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MOON'S BEE WORLD,

— A GUIDE TO —

BEE-KEEPERS.

VOLUME 3.

FEBRUARY, 1876.

NUMBER 3

For the Bee World.
HOW I MANAGE BEES, No. 3.

REV. M. MAHIN.

In the present number I propose to tell how I feed bees. My feeder is about the size and shape of a quart tin fruit can and is made of tin. The mouth is open the whole size of the can, and there is a crease about one-half an inch below the top. A tin ring about one inch wide is made to fit loosely around the mouth or open end of the can. Fill the can with sugar sirup, spread over the mouth of it a thin muslin cloth, press the ring down over it until it reaches the crease, and it is ready to be put on the hive. Turn it bottom upward in a pan or dish and let it drip a few moments, and then place it over a hole in the honey board inside of the cup. The ring holds the cloth up off the board, and the bees go up and take the sirup from its under surface.

To feed in winter a short-necked glass bottle is better than anything

else. When filled, tie a thin muslin cloth over its mouth, and put the neck of the bottle down through a hole in the honey board. The mouth of the bottle should go a little, and only a little, below the under surface of the honey board. The bees can reach the mouth of the bottle in the coldest weather, and will obtain from it enough to supply their need. I have a swarm "nursing the bottle" at the present moment, and they seem to be exceedingly pleased with it. For feeding to stimulate breeding it is, perhaps, the best of all feeders, as only a few bees can get at it at a time.

Cream tartar and vinegar are sometimes recommended to prevent sugar sirup from granulating, but in my opinion they are worse than useless. I have been using sugar sirup for years, and I have never known it to granulate when sealed up in the combs. I have extracted it in the spring, after it had been in the hive all winter, and there were no signs of granulation. Four pounds of sugar to a quart of

water makes the sirup just right. When feeding to supply winter stores, I put on two or three feeders at a time, and they are emptied in a few hours. They may be put on at any time of the day without attracting robbers.

The above method of feeding is much less trouble than putting the feed into empty combs.

New Castle, Ind., November, 1875.

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For the Bee World.

LETTER FROM COOSA COUNTY, ALA.

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KATE GRAYSON.

Thinking perhaps you would like to hear how the bees are doing in this part of the country, I will give you a few items in regard to mine and those of my neighbors.

We are having such a warm, balmy winter so far, that my bees are as busy bringing in pollen as they will be next spring. I have, however, had some bad luck, which doubtless could have been avoided by you experienced bee-keepers. It was so late before I got my frame hives made that I did not get all my bees transferred, I not knowing how to get rid of the moth in the old box gum, lost one. The worms got up in the body of the hive among the richest of the honey, and what to do to get them out I did not know. Since then they have been doing very well, until quite recently I noticed a certain hive attacked by robbers. I contracted the entrance, and it did no good. I put grass over the entrance, thinking the home bees would find their way through or under the grass, but fighting still kept on. Finally, as a last resort, not knowing what else to do, I opened both hives and gave them a thorough sprinkling with sweetened water strongly scented,

poured the weaker family—which was rapidly growing “smaller and beautifully less”—into the midst of the stronger, closed the entrance entirely for twenty-four hours, and there has not been a murmur among them since. I was surprised to see how amicably they united. As to which of the queens should reign supreme, I left them to decide that matter between them. I felt considerably elated with my success in uniting the two colonies, as it was my first effort. I regret very much, though, that I lost both the Italian queens you sent me.

I never heard so much complaint of moths, starvation, and the like among bees as I have heard the past fall, and I still hear great complaint. Some of my neighbors have lost all, and some have one or two stands left, but expecting every day for the last one to “give up the ghost.”

Mine are the only frame hives in the neighborhood, and I must say have yielded me—what few I have—some of the most beautiful honey I ever saw. I have no extractor, so I have to take comb honey. I was much pleased with a suggestion made by friend McLean in the November number of the BEE WORLD—that is, that some old experienced bee-keeper write an article for each month during the present year for the benefit of beginners, (like myself). I hope that he or some one else will act upon it. Tell us plainly and simply what to do, and when and how to do it. Old veterans in the cause, pray do not forget us beginners, who are struggling hard to keep in sight at least.

I see mention made of the improved Thomas hive. Is there a late improvement on the hive that you sent me? If there is, I want the best, though I

did not think there could be any improvement made on the one I have.

I would like to hear more of those stingless bees mentioned by Miss Saunders. Would give more for them, if they are good honey-gatherers, than any other bee.

I would also like to know more of Dr. Brown's varnish tree. Never heard of it before. Where could I get some?

Wishing you, Mr. Editor, and all the readers of the most excellent BEE WORLD, a happy new year, I bid you good night.

Nixburg, Ala., January 13, 1876.

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For the Bee World.

TENNESEEE vs. FLORIDA—BEE-KEEPERS' CONVENTIONS.

W. P. HENDERSON.

MR. EDITOR:—I have received the December number of volume 3 of the BEE WORLD, and have read with pleasure its contents. The communication of H. J. P., of Bibb county, Georgia, has sense in it, sound and practical. I have been all along there. There's no use of a man comfortably situated in North Alabama, Middle Tennessee, or Middle Georgia looking up a better place. He can't find it. You have Florida lands for sale, and I don't care to say anything in comparison with Florida, and the sections of country mentioned, showing the superiority in a great many respects to Florida, for we are thick enough, and good places—rich, fertile, and well improved—are out of the reach of persons of limited means. If I were given a home in some of the North-western States, you could not induce me to live upon it, unless you could change the climate. Florida lands are

cheap, and before I would freeze up six months in the year in Iowa and Minnesota, I would emigrate to where there were more sunshine, birds, bees and flowers,—where cattle graze the year round, and where there is more ease and comfort. The luxuries, considered North, would cost you less than you pay for the substantial, while at the same time, if you are industrious, you can have both in abundance and to spare, and work only half the year. But I didn't intend, Mr. Editor, when I picked up my pen, to write an emigrating article, and therefore will quit right here and go along and tell you what I intended—that we are having a most remarkable winter for Middle Tennessee. I extracted honey on Christmas day, and could have extracted every day since. The thermometer in the shade, on the north side of the house, ranges from 60° to 70° Fahrenheit at 12 o'clock noon. Many flowers are in bloom, and I noticed, yesterday, blooms of the dandelion in my apiary. For a week bees have been busy at work gathering pollen from the swamp maple and red cedar, and in my yard there is a Japanese quince, in full bloom, from which the bees are gathering some honey. Now, all this is very lovely, if it would only last or get a little cooler. No doubt our bees think—if they think at all—that spring is here, for they are acting just like they usually do in March. The queen is as active inside as the bees are outside the hive, and when one of these cold snaps do come, which I think certainly will, away goes the larvæ and many old bees, leaving the colony in a much worse condition for our warm and tropical winter.

