. V.," your head is level about using a guage or mitre-box to saw stuff in. We do not have the circular saw as yet to do it with, but in sawing by hand it saves a vast deal of time.

CRITIC.

No Sir-ee, friend Davis, I didn't say "me" for critic, but YOURSELF combined with reviewer. Now, do you understand? And as to the honey running a foot deep in the yard, why—but that comes under the head of

REPORT.

Well, in the spring—'74—we had one strong stock, twenty-frame hive, and one light one. Bought four nuclei stocks, made one artificially, and now have seven good strong stocks, a good share of it taken from the one big stock. Bees began carrying in flour and meal March 20. First honey gathered April 24. Balm of Gilead, currants, goose-berries, cherries, cotton-wood, peach, etc., began blooming about May 11. Apple and dandelion bloomed May 13. Bees working hard at this time. Strawberries and pieplant in bloom May 25. White clover began May 29, and the extractor began to work at the same time. June 1st saw raspberry and blackberry in bloom, and bees going at it "full tilt." June

10, honey locust in bloom, and bees in it in a perfect roar. June 17, first swarm of black bees, and mustard in bloom. Bass wood came in about July 2, but, being very dry, they did not get as much as they should. Sweet corn came in bloom July 12, and bees worked on it freely. July 18, hearts-ease just opening, but weather very dry, and, of course, gathering very slow. Buckwheat came in bloom August 6, and from that time till it was out of bloom it was a lively time, both for bees and keeper. We have taken, in all, 330 lbs. extracted honey from our seven stocks, but nearly all of it in September, as our stocks were all too light, (but one), to do anything earlier; and then we had weeks and weeks of hot, dry weather, when the bees only got enough to keep the brood going. The stock that was very strong in the spring gave us 116½ lbs., which, at twenty cents a pound, is \$23.25, besides eight heavy frames of brood and honey, taken to build up light stocks. See what we could have done if our stocks had all been as good as that one! The box hive men all around us, with from ten to twenty stocks of bees each, have not had an ounce of honey, so I think we ought to be satisfied with our small yield, if it is a deal of a ways behind the big reports sent in.

About September 20, the harvest seemed to come to a stand-still, after giving the bees time to gather a plenty for winter. We are going to try the glass frame, or hot bed style of wintering two or three of our stocks, and a friend, six or seven the same way.

Oncida, Ill., October.

Have you subscribed for the BEE WORLD? If not, commence with the new volume.

REPORT, AND QUEEN RAISING.

BY JOHN L. DAVIS.

We commenced this season with forty-seven hives of pure Italian bees, and have obtained 2,500 lbs. of comb, and 500 of machine honey, and sixty-six new swarms and nuclei. We sold seventy queens, and several swarms, also. By the middle of September every hive, both large and small, was crowded with honey, except three or four that was hived about the 8th or 10th of September.

While trying to obviate, or avoid, the cutting of comb in queen raising, we have discovered that we can, with a pointed instrument, remove the worker larvæ from the worker cells, and introduce them into incipient queen cells, and the bees will raise them into nice queens. This we call the Davis transposition process. It can be done in any queenless colony, and in very populous ones that do not swarm when they should, which is the case with black bees, frequently.

Delhi, Mich., October.

BEE-KEEPING BY FARMERS.

There are two reasons, writes a correspondent, why farmers should keep bees: First, because their occupancy of land places them in the right localities to improve the whole honey field, and second, because their occupancy of the field entitles them to its harvests. Can it be made profitable? It would hardly be profitable to make it a principal business; as an incidental business it may afford them a large return for a very moderate outlay and trifling expense. Four hives of sufficient size, with surplus honey receptacles for four hundred lbs. of honey,

will cost, say twenty-five dollars; four swarms of bees would, at five dollars each, cost twenty dollars—making an outlay of forty-five dollars. The first year they would give, in a good field and season, one hundred and twenty-eight lbs. of surplus, more or less, according to the season, amounting at thirty cents per lb. to thirty-eight dollars and forty cents. The second season would yield five hundred lbs., or one hundred and ninety dollars—amounting in two seasons to one hundred and eighty-eight dollars and forty cents. This gives more than four times the cost in four seasons; and the average for many seasons may equal this with no additional expense save the supply of new honey-boxes annually. I gave the above figures from the results of actual experiment, having received the average given above from four hives the first and second seasons, they being the two first seasons in which I placed swarms in the Eureka hives, and the honey was so white and fine that it brought me thirty cents per pound.

Let me advise my farmer friends how to proceed in this matter. Get from one to four hives; according to your honey field and faith; take them to a bee-keeper, who will place a good first swarm in each hive; and remove them home. Or, if the seller is pleased to let them stand till fall, place boxes on them and let them stand till then. At the proper time in the fall, remove the boxes and take all home. With hives so constructed as to prevent the disposition to swarm, and the number limited to the capacity of the field, I have no doubt that they would sometimes do better than this, as I have had two hundred pounds from one hive in one season. On this plan

there is little to do but to place and remove the boxes in the proper time. If the hive is so constructed as to give ample room in the breeding and wintering apartment, feeding is unnecessary. If proper means are used to give room in the surplus boxes for all the colony the whole season, before any preparation is made for swarming and the hives are effectually shaded from the sun, no watching for swarms will be required; and no time necessarily devoted to them but to put on the surplus boxes in season, and remove them when full; and this may even be done by a neighbor accustomed to the business, if one is apprehensive of danger in performing these, or any other operations about the hive.