Wm. J. Andrews, of Maury county, I see also from the December number,

is advocating a Southern Bee Keepers' Society—County and State Societies. That's all well enough, but it won't last. We had a society several years ago in Rutherford county, about the time improved hives and bees were being introduced among us, and as long as the novelty lasted our society was well attended, but towards the close of the first year of its existence a quorum could not be had. Dr. T. B. Hamlin, by his untiring energy and perseverance, did keep the Tennessee Apiarian Society alive, and I see or hear nothing of it since his death. A short time before his death I visited the State Society in Nashville, and think there were less than a dozen bee keepers present. The first meetings of the North American Bee-Keepers' Society were largely attended from nearly every State and Territory in the Union, and I think, in looking over the proceedings of the last two meetings, there were not more present than ought to be present at a Maury or Rutherford county bee-keepers' meetings. Occasional conventions or meetings, say yearly or semi-annually, would be productive of more good probably than weekly or monthly meeting. For the county societies, one in April, to tell what you expect or wish to do, and one in October or November to tell what you did do. A party, alone interested in making or selling hives, raising queens or bees for sale, and other apiarians, will attend regularly weekly meetings, for that is their business and to it alone they look for profit; but a farmer, who keeps ten or twelve hives, has a garden, stock of every kind to look after, besides field crops, can not lose the time, nor does he take the same interest in these bee meetings. He is just

as much interested in poultry or turkeys as he is in bees, and would attend once or twice a year, especially if the time did not interfere with other pursuits. These national meetings are very expensive, and in this country have proved a failure. In Germany it is different. But of this more at some other time.

Murfreesboro, Tenn., Jan. 3, 1876.

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For the Bee World.

LETTER FROM CORNERSVILLE, MARSHALL COUNTY, TENN.

J. F. LOVE.

I have been sick all this fall and am not as well as I would like to be as yet. I have between three or four thousand pounds of honey on hand yet unsold—nice extracted basswood honey. It is now candied hard in half barrels, and I confess that it seems harder to sell than ever before. The bottom seems to have fallen out of the honey market, or the demand has ceased. One firm in Atlanta, Ga., says it would not sell at any price, and says they have a beautiful clear bright honey from Florida at \$1.25 per gallon, which is 10½c. per pound. Do they ever have any candied white honey that far south? I never saw any south of Tennessee, and I saw honey in Mississippi, Alabama and Georgia during the late war, and it was mostly dark, thick, red honey. I sent them a sample of candied basswood honey (i. e., Powers & Son, Atlanta, Ga.) and do you think they or the people of Atlanta thought it impure because it was candied! I sent a sample to Jno. McAllister & Co., Chicago, Illinois, and, after saying they would take one thousand pounds of a certain sample that was candied, when sent,

they said they did not want any impure or granulated honey, and still the sample they said they would take one thousand pounds of was candied or granulated. Now, did they know that the two terms were one and the same, or am I wrong, &c.? Some few new beginners in apiculture have extracted too much honey from their bees and they may lose them next spring. A bee-keeper should always be sure to leave the bees enough, and a little over will not hurt anything in the South, as when they commence work in spring and honey begins to flow it is an easy matter to extract it then.

Cornersville, Tenn., Jan., 1876.

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MICHIGAN BEE-KEEPERS' ASSO-
CIATION.

(Continued from page 54.)

EVENING SESSION.

The Convention was called to order at 8 o'clock, President Balch in the chair. He expressed the opinion that it would be preferable to hold a short session, and devote the balance of the evening to social intercourse. The Secretary thought the social element of our gatherings should receive more attention, inasmuch as it was an essential feature—one that was more fully appreciated by those in attendance than any other. Our personal intercourse with each other will result in pleasant memories that will be cherished long after all else shall have been forgotten. After remarks from others, all concurring in the sentiments expressed above, President Balch's suggestion was concurred in.

James Heddon read Mr. Langstroth's patent claims, interspersing the reading with remarks to show that the admitted requisites of the best features of movable combs to day are embod-

ied in Mr. L.'s claims. The shallow frame and lateral movement of the same, slotted honey-board and air space between it and the top bar of the frames, and a small brood chamber, are all essential to an easy and rapid manipulation, and the best success in securing box-honey.

Dr. W. B. Southard—I understand that Mr. Stray has been experimenting largely during the past season with a view of securing all straight worker comb. Will he please give us the result?

Geo. Stray—To secure all straight, worker combs has been to me a long-sought desideratum; but not until the past season have I been entirely successful. My method for securing this most desirable result is as follows: Remove all the capped brood from the hive, leaving but two combs, which should contain eggs and larvæ. These are placed in the centre of the hive with an empty frame between them. As soon as this frame is filled with comb, place it on the outside and insert another empty frame. Continue the operation until the hive is full of comb. By this plan combs are built very rapidly, the queen will fill them with eggs as fast as built, and you obviate the building of drone comb. Swarms thus treated soon become as populous as they were before any brood was removed.

Pres. Balch What do you do with the removed brood and combs?

Geo. Stray—Place them with a few adhering bees in an empty hive, give them a queen cell and you have another swarm. Last winter I lost all but one of 73 colonies. Purchased 12 in the spring—had one stolen—so I commenced the season with 12 stocks, not in good condition. Have

covered all my combs, had 272 combs built—all straight and no drone-comb have now 112 stocks in splendid condition; and secured 400 lbs extracted honey. I attributed my success to my method of management. No other plan I have ever tested would have give such good results. I find that small hives, 1,200 to 1,500 cubic inches available comb space in the brood chamber, are much the most profitable.

Pres. Balch Stated that the Convention would proceed to the election of officers for the ensuing year, which resulted as follows:

President Arad C. Balch, Kalamazoo.

Vice-President James Heddon, Dowagiac.

Secretary Herbert A. Burch, South Haven.

Treasurer Julius Tomlinson, Allegan.

The first ballot for the office of President resulted in a tie between A. C. Balch and James Heddon. The remaining ballots were unanimous in favor of the persons elected to fill the several positions. The subject of adjournment was then considered. Considerable discussion ensued, a large majority expressing the belief that Kalamazoo was the most central point of the bee-keeping interest, and therefore the most eligible point for our conventions. It was finally agreed upon to hold a spring session in Kalamazoo on the first Wednesday of May, 1876. The Convention then adjourned until 9 o'clock A. M. tomorrow.

MORNING SESSION.

The Convention was called to order at 9½ o'clock, with a good attendance, President Balch in the chair. The morning session was immediately taken up, by the Secretary's reading a paper on "Queen Rearing," from

George Thompson. Geneva, Ill. The paper was a valuable one, portraying the necessity of more care and skill in breeding bees. The conditions necessary to a successful prosecution of the work were considered with the conclusion that we are entering upon a new era of progress in this department of bee management. A brief paper on the same subject was read by the Secretary, from James M. Marvin, St. Charles, Ill. Considerable discussion ensued, an epitome of which we give as follows:

Julius Tomlinson—Mr. Thompson advances many good ideas, but does not go far enough. We should aim to breed up a profitable race of bees, a race at once prolific and industrious. Beauty is of secondary importance. We do not need to go to Italy for queens. Better queens have been reared in this country than were ever imported.

Dr. Southard—Mr. Marvin speaks of the size of bees. Does old comb effect their size?

J. H. Everad—I once transferred a swarm of bees from an old box-hive that had been continuously occupied for over 40 years. The combs were so thick and tough that a piece a foot square would bear my weight (160lbs), but the bees were as large and as active as any, and such bees to winter I have never seen before nor since. I tried all sorts of experiments upon them, but they wouldn't die—always wintered well. You might drum upon the hive from January to June, but they wouldn't show a single sign of dysentery. The hive was finally burned accidentally.

James Heddon—'Twas time.

H. A. Burch—Cremation.

Julius Tomlinson—I find no per

ceptible difference in size of bees, whether bred in old or new comb.

Dr. Southard—I have brood combs that are 12 years old. The cells are smaller than the usual size and so are the bees.

Pres. Balch—While it is true that a hatching bee leaves a cocoon in the vacated cell, it is equally true that the bees gnaw them out, thereby preserving about the same relative size.

J. H. Everard—As the septum of the comb increases in thickness with age, the bees lengthen out the cells, thereby maintaining their uniform length.

Pres. Balch—Bees will winter much better in old combs out of doors than in those more recently built. But we are wandering from the subject under discussion. Let's go back and canvass the queen topic.

James Heddon—Extra prolificness in the queen is not desirable. It is a universal law of nature that which yields the most is of the poorest quality. The common grade cow that gives an enormous amount of milk, will not produce the quality nor quantity of butter that little Jerseys do. Pomologists have discovered that thinning is indispensable to success in raising well developed fruit of the finest quality. So it is with bees. The strongest stocks with their extra prolific queens are by no means the most profitable. Quality, and not quantity, of bees in a hive, is of paramount importance. The size of the hive has an important bearing on this subject. The "long idea" principle (my assistant termed it "wrong idea hive") of Gallup and Adair, is one of the worst of apistical delusions. Supposing that a good queen costs

25 cts, as a basis; a frame of worker comb is worth a dollar. The extra combs of a large hive are equivalent to another swarm, while a small swarm will yield much the better comparative results. The most profitable colonies I ever had were 8 frame hives, and small frames at that. This is not an isolated case in a single season but an apiary during a series of years. In the small hives, the queen will crowd the brood combs and the bees will crowd the surplus boxes. Combs—not queens—are the basis of an apiary.

J. H. Everard—The trouble with friend Heddon is—he has never tried the "wrong idea hive" of Gallup and Adair.

James Heddon—I've got 32 of them at home that you can try for a quarter apiece.

Pres. Balch—Unless we have prolific queens our success will be limited.

James Heddon—I have no objection to prolific queens whatever, but put the capacity of the hive below that of the queen and you'll push things.

Dr. Southard—Has any one using small hives ever experienced any difficulty in having extra prolific queens lay several eggs in a cell? I have often found 3 eggs in a single cell.

Jas. Heddon—And so have I, but, strange to say, never saw three bees hatch therefrom.

Pres. Balch—If you had strong stocks would you divide them early, with a view of increasing your crop of surplus honey?

James Heddon—'Tis a fine point. Some seasons I would, others not. It all depends upon circumstances. Our seasons differ so widely that no

rule can be given. When bees are strong and the honey harvest is good, they will swarm, if not divided, and thus materially lessen your amount of surplus.

Pres. Balch—I want my queens so prolific and my stocks so strong in numbers, that they will swarm. Then I am sure of a goodly amount of surplus honey.

Jas. Heddon—Are natural swarms superior to artificial ones?

Pres. Balch—They are most decidedly so.

Jas. Heddon—I want a queen that is prolific in proportion to the combs of a hive, and small hives will secure this. Swarms of equal strength will often present a vast difference of results. I want bees of quality—not quantity. A bee that is lightning on business is what we want.

Julius Tomlinson—Please give us your plan for securing this result.

Jas. Heddon—I have been very successful as my annual reports abundantly prove. My plan is to rear my queens from my choicest stock. By choice stock I do not mean those yellow bees that show the greatest number of rings, but the swarms that roll up the largest amount of surplus honey. The long nosed breed of hogs that will root up the third row of potatoes through a crack in the fence will not fat; but the little chunked grass breed will do so readily. A bee that will secret wax quickly and build comb fast—which is equivalent to honey, and comb honey in boxes represents money—is the bee for profit. I prefer the Italians for their longer life and greater peaceableness; but aim to breed the best strains of two races.

J. H. Everard—When hives are

crowded with brood and bees early in the season it is better to divide them, you will get more honey. Italian bees will fly father and carry heavier loads; and should they “dwindle down” in spring, will recuperate where the blacks will not. I once had a swarm of Italians dwindle down to seven bees, and a queen that defended their hive against robbers for over 4 weeks.

Dr. Southard—That's the smallest swarm on record.

Geo. Stray—Much of our success will depend on getting our swarms strong in numbers as early in the season as possible, to do this keep your hives adapted to the size of the colony, even if you have to contract it down to two combs. And then add combs as needed, using a division board. When the honey harvest comes your bees will be in condition to gather it.

Pres. Balch—The best division board is a close fitting frame.

Jas. Heddon—A comb is the best non-conductor—better than any cloth or board to retain heat, especially when the frame is tight-fitting, as Mr. Balch uses it.

Geo. Stray—My plan has given me more satisfactory results than any other I have ever tried.

Pres. Balch—The only objection to a tight-fitting frame is, that it is not quite so easily manipulated, but it overcomes all the objections of a loose frame. How do you dispose of your removed combs?

Geo. Stray—Put them over on the other side or division board, so that the bees will not be compelled to keep a lot of honey warm, when the heat is necessary for the producers of brood.

James Heddon—Bees cover their brood and keep it warm. They are

heat producing and retaining bodies, according to circumstances.

W. W. Millard—If you were to set a hen would you select the top of a brush heap that would give a constant draft of cold air, or the ground where she could better control the temperature and keep her eggs warm? My idea is that better success may be attained by keeping your bees in a place, the size of which will correspond with the strength of the colony. A small furnace will not keep a large room warm in a cold day. So it is with bees; and if you keep them warm they will breed faster and prosper better. By closely watching their procedure this will readily be seen.

Jas. Heddon—The brush heap isn't a proper illustration! It would be a parallel case to inserting a hollow tube in the centre of the brood nest. Experiments have demonstrated the fact that bees are rearing brood in the spring when the outside combs are cracking with intense cold. How much heat escapes from a hive when the cover fits so poorly as to leave a large crack all around? So little that it can scarcely be detected. We theorize too much. Those swarms that are "ventilated to death" in the spring months, breed just as fast as those that are so snugly and cosily "tucked up in quilts" and the like. I remember that one spring after setting out my bees, the covers warped so badly, that I feared the consequences of so much upward ventilation, and procured a quantity of listing with which to close up the cracks. I worked with a will until the listing was exhausted with some 10 or 12 hives that were still "all ventilated," but as I was completely tired out, thought they might get along as best they could,

they couldn't any more than perish anyway. What was the result? Three that were left to shift for themselves were just as strong and vigorous in June, as the others.

Julius Tomlinson—The contraction of hives depends altogether on circumstances. No rules can be given that will apply to all cases. Exercise care and judgement, and adapt yourself to your surroundings.