—[N. Y. Times.

AN IOWA PLAN OF WINTERING.

An Iowan thus tells how he winters his bees:—In the fall, when preparing bees for winter, I take off the strips from the honey-board and cover the honey-board with corn-cobs; they are pressed closely together so that no bees can escape. Place the cobs three or four double over the space where the surplus boxes were, and contract the entrance, except an inch. Put them in a cool, dry, dark cellar, and they are safe in "winter quarters." I have tacked wire over the entrance to confine the bees, but think it unnecessary, for if the light is excluded the bees will not leave the combs. We use Langstroth and American hives. Last winter we wintered forty colonies, prepared in this way, and did not lose one, and the last will be remembered, was a very severe winter on bees, many losing every colony.—[Cor. Am. Bee Journal.

PRUNING BROODS.

Pruning brood combs is generally quite unnecessary, in fact is more often injurious than otherwise. If they ever require excision, it can only be when they are so overcharged with pollen as to render breeding impossible, in which case the operation should be performed in the spring. Pruning them after the bees have swarmed and cast, is very unwise for several reasons. First, there is a possibility that during a glut of honey, the bees would build an excess of drone comb, or supposing their queen to be lost, that they would build drone comb exclusively, if any; second, that having to replace the excised comb, they would be less likely to yield a surplus in their super; and, third, there is the undoubted fact that bees winter much better in old combs than in new ones, because being coated with so much silky fibre, they are the warmer of the two, and again there is the chance that in an unfavorable season they may be unable to build any comb at all.—[British Bee Journal.

CRYSTALIZATION OF HONEY.

Action of light causes honey to crystallize. The difficulty may be obviated by keeping it in the dark, the change, it is said, being due to photographic action; and that the same agent that alters the molecular arrangement of iodide of silver on the excited collodian plate, causes the syrup honey to assume a crystalline form. It is to this action of light that scientists attribute the working of bees by night, and they are so careful to obscure the glass windows that are sometimes placed in their hives. Therefore keep honey away from the light.

RAMBLING NOTES.

BY G.

OCTOBER NO. BEE WORLD.

Mr. Davis asks if "the key-hole in my table drawer was so small that the moth miller could not gain access to the wax balls?" My recollection is that the key-hole in the drawer only went to the inside of the lock, and not through the lock, and therefore gave no access for the moth miller.

Mr. Davis also asks me "to be a little more particular, and show us how we are bringing the BEE WORLD, more particularly than the other journals and bee-keepers, into the adoption of Standard hives and frames." In speaking of the "Bee World," I did not mean the journal called the BEE WORLD, and did not suppose any one would so understand it.

And again: "Why is it impossible, if desirable? Cannot everything in that line desirable, be rendered practicable?" I answer emphatically, it cannot. There are innumerable things desirable that are not practicable, from the fact that men are created with minds and intellects of different capacities, all governed by interests and prejudices, to an extent that it is impossible for any one to divest himself of these features—they were entailed on the race by Adam's fall. Is not the creed of a minister of the Gospel known by his sermon? I have taken ministers to illustrate my idea, not for detraction. Not by any means, far from it; but to show the impossibility of one ever so pure and good a Christian, as it is possible for fallen man to be, after a life-time of strife and contention, to subdue and control his own selfishness and prejudices, however much progress his Christian faith may have enabled

him to make. We do not, nor can we all think alike. You cannot harmonize even a small number (comparatively), of the bee world (not journal), to agree on either the length, depth, shape or size of frame hives; and I say now in substance, what I said in a former article, that the adoption of a Standard hive and frame is impracticable, however desirable, from the great variety that have been invented, and the diversity of interest thereby created with bee-keepers; and that the prospect is that new inventions will continue; and we may yet get something better in hives, both as to size, shape, and greater convenience in handling bees, than anything we have at present. Something may yet be invented, better adapted for bee-culture than even the present hives. We live in an age of discoveries, inventions and progress, and you might as well try to stop the world in its progress and improvement in anything else, as in bee hives; and say thus far shall thou go, and no farther; but who will head you?

BEE FORAGE.

Mr. Davis says "the remedy for the loss of the forests for forage, is to cultivate such grains and plants as will supply a continual flow of honey the whole summer season." While I confess much may be done in this way, I doubt its being profitable to cultivate any plants or crops, solely for the harvest bees would gather from such, and should you cultivate them you still want the influence of the forests on the clouds and dews to give your plants and crops the rain and sparkling dew-drops. I am inclined to the opinion that the loss of the forest trees, were it not for the loss of the influence I have stated, would not be so great. They shaded

the ground, kept it from evaporating to the present frequent dryness, and gathered and held the dews over the honey plants and kept them moist, or from drying so that the bees could gather honey from them during the entire honey season; and from some cause the honey season continued much longer than at present; bees then gathered honey from almost every opening flower, all the day long; not so now.

BUCKWHEAT.

This is certainly the best and most profitable forage we ever raised for bees. Still, like all other plants, some seasons bees get nothing from buckwheat, from various causes; the season may be too wet, or too dry; may have no dews; may be too cold for bees to go out in the early part of the day, or until all the moisture gathered during the night in the blooms has evaporated. But buckwheat cannot be cultivated profitably on lands that are not very rich and mountainous, as it is a very exhaustive crop on most other lands. From the simple fact that rain, the best fertilizer, enables the soil to produce without drawing much from it, the crops of a very dry season tells more on the soil than two or three crops of a wet season. The influence of the mountains on the clouds is so great that the crops and soil on them seldom suffer for want of rain.

I recollect a remark of a farmer once to a neighbor, that he had a field pestered with a very objectionable weed, and he was sowing buckwheat to kill it. His neighbor replied, that it would kill the weeds and ground, too, so effectually that it would neither grow weeds nor anything else.

BEE MOTH WORSE IN FRAME HIVES THAN BOX.

I cannot agree with Mr. Davis that

the frame hives require no more attention to keep them clear of bee moths than box hives. There is no place in the box hive not occupied by comb, that the bees are not necessarily constantly passing over. While it is true they can pass between the frames of the frame hive, yet it is not so often they do so; and I have seldom ever opened a frame hive that I did not find some moth behind or on top of the frames. Mr. Davis must know there are many more places for the bee moths to secrete themselves and attach their cocoons to, in the frame than box hives. Nevertheless I do not think bees are ever destroyed by the bee moth, until after some other cause has so weakened them that they fall a prey to their enemy. But frequently, after they become so weak, that if left to take care of themselves the moth would soon take them, when if the cause of their weakness is discovered before the moth has progressed, they may be saved by assistance, and by supplying them with what is wanting, to enable them to take care of themselves. I had a swarm so much reduced last spring, and the moths had taken such complete possession of them, that I had to transfer the bees and give them all new comb, thus saving them.

Rome, Ga., October.

Mr. J. S. Harbison, of San Diego, Cal., sold \$28,000 worth of honey last year. The honey is mostly gathered from the white sage. The best honey is gathered from that growing in the mountainous districts. It is superior to our eastern honey. He had strained honey offered him, in California, at four cents per pound. It is no uncommon thing to get 160 pounds of box honey from one hive.

BEE-KEEPERS' MEETING.

The Utah Bee-Keepers' semi-annual meeting was held in the City Hall, Oct. 8th, President A. M. Musser in the chair.

Six counties, viz., Salt Lake, Davis, Utah, Juab, Iron and Tooele, were represented.

Mr. Chas. Monk, from Utah county, stated that he and his son had attended, in his own apiary, 135 stands. The average increase in honey per hive was forty pounds, valued at thirty five cents per pound. He had owned bees five years, had the moth miller or bee moth there. But no fruit in Spanish Fork wormy as yet.

Vice-president J. Morgan stated that the committee on correspondence had prepared each month an article for publication, as requested. There was a great difference between the bee moth and the codling moth. He had taken from eleven hives 460 pounds of extracted honey, and 120 pounds of capped honey in surplus honey boxes.

Geo. Bailey, of Mill Creek, reported his bees doing well and in excellent condition for wintering. He had considerable loss last winter and spring, but had replenished his stock, and had taken 1,640 lbs. of honey. He recommended those who owned bees to take a bee journal and attend to their own bees, for it was a nice study, and all could learn a lesson from the little honey bee, who was in the United Order. It was not the bees that bred the codling moth.

Mr. Samuel McKay stated that bees in his neighborhood had not done well this season.

Mr. J. Barlow, of Davis county, said that owing to ill health he had only done tolerably well with his bees, but

he could have done better. He had taken 500 lbs. of honey from thirty colonies. He recommended to sow seed for bee pasturage and to keep the bees as purely Italian as possible. He thought the business profitable.

D. Miller, of Farmington, stated that he lost several hives last spring by a cold east wind, and that indoor wintering required considerable care and a suitable dry cellar. The white or sweet clover was a good honey plant, especially for late honey.

Mr. C. Merkley gave his experience in bee-culture.

Mr. T. D. Schodder, of Juab county, stated that he wished to help his bees, and from four hives, last spring, they had increased to ten, and he had taken 205 lbs. of honey. He took a bee book and attended his own bees.

Mr. Rydalph, of Tooele county, said that the disease called foul brood had been in one of his hives last spring, and in dividing and swarming, had spread it into other hives. His bees had not done well.

Mr. I. Bullock, of Provo, gave his experience with foul brood.

Doctor Crockwell recommended a solution of carbolic acid to a gallon of water as a disinfectant for hives that had contained foul brood.

Mr. L. Root, of Iron county, stated that his bees had done well. He had taken 150 pounds of honey, and had doubled his stock.

Motioned that Chas. Monk be added to the publishing committee. Carried.

Motioned that Messrs. I. Bullock, J. Morgan, C. Monk and G. Bailey prepare an article on foul brood, for publication. Carried.

President A. M. Musser stated that in the southern settlements they accused the honey bee of sucking the

juice from the grape; but it was proved that the wasp or yellow jacket punctured and broke the skin of the grape, and the bees worked upon the broken fruit, but not upon the sound. He said that Mr. J. E. Johnson, of St. George, had done remarkably well with his bees in increasing of them. He urged it upon the members to be diligent, to learn all they could, and to make bee culture a successful branch of home industry.

Dismissed by J. S. Tanner. Adjourned sine die. GEO. WALLACE,
Secretary.

GEO. B. BAILEY, Sec. pro. tem.

BEE-KEEPING.

The following is the report of the committee on foul brood:

SALT LAKE CITY, Oct. 9, 1874.