W. W. Millard—Related experiments of crossing different breeds of animals with a view to the development of certain desirable qualities. In breeding bees, we should aim to cultivate their comb-building and honey-storing qualities. Combine, if possible, the best characteristics of the two races.

Pres Balch—I have noticed one peculiarity of the blacks, that has not been alluded to—they "hang out" worse in summer than the Italians.

Dr Southard—Upward ventilation will obviate it.

J. H. Everard—Bees "hang out" from excessive heat and heavy combs of new honey. Have had bees winter well that were exposed to a direct current of cold air.

The Secretary then read a paper on the "Fallacies of Bee-Culture." He took the ground, that notwithstanding we had made commendable progress in scientific bee culture, there yet remained a vast amount of empiricism and error, that passed as science; and proceeded to point out the more common and glaring fallacies. The paper elicited much comment, agreeing in the main with the views he expressed; but as most of the ideas advanced are contained in the report of yesterday's session, the discussion is omitted.

After the transaction of business relative to the affairs of the Association, and the adoption of a motion, extending a hearty vote of thanks to those who had kindly furnished us valuable papers, the Convention adjourned to meet in Kalamazoo, on the first Wednesday of May, 1876.

We may add that the Convention was harmonious and united throughout and that all seemed to feel amply repaid for the time, trouble and expense incurred in attending the present meeting. And thus ended one of the best and most profitable apicultural gatherings of American apiculturists; a gathering that, in the opinion of many present, will mark a new era in scientific and profitable bee-culture in America; and that convening on the threshold of the first centennial of the Republic, it might prove to be an auspicious beginning of a brighter future for American apiculture, was the earnest and sincere wish of all in attendance.

HERBERT A. BURCH, Sec'y.
South Haven, Mich.

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For the Bee World.

LETTER FROM LAUDERDALE, MISSISSIPPI.

—
DR. J. M. SIMMONS.
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EDITOR BEE WORLD:—As the season of 1875 is about over, I will give you my little experience with the long single story hive, holding twenty-two frames, and Italian bees. I commenced this season with six hives, and have realized from them as follows: May 3, 102 lbs.; May 14, 152 lbs.; June 11, 171 lbs., and June 13, 175 lbs., making in all 600 lbs. of extracted honey. I have increased to eleven hives, and would have had twelve, but lost one swarm by neglecting to use my extractor in time.

All of my hives seem to be in good condition now and had plenty of natural stores for the winter, but it has been and is still so warm that I fear they will need feeding before spring. My bees are working on something to-day, just like summer time.

After trying this sized hive for another season, I have come to the conclusion that for all purposes the two story hive is the best and most convenient to use for all seasons, and would advise all beginners to commence with them and have all the frames of the same size both for the lower and upper stories, then if the queen should happen to get in the super and lay you can change the frames and put them below, keeping all brood pollen below. I find the two story hive the best for winter, spring and summer use, when you want comb honey, as the queen will occupy part or most of the frames in a single story hive, thereby preventing you from cutting the comb out. As to economy, I think generally it is in using the two story hive, as the length in the bottom and top will more than make up for the ends or sides, as the case may be. I don't think it makes so much difference as to the size of the frame, so that you furnish the bees with plenty of room to deposit honey, eggs and pollen. I think a frame, about 9x16 or 17 inches makes a more compact hive and you can let the frames run across or to the entrance, just as you fancy. I am satisfied with my frames as I have them, and will not change them, but may change my hives next season. I believe in clipping queens' wings, thereby saving much time and many nice queens. I believe in artificial swarms, and have a queen cell or young queen for each, thereby saving much time.

I find that it is not necessary to have a queen to make bees gather honey, for you may take a strong hive with a prolific queen and divide it equally, frames, bees, and honey, and keep all cells cut out of the queenless hive, and furnish frames of brood from the hive having the queen, and you will find no difference in honey in each hive. After this division you may let the hives remain a foot apart or remove any distance you wish. I let mine all stand one foot apart, and each couple five or six feet apart. I find that to let them stand close together the labor of furnishing brood from time to time is much less. I find no difficulty in running hives this way, but it keeps your queens on double duty all the time to furnish eggs and brood for both hives, especially with twenty-two frames in them. I cover my hives with boards to keep off sun and rain. My hives are raised six inches from the ground, but I think a foot or two feet would be better. I think a single wall better than a double one, if the plank is seven-eighths of an inch thick. I use a honey quilt, instead of a board, thereby saving much time in handling and the lives of many bees. I use Winder's extractor and like it very well, but would prefer one with a can stationary. I have planted nothing for my bees save buckwheat, and find it best to plant two crops—one early and one in July or August, for late pasturage.

I will close by wishing you and all aparians a prosperous year in apiculture. I think every man and woman south who keep bees ought to take the BEE WORLD, for it is the only journal suited to our latitude, and I think some would like it better if you did not have that axe to grind to make it

public property and sell hives. I send you \$2, for which you will send me the BEE WORLD for 1876. I must have it if I don't keep bees.

Lauderdale, Miss., Dec. 30, 1875.

—o—
For the Bee World.
THE VARNISH TREE.

CH. DADANT.

I see, in the BEE WORLD for December, that Dr. J. P. H. Brown recommends the planting of the varnish tree in the yards, as shade and ornamental trees. If, by varnish tree, he means the Japan varnish tree, (*ailanthus glandulosus*), I think that the beekeepers had better not plant it. The Japan varnish tree gives honey in profusion, but this honey is so bad that a friend of mine, Parson Lagot, living in the vicinity of Paris, France, has told me, in order to have his honey eatable, he is compelled to remove all the honey of this tree as soon as its blooming is over, for the smallest quantity of varnish honey injured the quality of clover or linden honey.

Hamilton, Illinois, January 10, 1876.

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For the Bee World.
HOW I MANAGED MY APIARY LAST SEASON.

ELI COBLE.

In the latter part of February I commenced feeding rye meal sparingly for some ten or fifteen days, until the bees commenced gathering natural pollen. My reason for not feeding as much as they would use was to keep down the swarming fever. After getting them at work on the rye meal for a few days, I examined such colonies as did not work briskly on the meal to see if they were not queenless. After getting through, I supplied one stock

with a queen from my nuclei that I wintered for such accidents. After this was done, I meddled but little with them, as the spring was wet and cool and I thought it best not to disturb them too much. I occasionally gave some weak colony a frame of brood from some hives that could spare it, and by the middle of May I never had my bees in better condition for gathering honey—about the 15th of May being the time for poplar to begin to bloom here.

On the 18th of April we had a killing frost that destroyed the poplar bloom, and consequently our early honey crop was cut short. In May I began to extract from the honey dew and honey locust. I obtained 2,800 pounds of dark honey, besides getting an average of two new combs built to the hive. I had seven new swarms to come off before the honey season set in. I fed each one of them daily about a teacupful of honey, besides giving them a frame of honey and brood when hived. By the time linn bloomed those first swarms had their hives full, as I only gave them a single story Langstroth hive. From one of them I extracted 55 lbs. of honey. Each one of them threw off a swarm during the linn bloom. I returned them to the parent hive, extracted their honey, and put on a top story, which they have filled with comb and honey.