Foul brood is a contagious disease among bees, affecting the young bees in the larvæ state before and after they are capped; they die in the cells and become putrid, emitting a stench, easily detected several feet from the hive.

On examining the frame of brood, the caps over the diseased larvæ are depressed or indented, and of a darker color than the healthy brood.

Bee-Keepers have been unable to assign a cause for this disease, neither have they found a remedy but to destroy all the comb containing brood by burying it. Comb containing honey can be put into an oven at night, when there are no bees about, and melt out the honey, which may be used in the family, but must not be fed to bees; after it is melted, let it stand until cold, when the wax and all the impurities will be found on the top, which must be taken and buried.

The hives, with the frames must not

be used for bees again, nor put where they can get at them.

We would advise all bee-keepers to examine their bees at once, and if foul brood is found they must follow the above instructions and rid the Territory of this terrible disease.

C. MONK,
G. BAILEY,

I. BULLOCK,
J. MORGAN,
Committee.

—Deseret News.

CATNIP FOR BEES.

For some years past I have been giving much attention to honey-producing plants, and am constrained to believe that the catnip plant has not received the consideration that its importance justly entitles it to. For three years past, I have been sowing the seed on waste places, in all directions, for the distance of a mile or more from my apiary, and I have never seen anything equal it. It commences to bloom here the last week in June, and lasts fully three months, giving a continuous yield from the time the white clover fails till frost.

It thrives in any part of our country; stands our continuous summer drougths better than any other plant, and never fails. Our bees are on it every moment of daylight there is, from one month's end to another; not even a smart rain will drive them from it. Notwithstanding it is now the driest time that has been known here for many years, the bees make a constant roaring over the little catnip field which I am cultivating. We shall plant more of it for cultivation next spring, or rather winter. January and February is the best time to sow it. Quinby says, "If there is any article that I would cultivate especially for honey, it would be catnip. I find nothing to surpass it."—[American Bee Journal.

IS BLACK COMB USEFUL?

Black comb, unless it be very old and choked with pollen and filth, is as useful for breeding purposes as any other. For guide combs it is better than any other, as it is tough and will not break away from its fastenings as new comb will. Care should be taken, notwithstanding, to discard all comb from which the bees of former seasons have not hatched out. Sometimes in old combs some cells may be observed from which the sealing has not been removed, some such cells may have small perforations in them, their crowns being sunken, and their contents dried up; others may still retain the remains of dead brood, but wherever these are seen the comb should be consigned to the melting pot, for there is danger that the combs are infected with foul brood.—[British Bee Journal.

A WISCONSIN BEE KEEPER.

A visit to the apiary of Mr. T. T. English, at this time of the year, is productive of about as much pleasure as anything we can now think of. The grounds surrounding his dwelling are dotted all over with hives of bees, each a community living and working within itself, with a unity and industry that may well be pointed to as an example for a higher type of intelligence. Although he devotes but a small share of his time to the management of his apiary, we believe Mr. English to be one of the most successful bee keepers in the State. He now has 165 hives (about all his limited space will permit him to keep), from each of which he receives an average of 20 pounds of as clear, pure honey as can be made. His total product this year will be at least 3,000 pounds, from which he will realize in the neighborhood of \$600.—Baraboo Republic.

NOTES AND QUERIES.

R. M. ARGO, Lowell, Ky., writes: My hives are all very full of honey.

ANNA SAUNDERS, Woodville, Miss., writes: The golden rod has been in bloom for nearly three months.

D. D. PALMER, Eliza, Ill., writes: I have tried Alsike three times, and the drought has killed it every time.

W. H. RIGGS, Russellville, Tenn., writes: I find that much contained in bee journals further North does not at all apply to our latitude, and have been led into needless expense and work thereby.

T. N. HOLLETT, Pennsville, Ohio, writes: Bees have done extremely well here this season, considering the cold, wet spring; but as I have been breeding queens this season, and kept all my force at that, I have no very heavy honey yield to report.

S. D. BARBER, Mattoon, Ill., writes: The bees in this locality did nothing until August; then forage was fair, nothing extra. Most of the new swarms came off in September, but many of them filled their hives. The fall has been very favorable for honey in the timber near here.

SHERENDON writes: My bees have gone into winter quarters with more honey than usual. It has been a very favorable fall for honey gathering. Golden rod, asters (tangle-foot), lady's finger (or lady's thumb), smart weed, and the two varieties of hydropiper are still visited by the bees for pollen and nectar. Does golden rod grow south of Tennessee? You can say, if you wish, to your silver-haired reviewer that "Sherendon" hasn't "seen all the world"—only a very small speck.

He is still a student and learning something every day. He could, however, teach the queen nursery-cage reviewer, if he isn't too old to learn, and not so much like Ephraim of sacred history notoriety, a wrinkle or two he never dreamed of. As to "true" or "not true," and "dare assume," the fraudulent issuance of letters patent, he need only to examine the records and opinions of our country. They will show him that Mr. A., Mr. B., Mr. C., &c., has been enjoined from the further sale and use of their patent churn, clothes-washer, or bee-hive, &c., &c.

EDITOR BEE WORLD.

SIR:—I would like to ask the readers of the WORLD if any of them have ever opened queen cells and found the head of the young queen at the bottom of the cell. I found some last year and two this fall. I have never seen any account of any such thing in any of the journals. We have a kind of white blossom sprangling wiry weed upon which the bees are at work at this time as we have had but a slight frost as yet. I do not think the quality of the honey is No. 1, or even second rate, nor does Mr. Coble think it good either, although Mr. Rambo, another of our apiarys, thinks it fine. I will send you some of the flowers of the weed to see if you can tell what it is, as I would like to learn its right name. It is perennial and out-blooms any plant I know of. The bees are filling up every cell and crowding out the brood nest at this time. I have seen blooms on it after Christmas. The bees winter on it finely, although it granulates in the cells before spring to some extent. So no more at this time. Yours, &c.,

JESSE F. LOVE.

EDITOR BEE WORLD.

SIR:—I see by the Atlanta Constitution that you were awarded the first premium for best bee hive. We use the Thomas hive, of which we were the first to take orders for. We were a neighbor of J. H. Thomas when he combined the many good qualities found in this hive. Your great display of pure Italians and hives was worthy of the discretionary premium of \$10,00 you received. The transferring of a swarm of bees, comb and honey, from a box hive to a Thomas movable frame hive in sixteen minutes is, I think, the quickest time on record. I wish, and think it your duty, to give your *modus operandi* of transferring, in detail, for the readers of the BEE WORLD; for one of the best requirements is quick time.

D. D. PALMER.

We first prepared ourselves with a sheet iron pan, 4 inches wide, 16 long and 3 deep. In this we put one part bees wax and three parts resin and melted together for fastening the combs, taking the precaution not to get it too hot. Next we had a common table, which we placed the bees upon, a wide plank or board to lay the combs upon when taken from the box hive, a small roll of rags, nicely burning at one end, a cold chisel, hatchet, etc. We blew a few whiffs of smoke into the hive, striking the hive with the palm of the hand a few times, alarming and conquering them in a very short time, they always giving due notice of their defeat by a loud roaring. We next turned the hive containing the bees, bottom up, and with the cold chisel cut the nails from two sides of the hive, which we took off, leaving two sides still standing, which served to keep the comb where we could get at it easily, and, also, to keep the bees together, as they always cluster on the remaining portion of their home, generally staying on the

outside, leaving the combs almost bare. We cut all the combs from the hive, leaving them as large as possible, laying them on the plank prepared for them, then lay a frame on a piece of comb, cutting it to fit the frame, and to set them in the same position they occupied in the old hive if possible. As soon as all the combs were fitted to the frames, our wax being melted, we dipped the edges of the combs into it, and set in the frames they were fitted, placed them in the new hive, and it was ready to receive the bees, which we placed in front of the hive, the same as any new swarm. We have tried the above method 30 years, and prefer it to any other.

While this transfer was performed in the short space of sixteen minutes, yet, it was done under very unfavorable circumstances; the crowd was great, and gathered around us so closely as to greatly inconvenience us; and we are confident that we can go through this operation in ten minutes. And to any one giving a better, and quicker mode than the one given by us, and doing the work quicker than we did, we will give \$100.00. The hive must contain sufficient honey to winter the bees, and the work done satisfactorily.

We append below the report of the Committee.

REPORT OF COMMITTEE ON BEES.

We, the committee appointed to pass upon the merits of bee hives, find several in competition, and after a careful investigation we award the premium to Mr. A. F. Moon of Rome, Ga., who has on exhibition the Thomas hive, which we think best adapted for successful bee keeping. We would also recommend a discretionary premium of \$10.00 to Mr. Moon for the best swarm, and the greatest display of hives containing Italian bees. We

think the Society, as well as the whole State, should give to Mr. Moon their highest commendations for his zeal and enterprise in this direction. The Society should encourage him. The bee display at our State fairs would be insignificant, and this important industry, yet in its infancy, would still lag behind the progress of the age. We witnessed his transfer of a hive of common black bees to one of his hives, which was performed skillfully and with greater dispatch than we ever witnessed; saving all the comb, honey and bees; the time being only sixteen minutes.

J. B. HART.

H. J. PETERS.

MR. EDITOR:—Please answer the following questions and oblige a skeptic bee-keeper.

S. H. MASON.

1. Did you transfer a swarm of bees from a box or gum hive in sixteen minutes at the Georgia State fair?

2. What was the size of the combs you removed from box hive to frame hive?

3. Was there plenty of honey to winter the bees?

4. Was there plenty of bees?

5. Did any person help you make the transfer?

6. Was there any cross-bars or sticks running through the hive?

1. We transfer the bees in the time as set forth by committee, in sixteen minutes.

2. The combs we removed were about 14x16.

3. There was plenty of honey and bees to make a good hive.

4. We had no assistance, either direct or indirect.

5. There were two cross-bars or sticks running through the hive which had to be removed. We have given the manner of making the transfer, in full in another column.

E. D. GODFREY, Red Oak, Iowa, writes: I have 87 stocks of bees, all in good shape, from 17 stocks, June 1. I clip both wings of queen as soon as fertile, and never swarm. Raise my queens in common sized hive, using two combs. When the queen is fertile I add combs of hatching brood from strong stocks, and in one week it is as strong as any.

EDITOR'S TABLE.

RETROSPECTIVE.