About the prime of linn bloom it seemed the whole apiary would swarm, as I did not have help enough to keep their honey out of their way, and being hindered with the swarms I had no other remedy but to give them a new hive or return them to their parent hive, the latter being the way I treated the most of them. After taking out

half or all the brood and replacing with empty frames and destroying all queen cells, if anywhere I had a very strong hive to swarm, I would return a portion of the bees to the parent hive and give the others a new hive containing one or two combs with brood and honey. Of linn honey I obtained about 1,300 lbs., making in all 4,100 lbs. I commenced the season with seventy colonies. About one-third of them were very weak early in the spring. I have now one hundred colonies, including queen rearing hives that I am wintering some surplus queens in. Unless some unknown disaster should occur, I expect to have one hundred colonies next spring, as I have never lost one since I have been using a frame hive.

My bees had a jolly time, yesterday, on wheat bran. They seemed to enjoy themselves as well as they do on rye meal. I have had some rye ground to-day, and intend the first warm, sunny day to give them a big picnic. What say you, Mr. Editor, will it have any bad effect?

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

—O—
For the Bee World.

TIMELY HINTS, No. 1.

(For February.)

D. STAPLES.

MANAGEMENT VS. LUCK.

As the cold days of January is now past, and the balmy days of spring are approaching, it is a good time to be looking after the bees, for this is the time to determine the luck of the season. During the first warm days in this month we should carefully inspect every hive in the yard, and if we should find any weak or queenless stocks we should give them honey and

brood. By so doing we save a vast deal of trouble, for if we neglect this one step in time, it will cause us many steps afterwards, as they will be sure to come out in a few days with the intention of robbing, and, after creating a disturbance in the whole yard, are pretty sure to be killed out at last, thus causing the loss of the colony that has caused a certain amount of honey to winter thus far, where perhaps they could have been saved with a very little cost and trouble, for which they would richly compensate their owner ere June.

If you do not find it convenient to attend to this, I hope we shall not hear you crying, "I have had bad luck; my bees are doing no good." There is a rule in nature that certain causes combined will produce certain effects. Or, in other words, management makes luck. If you wish to have a fancy or a paying stock now is the time to remove all drone combs from all hives that do not produce fancy or industrious workers. In inspecting your bees now you will be able to determine what queens are worthy to breed from during the season, for good queens will have a good amount of brood and eggs now deposited in the combs if everything is right in the hive.

If you wish for early queens and bees, it will be necessary to stimulate your stocks from which you wish to rear queens and drones, by feeding. It is not a hard task in this latitude to have plenty of drones flying this month. Then comes business. We are then ready to commence queen-rearing in earnest; and we can have a large amount of workers on hand when the harvest comes. It matters but little if we have a bountiful honey crop at any time, if we have no work-

ers to gather it our share of this bountiful gift of nature—ready to be bestowed upon us by the great Giver of all good—will be most disagreeably small. But if we have used diligence, and improved upon the one talent put into our hands, we may have plenty of laborers, who will be willing to work for us and board themselves, thus showing the old proverb true that God helps those who help themselves.

Hoping these few lines will prove a ready reckoner to at least a few of your many readers, I remain,

Yours, truly.

Columbia, Tennessee. February, 1876.

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For the Bee World.
SUNDRIES FROM SUNNYSIDE, SOUTH-
ERN MISSISSIPPI.

—
ANNA SAUNDERS.
—

Do send me the September number of the BEE WORLD, if there is a copy to be had. I did not know whether or not you had received my article on "Bee Forage," until recently I received several letters which it had elicited. I can not answer them all now, but will certainly do so as soon as possible. I hope none of my regular correspondents are beginning to fancy I want to drop them. I hope in a few weeks I shall be able to spare a little more time to my far-away friends.

Can anyone tell at what time honey occupies the smallest space, and give an idea of how much allowance should be made for expansion? It is my custom to give full measure and down weight in measuring or weighing, and I have frequently had cause to regret filling my honey vessels too full. According to a rough estimate, I think the contraction from evening till morning on a summer's day here

amounts to nearly one foot in sixty. By evening again it will be up to the original mark, or higher, if the day has been warmer than the preceding one. Then it seems that from a certain point it expands on the loss of heat, also. The rending of rocks and mountains by the freezing, and the fearful power of water when converted into steam, makes us all familiar with the fact that at a certain point (40° Fah.), water expands on either increase or diminution of heat. The school books used to teach that no other substance possessed this property. But we bee-keepers know that honey is just as singular in this respect, though we have not seen it show its eccentricity in so powerful a manner; but we often find it stated that the honey granulated, corks burst out of the bottles, and honey ran over even to the shelf. This solidifying process takes place in winter, and must be produced by the abstraction of caloric as with other substances. Taking this view of the matter, I did not anticipate trouble with granulated honey here, where we have so little cold weather. But last winter I opened a hive in which I accidentally discovered the honey in the combs was so completely granulated as to resemble wet sugar. My extracted honey was as limpid as ever at the time, and, indeed, through the whole winter. This was the second granulated honey I ever saw, and I thought there must have been something peculiar in that particular specimen. But last week I had to empty a demijohn of honey, which was almost in a solid state. I had enough demijohns, stone jars, &c., to hold about a barrel and a half or two barrels, and my barrels leaking so badly last summer, I left honey in

these things. Last week I emptied nearly all of them which still contained any. Besides the demijohn mentioned, none of it was badly granulated except one bottle. Some of the vessels showed no signs whatever of granulation. I should think the process would be very greatly accelerated by disturbing the honey after it had reached, or nearly reached, the point at which solidification begins; and in proof that it is so I noticed that my pound bottles, filled in the fall, are badly granulated, though I hope they will not get sufficiently so to burst the corks out. If everyone liked it in this state as well as I do there would be no need to guard against it.

Reasoning from analogy it would seem that there should be a fixed degree of temperature at which the solidifying process should invariably begin; and if temperature alone controlled the operation of course there would be. In point of fact, though, I suppose it granulates at a higher or lower temperature, according as it contains more or less of the substance or substances which assist granulation. The hottest part of last summer I noticed a few grains in the bottom of one of my bottles, and while real warm weather still lasted I received from three different persons queens which were supplied with honey in the comb which was granulated. The cells seemed full of the dry honey, and I cannot imagine how the bees lived on the imperceptible portion which had not become solid. The fact that boiling and skimming, and even skimming alone generally prevents it shows that something is contained in honey which is necessary to granulation. The first granulated honey I ever saw had been boiled, and I have recently learned of

another case in which boiling did not prove a preventive. Perhaps, though, it was boiled very slightly and skimmed in the same manner.

On opening some of my honey I found around the top of it, where it came in contact with the vessel, an ugly brown scum, of a very disagreeable taste. Before putting up I thought I had skimmed it all faithfully, but I had only small skimming vessels enough to hold about thirty gallons, and the open topped barrels which I used for this purpose were so deep, and the honey so thick, that I doubt if the benefit derived from using them paid for the trouble.