With this number we close the first volume of the BEE WORLD. To its many readers, who have followed its career through the vicissitudes attendant upon the establishment of a journal of this nature, we extend our thanks. Although started during a period of financial stringency calculated to prove ruinous to almost any venture, the BEE WORLD has pursued the even tenor of its way, not without its faults, yet, in the main, a liberal exponent of the thoughts and feelings of America's best bee culturists, and a journal devoted to practical bee-keeping, without that superficial knowledge which tends to confuse the new beginner. And now, at the close of volume 1, with a fast growing circulation, and with an established reputation as an unerring guide to those who are trying to master this long hidden branch of industry, we look back with pride upon the efforts we have made to make our publication a success. One year ago the BEE WORLD was created, so to speak, and to-day it assumes the proportions compatible with a first-class journal, and having a well defined purpose in view.

We had long looked upon the South,

with its balmy breezes and glorious climate, as the home of the honey bee; and to a better appreciation of their true merits we came and dedicated our efforts. Yet the teachings of the BEE WORLD have not been confined to the South; but, on the contrary, it is a visitor to families in every State from Maine to Texas; and many a home is gladdened, we trust, by its presence, who but for it would have remained in ignorance of the happy results attending judicious bee-keeping, as taught in its columns.

But we are not oblivious to the fact that the BEE WORLD owes its success and popularity to the warm encouragement and support given it by its correspondents, who have apparently taken as much interest in its welfare as we. Many a time in the year just passed has the lamp of hope been nearly dashed to the ground, only to burn brighter again, as the cheering news would come to us of the good work being done and the satisfaction rendered. Truly the office of a publisher is no sinecure, when trying to establish a new publication, and more especially is this true when all other publications of the kind are looking upon the aspirant with no kindly feeling, refusing to extend the hand of welcome, and, as in the case of one of our cotemporaries, denying us even its advertising columns.

But such a train of thought is out of place in a Retrospect, and we will close by again thanking our friends for their kindness towards the BEE WORLD, their forbearance for the many little omissions of duty, arising from inexperience, which we have been guilty of, and with a hope that our next Retrospect will be a still brighter one, we bid you adieu.

THE SOUTH—ITS ADAPTABILITY TO FARMING.

Although we have resided in the South but a short time, we think we have seen enough and learned enough to give, with some degree of accuracy, a brief outline of the many advantages possessed by the South over the North, as a country calculated to give to the laborer the greatest returns for the same outlay of time and labor. We take, for instance, the State of Georgia. In soil, climate, railroads, water-power, minerals, timber and location, she is truly blest. The northern portion of Georgia is hilly, yet productive; growing at the same time cotton, wheat, clover and all kinds of grasses, and tobacco. Vegetables and fruits, common to the North and West, can be and are raised here in profusion. The climate is unsurpassed, in our estimation, by that of any other southern state; the average temperature in summer being about 77 degrees; rarely, if ever, reaching in the hottest day 100 degrees. In the winter the temperature sometimes reaches 10 degrees above zero, the average being from 43 to 44. Flowers bloom in open air every month, and various mechanical and agricultural occupations are pursued through the winter. Fine springs of the purest water are to be found everywhere, and constant running streams are numerous. Timber is plenty, and facilities for working it into lumber are good. Prices are always remunerative, and labor cheap. Three tons of clover per acre is not an uncommon thing when pains are taken to secure such a crop by the aid of manure. A bale of cotton can be raised upon an acre of well manured land with scarcely any more trouble

than a good crop of corn. We have seen fields which have produced 60 bushels of corn per acre for years, and, with a thorough system of culture, a rotation of crops, and a saving and application of all the manure made on the farm, we are quite positive that farming can be made a better paying employment than it is at the North. We have northern, middle and southern Georgia with soil and features corresponding. As said before, the northern portion is hilly and productive. The middle portion is undulating, producing cotton, wheat, corn and tobacco, while the southern produces cotton, corn, sugar and rice. The climate of the latter is almost perpetual summer, while in the two former it is extremely mild and salubrious. Rich bottom lands abound throughout the State, which, in fertility, will compare favorably with the western prairies. This soil is a red brown clay, and is capable of being brought to a state of unsurpassed fertility, even in badly run fields.

We could fill pages of our paper on this, to us, interesting subject, but lack of space forbids. At some future day we will give statistics and facts connected with agriculture in the South that will astonish many at the North, who do not think land is fertile enough to warrant their coming to this, the best part of the United States. Any of our correspondents who wish, can write upon the subject, and it will be thankfully received.

If he expects to be successful, the bee-keeper must love his calling, and have a taste and adaptation to that business. This is the case more particularly with the bee-keeper than with any other calling.

WINTERING BEES.

The great object of bee-keeping is the production of honey, and to promote this object successfully, is to provide suitable homes for the bees, and give them suitable care, both summer and winter. Man cannot change the season or the instinct of the bee, but he can provide suitable homes for them.

The necessary requisites for successful wintering are—1st. Plenty of good honey, not too much. 2d. Sufficient warmth. 3d. Pure air and dryness. Bees having a supply, and being provided with the above requisites, there need be no fear but they will winter successfully. They will generate their own warmth in the coldest weather. Should they remain upon their summer stands, they will get pure air, which is a great necessity to their prosperity. In the North it will be better to protect from the cold, by placing the hives against a tight board fence or a building. This will break off the bleak winds, and with a few boards to protect them from the sun, they will winter finely. Have a small upward ventilation, but guard against a current of air passing through the hive, and keep them dry.

WINTERING BEES IN THE SOUTH.