I have had only one small lot of honey to ferment; it was fermented in the cells, and went on fermenting as long as there was a drop of it, in spite of oft-repeated skimmings. It was capped over unusually well—some of it from top to bottom—and yet it was the thinnest honey I ever saw. So capping is not invariably an evidence that honey is thick. It required an astonishing allowance to be made for expansion.

While my bees were still gathering light colored honey last year, a few stocks for a little while gathered some dark honey of a beautiful red color, and of delicious flavor. It was scattered about, a cell here and two or three there. It colored the combs beautifully, but not permanently. I did not have time to track the bees, or in any way discover from what flowers these interesting specimens of honey were gathered.

The plum, peach, spring huckleberry, wood violet, and yellow jasmine commenced blooming before Christmas; wild peach before New Year's day; on the 8th I noticed white clover,

mullen, and many other plants blooming. I went around my apiary this evening. I have been able to go into it only once before since November. Many of my hives I have not opened since I stopped extracting in June or July. I keep hoping that the time will come which will allow me to give more attention to my bees, but it is still in the future. Unavoidable as this neglect has been, I can not help feeling something like self reproach when I see how much they need attention.

Woodville, Miss., January 15, 1876.

—o—
For the Bee World.
FRUIT SIRUP FOR BEES.

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H. J. P.
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EDITOR BEE WORLD:—I have a small apiary (of blacks) located several miles from the swamps, which for the last three years has failed to pay me a reasonable dividend. If I use the extractor after the season of fruit blooms the bees fail to recuperate, and if not fed either desert their hives or starve to death during the winter. On the place grow large quantities of sweet fruits, such as peaches, plums, figs, grapes, berries and melons, which for the want of a paying market are fed to the hogs or allowed to rot on the ground.

Now, as these fruits contain large quantities of grape sugar, the main constituent of honey, why would it not be a good idea to gather the sweetest of this fruit, during the time of scant bee pasturage and boil the same with cheap honey or cane syrup, (which latter is also converted into grape sugar by long boiling with fruit juices), and feed the bees with the syrup so obtained? Would the bees,

if fed plentifully with this syrup, store and seal it in the surplus boxes or frames? and would it have the taste and odor of honey gathered from the nectar of flowers in the natural way? I have never tried feeding with fruit syrup, and would like to hear from some one who has.

Bibb County, Ga., January, 1876.

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For the Bee World.
NEGLIGENCE.
RUCKER.

EDITOR BEE WORLD:—Some time has elapsed since I have written an article for the WORLD, and I am at a loss to know how to commence; but as the subject that I have selected is so much suited to myself, I had as well commence with my own experience in neglecting duties that devolve upon us. The first duties of man are to the Creator of man; and should we neglect these we are doomed to eternal misery and loss. The second duties are that which we owe to ourselves and our fellow man. When I say ourselves I include the whole family; and should we neglect these duties we are sure to suffer for want in the family circle. Should we neglect our fellow man we ought to expect to be neglected, and when we want help we have no one to look to. The next highest claim on man is his property, which is composed of various kinds; and we who farm are compelled to have horses, cattle, hogs, &c. Now, if they are neglected as I have neglected to write for the BEE WORLD, they would have been all dead and no money in the pocket to buy more. Then I would be in a sad fix to work my little farm this coming year. In like manner the honey bee must have attention if we expect to harvest any honey when the

harvest time shall roll around. What say you, my young bee-keeper, (for I am not writing for the eye of Davis, or H. of Murfreesboro, or none of the old bee fraternity, but for the new beginner, like your humble servant).

Now for some of my negligence: Early in May I had two large swarms of bees come out the same day and at the same time, all going together. In trying to hive them in two hives I ran them into the woods about one hundred yards from my yard, and settled them on the body of a tree, ten feet from the ground. I then went to work to put them into one hive, and succeeded, and set the hive on the ground and neglected to take it to the yard. They went to work and soon filled the hive. I think it was 12 days after when I took from them about 20 lbs. comb honey; and I noticed then that they were making preparations to cast a swarm. They were off by themselves, and they did swarm, but I neglected to be there in time to save them, and they were gone before I knew it. I still neglected them, and they swarmed and swarmed until there was none left worth a shuck, and this fall I went to see them and the moth had what was left. So, you see—as my mother has often told me, “A stitch in time saves nine,”—had I been faithful to my duty I would have had a good colony of bees, and probably 40 lbs. more nice comb honey where I now only have 20 lbs.

The above is only one case and I could mention more of my own. And here I will give another reason for not writing more, and being more attentive to my bees, and that is, I have (as the saying is) too many irons in the fire. Now, I would advise that we all take heed to a lesson taught me when

young, that anything that is worth doing is worth doing well. That, also, will apply to our honey bees.

The honey harvest in this section was not a very long one. It was almost an average yield. The market is not good. I could dispose of one barrel at about \$2 per gallon. I never did sell any cheaper than that; and, as friend H. says, I have half a dozen little Bakers, and they are all honey destroyers, and good extracted honey never has made any of them sick that I know of. One thing I do know,—honey saves meat, and I believe it is equally as healthy; and bacon will all ways sell.

Now, friend Moon, you want to sell all us poor people a little home in Florida, where flowers always secrete honey, and the orange tree is forever in bloom. I would just like to know if there are any negroes there. If there are, I am like the Dutchman was about going to heaven where the preacher said his (the Dutchman's) wife had gone: "I comes not there." I carried a Mississippi rifle in Florida in 1862, but did not think about making a home and an apiary there then.

I reckon I had better stop until the next change of the Moon.

Hernando, Mississippi, December 15, 1875.

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MAURY COUNTY (TENN.) BEE-KEEPERS MEETING.

The Maury County (Tenn.) Bee-Keeper's Society, held their regular meeting in the Circuit Court room, Columbia, Tenn., on Saturday, Jan. 1, 1876. There was a full attendance.

The minutes of the last meeting were read and adopted.

Mr. J. J. Jones moved that the Secretary be authorized to receive members at any time—adopted.

Mr. David Staples, being called upon, addressed the Society about as follows:

Mr. President and Gentlemen:—I feel highly complimented on being called upon to address you on this occasion, upon the history and habits of the Honey Bee. But knowing my inability, it is not strange, nor unnatural that I should feel a degree of embarrassment. But as the vast ocean on whose bosom floats the mighty ships of commerce, is made of little drops of water; and this earth on which we tread, is composed of little grains of sand, it may not be amiss in me to cast my little drop in to the ocean of science, that is now sweeping across our pleasant land.

A retrospect of the past is noble, and well becomes an enlightened mind. It is not necessary that all communications with our fellow beings, shall be cut off, because they first succeeded to this hereditary globe, and first mingled with its silent dust. In reviewing the past thick coming fancies, and stern realities, strangely mingled, crowd upon our minds.