Bees need but little care, comparatively speaking, to what they do in the North and West. They should have good honey and plenty of it, protect from the sun by giving them some cheap cover, which will prevent them from coming out every warm day; also it is a great saving in the consumption of honey. Bees need no mattresses to absorb the moisture arising from their breath. Where they can have a fly, as they do in the South every few days,

there is but little frost accumulates in the hive. The greatest destruction to the bees in winter is the dampness that accumulates in the hive, which occurs when a period of cold weather sets in for several days or weeks, without a warm day or two to give the bees a fly.

ITALIAN BEES.

We have frequently spoken of the fine queens sent us by many of our correspondents. We find that among these queens there are two classes in color. What is called very light, and another class darker, but all of fine uniform color, with fine markings. The difference in color has been brought about by breeding from the very lightest queens, and visa versa. By careful breeding we can soon breed to almost any color, dark or light. One of the grand secrets is to breed purity, which is the standard we all should be governed by, each one trying to excel in excellence, not to see how many we can sell, but who can sell the best.

We are pleased to note the rapid improvement and interest now being manifested among the bee-keepers of the South to care for the bees. The neglect of this branch of rural industry has simply been for the want of a proper knowledge of the bee and its worth; but the tide has changed, and we are happy to say, in favor of the bees.

It is important that all the numbers of the *WORLD* be preserved, as there are a great many things you will want to refer to at some future day. The complete index given in the present number will enable you to refer back and examine the contents of the volume at pleasure.

THE MOTHER BEE.

In every well balanced colony of bees is a queen, or what is more properly called a mother bee, the duty of which is simply the laying of eggs. To her has been attributed great royalty, &c., yet she exercises no authority whatever over any of the inmates of the hive. Her simple duty is the laying of eggs, and the mother is governed by one infallible rule—abundance of honey and the requisite heat to mature the brood. When they possess these requisites, the swarm may be considered a proper and well balanced one. But the mother is nothing more or less than a slave from her birth to her death. As soon as she begins to fail in furnishing the requisite amount of eggs for the colony, the workers will commence cells, in which they place an egg to rear another mother, to take the place of their own, which they intend to supercede. They are aware that they will cease to exist unless they do this, and as soon as everything is satisfactorily arranged, they fall upon her and destroy her. This they know is strictly necessary for their safety. The worker bee seems to possess considerable wisdom in a great many things. It often occurs, in Spring, that the flowers put forth in abundance, affording a rich harvest for the bees, the queen begins to lay rapidly, and soon the hive is filled with brood. The weather may turn cold, and no more honey be gathered perhaps for weeks; the large increase of bees have consumed nearly all the honey, and death and starvation stares them in the face. To save themselves, the workers tear from the cells the unhatched brood, dragging them out of the hive, simply

to save the lives of those living, or the mature bees. Again, let the queen be laying very rapidly, and should a failure take place in the honey, she ceases to lay in proportion, although they may have abundance of honey in the hive.

A GREAT many of the subscriptions to the BEE WORLD expire with this number, and as it is impracticable to notify each subscriber, we hope this general notice will be a sufficient reminder. Each one will easily recollect when his subscription expires, and a prompt renewal by all who intend to honor us with their continued patronage, will greatly oblige.

THROUGH an oversight in our proof-reader, the advertisement of Dr. J. P. H. Brown, in our October number, said that he would sell Italian colonies for \$5. This, of course, was a mistake. It should have read \$15, which is cheap for such as he keeps, as no person in this country has taken more pains to get pure stock than Mr. Brown.

WE hope to have our advertising columns represented by an entirely new lot of advertisements in Vol. 2, No. 1, and request all wishing those in present number continued, to send in a change in time for the next number.

HONEY REPORTS.—We want honey reports from every one of our subscribers next month. Make them short and to the point. Also state probable market price in your vicinity, of good honey, box or extracted, price of bees, &c.

BEE-KEEPERS write down your experience and send it to us for the benefit of others.

THE CHEROKEE APIARY.

This apiary is located in the edge of the city of Romé, and contains about 140 swarms, all of which are fine Italians. We have introduced this season a large number of fine queens from the best breeders in this country and from the best imported stock that could be obtained.

Persons visiting Rome and feeling any interest in bee culture would do well to visit this apiary.

We have received from A. I. Root & Co., a fine engraving of a hexagonal apiary—their ideal of what an apiary should be, and how it should be arranged to save time and labor. Thanks.

The WORLD has been delayed this month on account of non-arrival of paper. Hope no more such delays will occur in future.

Our Club List.

We will send either of the following periodicals with the WORLD one year, including Chromo, on receipt of price annexed:

Louisville Courier-Journal.....	\$3.00
American Agriculturist (and chromo, unmounted 10c. extra, mounted 25c.).....	2.75
Harper's Magazine, Bazaar or Weekly.....	5.00
New York Weekly Tribune.....	3.25
“ Semi-Weekly Tribune..	4.25
Rome Weekly Commercial.....	3.50
Illustrated Journal of Agriculture	2.75
Peter's Musical Monthly.....	3.75
Peterson's Ladies' National Magazine.....	3.15
New York Sun, Weekly.....	2.75
“ “ Semi-Weekly....	3.75
Fruit Recorder and Cottage Gardener.....	2.35
Gleanings in Bee-Culture.....	2.75
Phrenological Journal.....	3.75

These publications are all good. If any periodical is desired that is not on the list we can get it.