One moment, we wander among the crumbling epitome of ancient mythology, where we see that the Honey Bee has been the friend and companion of the white man ever since the most remote ages in history (I say white man, for there is a tradition among the Indians of the present day, whenever they see the Honey Bee among them, it is an omen that the white man is on the trial). I need not trace the chronicles, and show you how she sought the hollows of the trees, the clefts of rocks, and the carcass of the dead lion, wherein she could bestow her loads of sacred sweets, in order that she might

have not only a sufficiency for herself and young, but also an occasional treat for her friend. Let us pass by the inhuman ordeal, when lo, we behold him in the darkness of night with the brimstone match in his hand, in cold blood and unprovoked murder, and rob the little innocent, who feign would have toiled her life away for his good, had it not been for such base inhumanity.

These we hope might not directly concern us or our countrymen. But no sooner do we tread on America's soil, no sooner see her Langstroth with his movable comb hive, than we are personally interested in its history, and commence a scientific course in apiculture. Far off on the shores of Geneva, in the year seventeen hundred and ninety-five was seen a Huber (having no doubt solved the riddle, wherein from the strong came forth sweetness.) Observing with what accuracy the little insect followed the ribs in the carcass of the dead lion, he conceived the idea of placing a bar across his hive, that he might secure straight combs. and in whatever direction he pleased.

After having lain dormant for more than a half a century, those ideas were aroused and wafted across the mountainous wave of the Atlantic and were caught up by a Langstroth about the year eighteen hundred and fifty one, which was the first permanent step in apiculture in America. This was the land of the log gum, and the brimstone match; and perchance one half century ago, the rude gum stood on the very ground, where these walls are now erected. The brimstone match was lighted, and the foul murder and base robbery were committed where this candid

audience is now seated. I have said the idea came, and need I tell the result. The log gum was driven from its place in the grove, was expelled from its corner in the yard, was banished from its nook in the garden; and ere long, the little relic of barbarism will be known only as among the things that were.

Having attained the perfect control of the hive, and by the importation of the Italian bee, (whose superiority has long since been decided,) it became necessary to give the queen more room at certain seasons, wherein she could deposit her eggs. Hence sprang up (as by magic) the mel-apult, the honey slinger, the extractor and a vast vocabulary of names, signifying a little machine with which we are enabled to remove the honey from the combs, and return them to the hive to be refilled by the bees; thus saving much honey and labor in building new combs.

In order to attain the greatest success in apiculture, it is necessary that we should have a large supply of workers on hand to gather the harvest when it comes. (Me-thinks I hear some one say, I thought bees made honey, and why cannot they make it at one time as well as another.) No sir, bees do not make honey; but nature secretes it in the nectaries of the flowers, and bees gathered it, and and store it in the combs which they have made.

The honey crop in this country is sometimes cut short by excessive wet or excessive dry weather. Therefore the necessity of having a strong band of workers on hand, that they may wade in at its early appearance and take of the first fruits of the land, and should the harvest linger, you

need not fear that the laborers will tire, for when there is work to do, the little busy bee is always ready.

I might go on and describe to you the different kinds of bees, such as the common black bee, the gray bee of the South, the German bee, the Italian or Ligurian bee, the Cyprian bee, the Egyptian bee and the Stingless bee of South America, also the various manipulations of the apiary; such as rearing queens and bees, removing honey from the combs, and placing them back in the hive to be filled again, etc. But I fear it would be monotonous, and intrude upon your time. But if any of you are sufficiently interested to come to my apiary at any time, I will show you with pleasure, what little I have learned concerning this beautiful gift of nature bestowed upon us by the Great Giver of all good.

It seems like I hear some one say, "does this bee business pay?" In answer, I would say it is not unlike many other rural pursuits. Who among you would buy a fine flock of Cotswold sheep, a herd of Ayrshire cows, or a good stock of Berkshire pigs, and turn them on the commons, with no care, and expect a large profit? In the same way if he buys a full colony of Italian bees, and puts them in a log-gum to take care of themselves, he may have all the profits, I do not wish to share them with him. We however have statistics from not only this State, but also from almost every State in the Union; where with proper management, it pays from 100 to 300 per cent. on the capital invested. Not only so, it is a business in which ladies can engage as well as men, and I believe some of the most successful apiarists in the United States are

ladies. And I would that more of the ladies in this country, who are left with small fortunes, and can hardly keep the wolf from the door, could be induced to turn their attention to the scientific keeping of a few colonies of bees.

In conclusion, let me say in the language of an eminent writer, I would not for one moment encourage any one to engage in this enterprise, without first having a taste for this rural branch. Could you see in this field of labor, a beauty, a grandeur that would give you pleasure to follow, then I would say to you as a friend that you can make it one of the most successful occupations of the day, and would warrant you a successful future. To do this, the novice must understand to be successful he must know how to get good strong stocks, and learn how to keep them so. Concerning this rural branch, we can safely say that in no other part of the world has apiculture made greater advances, than in America. The prosperity of the apicultural community has been unparalleled.

In the apicultural pursuits of this country, there is ample room for all. There is no need for jealousy. Yet we are sorry to say that selfishness has been the motto of some. The more enlightened we become as honest men in apiculture, the more we rejoice to see all indications of improvement advance.

There may be a few Judases in our camp, but we speak as a whole, each endeavors to stimulate his brother apiarists by his own success. By this means, there is generally among them a fraternal feeling. There is a great pleasure in this—one that we need feel proud of. It produces in social

life a feature so lovely, so elevating that it opens a way by which we may be better prepared to understand the beauties of nature. Much of the progress which has been attained in our country, is the result of individual enterprise. It has, however, been aided by the press; to-day, we are marching on to victory. Our course has been one of onward movements, although there has been a neglect in this country to cultivate a taste for apiculture, from the fact that the whole subject has been generally viewed with indifference, and in some places we are sorry to say treated with disdain. Yet, let every adept in the science teach the right, the true, the practifful method of successful bee-keeping, and ignorance, and superstition will be driven from the land. And then in connection with the rearing of cows, sheep, pigs and other agricultural pursuits, for which this country is so beautifully adapted, we may expect the good promise given to our forefathers of old, truly verified: "Thou shalt inherit a land flowing with milk and honey."

The question set for discussion, viz.: Mode, objects and results of feeding, and queen rearing was then taken up.

Mr. S. D. McLean said there were various methods of feeding, and two kinds of food, viz.: liquid and pollen food. Bees when rearing young required a great deal of pollen and honey. Some fed them sweet liquids by suspending it in the hive, or placing it out in the open air. The best plan, he thought, was to feed in the hive; regarded unbolted rye meal the best for pollen. The object of feeding is to stimulate the queens, and make strong colonies, thereby securing plenty of combs and honey. His mode

of feeding was by inverting a vessel on a plate, and setting it on top of the frames, allowing it to run out in just sufficient quantity for the bees to get around, and take it up. The result of feeding, he found to be very beneficial. When bees were gathering honey the queen would be found to be laying. It should be kept up when commenced, for if the supply was cut off the brood would die. Had noticed in the last few days that his bees entered his kitchen for meal. Advised that bees be fed now, thought about the first of February the best time to feed. On examining his hives found that his queens were laying now.