TALMAGE'S PAPER.—THE CHRISTIAN AT WORK (New York) ranks with the best of the religious weeklies. Dr. TALMAGE is its active editor, and his sermons are published exclusively in its columns. The terms, \$3.25 per annum, cover everything, including postage and delivery of the new premium, a “Portfolio of Twelve Gems,” or a copy of LANDSEER'S “TWINS.” Without the premium it is only \$3 per annum, postage prepaid, as above. Agents will find this a success.

THE LEE MEMORIAL MONUMENT.

The latest news from the Lee Memorial Association is that Prof. Edward V. Valentine, the sculptor, has procured from Vermont a block of pure white marble, from which he is now fashioning a recumbent figure of General Lee, to be placed on the grand monument that is now being erected at his tomb, at the Washington and Lee University, Lexington, Va. The figure represents General Lee reposing in an easy position upon a couch, his head and shoulders slightly raised above the body, his left arm outstretched by the side of his sword, his right arm laid across his breast. He wears full Confederate uniform, including boots and gauntlets, and a light drapery covers nearly the whole form. The appearance is natural and graceful, indicating peaceful slumber rather than death.

This monument, when surmounted with such a fine work of art, will be a lasting memorial to one of Virginia's noblest sons and patriots. The members of this Association are gentlemen well and favorably known by the entire community, who will see that nothing is left undone that will add to the beauty and finish of this great work. We are advised by the Secretary, Mr. Charles A. Davidson, of Lexington, Va., that not sufficient funds have yet been subscribed to fully complete the monument. In order to further this object they have issued a life-size steel engraved portrait of General Lee, to be sold only by subscription through authorized agents; the proceeds of such sales to be applied toward the completion of the work. They and we feel that this is an opportunity for all not only to procure a superb life-like portrait of the great General at a very reasonable price, but also enables every person to aid in the erection of a lasting monument to his memory. Each subscriber will receive a certificate, signed by the Secretary and Chairman of the Lee Memorial Association.

We commend this valuable portrait to the public, and predict for it an immense sale.

Some energetic person should secure the agency in this section to assist in this noble work. W. W. BOSTWICK & CO., Nos. 177 and 179 West Fourth Street, Cincinnati, O., have been appointed General Managers of all Agencies in the United States. All communications addressed to the above firm for circulars, certificates and terms to agents will receive their immediate attention.

Publisher's Department.

ADVERTISING RATES.

SPACE.	1 Month	2 Months	3 Months	6 Months	1 Year
1 Page	16 0	30 00	40 00	70 00	125 00
3-4 age	12 00	20 00	30 00	55 00	80 00
1 Column	10 00	18 00	25 00	45 00	75 00
3-4 Column	8 00	15 00	20 00	35 00	70 00
1 2 Column	7 00	12 00	18 00	25 00	50 00
1-3 Column	6 00	10 00	15 00	20 00	30 00
1-4 Column	5 00	8 00	12 00	16 00	20 00
1 Inch	2 50	4 00	6 00	9 00	15 00
1-2 Inch	2 00	3 00	5 00	7 00	12 00

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

BEE WORLD

BEE-KEEPER'S

DIRECTORY

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

Imported and Home-bred Queens.

Gray's Improved Honey Extractor Gerster's wax Extractor, Queen cages, Honey Knives, and various Supplies generally. Also Roland China Pigs bred from prize stock. Orders solicited and satisfaction guaranteed. Enclose stamp for further information. GRAY & Co., Importers and Breeders of Italian queens, Reily, Butler Co., Ohio. 9-1f

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An Illuminated Portfolio of Twelve Gems by Hendricks each 8 1/2x10 1/2 in. or the Superb Chromo, "The Twins," 22x28 in. after Landseer. Price 3 25, including postage. No extras of any kind. Without premium 3 00 per annum.

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S. D. BARBER,

Mattoon, Ill.

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PURE ITALIANS,

IN LANGSTROTH HIVES.

strong in Bees and Honey.

With tested Queens suitable for breeders next season at

TEN DOLLARS EACH.

If taken before December 15. Also

FIRST CLASS POULTRY!

Light and Dark Brahmas,

— AND —

Partridge Cochins, at \$1.50 Each,

If taken at same time, delivered at shipping office.

R. M. Argo,
Lowell, Garrard Co., Ky.

FOR SALE.

I have now on hand

Fifty Pure Italian Queens

Which will be sent on receipt of price.
For one Queen in small shipping box - - - 2 50
For one dozen Queens - - - - - 25 00
For one Queen with about a pint of bees in nucleus hive, 4 frames 11x5 inches, each 5 00
Full colonies in Langstroth movable frame hive - - - - - 12 50
Send money by P. O. Order or by Express. Address

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EIGHT DOLLARS PER COLONY,

If taken before 15th December—too cold to ship after that.

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"Dollar Queens"---Straight Combs Delivered

At shipping office, this place.

H. NESBIT,
 Cynthia, Ky.

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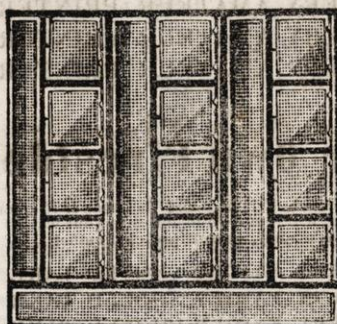
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