J. J. Jones.—Will Mr. McLean please state why he considers rye meal the best food for pollen?

S. D. McLean.—Because they partake of it more readily, and it nearer resembles pollen.

J. J. Jones.—My bees have been feeding on corn meal, and it has kept them out of mischief; did not know why rye meal was the best; have never heard or read of any reason being given. He thought it probable that it was more convenient and cheaper.

D. Staples.—I think Mr. McLean is correct. If the matter of feeding be tested, thought it would be found that those that were fed would be found more active during the honey season. There were many things in nature we could not explain. He had observed his bees working in sawdust. The reason they preferred rye meal, he supposed, was because they knew what was best for them.

S. D. McLean.—Put rye and corn meal both out, side by side and they would take the rye and leave the corn meal.

C. C. Vaughan.—Had put them both out together. Thought they took most readily of the one they first lit upon.

Mr. Caskey.—Thought if they took anything more readily or better than corn meal, it would be an injury. Supposed they took the rye in preference, because it was much richer. He proportioned his liquid food of one part water to three of sugar. This he poured into an empty rack of comb. Regarded comb as the feeder. One rack of comb, filled, was sufficient to feed a large colony of bees. By this mode of feeding there was no danger of having been drowned. His experience was that those which had been fed are more active and go earlier and more readily to work.

Mr. Staples asked Mr. Caskey why he fed his bees at all.

Mr. Caskey.—That they may nourish their brood. The feeding of syrup stimulates the queen to laying, and unless fed, the brood would die. Also fed at other times to keep his bees from starving. He objected to feeding strong colonies, for the purpose of stimulating them, until February.

Mr. Jones thought Mr. Caskey's mode of feeding objectionable, as it would induce robbery. His mode was to construct a feeder of canvass in a frame of his hive, into which he poured his syrup.

Mr. McLean.—If bees had plenty of uncapped honey he did not think it worth while to feed them. It would be found that the queens of weak colonies would be the last to commence laying.

Mr. Jones.—It matters not if the hives are full of honey, if the crop is suddenly cut short, the queen will stop laying.

Mr. McLean.—Queens are laying now, and there is nothing for them to gather at this time.

Mr. Caskey.—Weak colonies will not have as many eggs as strong ones, because they haven't the bees to take care of the brood.

Mr. Jones.—I have never made a practical test of the matter, but I think if two hives were experimented with, by extracting all the honey from one, and leaving the other as it is, and the honey gradually fed back to the one from which it was extracted, that they would prove during the honey-harvest to be the best workers. His bees were gathering honey now—thought it probable that it was by robbery.

Dr. Boyd thought that feeding required a great deal of judgement. Some queens were good layers, being better than others, and always had in their hives an abundance of honey. The best laying queens he regarded as dangerous, and it was necessary that they be closely watched. Did not think there was any great difference in any of the meals, as they all contained a great deal of nutrition. They did not contain any saccharine matter, but did contain starch and gluten.

Mr. Staples read extracts from a manuscript which he had prepared on feeding; at the conclusion of which he stated that it might be found in full in the bee journals.

Mr. Jones.—Last spring, a year ago, moved his apiary to a new place in cold weather. Soon after it turned warm, and the bees came out, and seemed lost. Many of them entered other hives, one in particular, which caused it to be very full of bees. When the blooms put forth, and the season came for honey, he found this strong colony

gathered a great deal more than any of the others. Yet they had had no feeding. The stronger the colonies the more they would gather.

Mr. Staples said that when feeding was commenced, it should be done regularly, and kept up until the honey season opens, but would not commence until it was approaching near enough to the honey season to keep it up, as they would start too much brood, and, by dropping it off, it would be destroyed.

The members of the society were invited to the apiary of Staples and Andrews, which was accepted, and afterwards reconsidered and postponed until the regular meeting in April.

Wm. J. Andrews offered the following as a substitute for Article 3d of the Constitution:

"That any person can become a member of this society by a vote of two-thirds of the members present, and paying a fee of fifty cents, and signing the Constitution." The amendment was adopted.

Dr. Boyd offered the following resolution, which was adopted:

Resolved—That the Executive Committee inquire into the propriety of employing some one to sell the crop of honey raised by the members of this society, and report upon what terms it can be done at the next meeting.

Dr. Boyd moved that the Secretary ascertain of the members of this society the number and kind of hives they have on hand. Motion adopted.

Mr. Vaughn moved that the Executive Committee be instructed to ascertain the best shape to have honey in, for market. Adopted.

The Secretary stated that he had been requested to have the rearing

of poultry connected with the society.

Mr. Staples moved that we unite with the chicken men.

Mr. Evans would favor the motion if it was so amended as to give bee questions the precedent, and added that he was very fond of chicken meat, but when it came to the table, could not tell the best blood from the common Dunghill. (Mr. E. is a preacher.) The motion was rejected, as it was thought it would occupy too much of the time of the society.

The Secretary moved that the question of "Queen Rearing" be postponed until the next regular meeting, and be the question for that meeting. Adopted.

The Secretary offered the following resolution, which was adopted.

Resolved—That the president appoint two members to write and read, at the next meeting, an essay on queen rearing and Italianizing.

The President appointed Mr. Jones and Mr. Vaughn. Mr. Jones declined, as he was not a queen breeder, and Mr. McLean appointed in his stead.

The society then, by special request of a new beginner, briefly discussed the best hive to use, without arriving at any definite conclusion; all agreeing that it should be movable frame, containing above 2,000 cubic inches, be easily entered, and all be of one uniform pattern.

On motion, the society then adjourned to the first Saturday in April.

WM. J. ANDREWS,
Secretary and Treasurer.

—o—

Can you not turn agent for the BEE WORLD a little while and send us a few subscribers? Send us three at two dollars each and receive your own free.

For the Bee World.

LETTER FROM TEXAS.

E. M. WISE.

MR. A. F. MOON:—I will give you a little of my experience in bee-keeping this year. I commenced in the spring with four colonies in box hives. One of them cast two swarms, and two of them one each. The fourth one proved to be queenless and I transferred them into a frame hive, and gave them some brood and eggs from one of my queenless swarms (they having been put in movable frame hives), and they soon had queen cells started; but before they hatched I received an Italian queen, so I cut them out and gave them the Italian queen. She soon filled all the combs with eggs, and they soon became strong and filled their hive with honey enough to winter on. The hive that cast two swarms I also transferred, and the second swarm made no surplus honey.

I made some hives and had them filled on shares, and got two more stocks in that way. I also captured a runaway swarm, and made one artificially, in the following manner:—I received an Italian queen and introduced her to one of my strongest blackest stocks, after taking out the black queen and caging. I then took an empty hive and put two or three frames of brood and honey in it without any bees. I then put the black queen on one of the combs and closed it up, moved a strong stock about three feet away and set the hive containing the queen in its place, opened the entrance a little and soon had a very good swarm of bees in it. They received the queen kindly, she commenced depositing eggs at once, and they went to work all right. I now have twelve

colonies, two in box hives and ten in movable frame hives. Two of them are pure Italians and one hybrid. I am not acquainted with the Italians well enough to give any opinion in regard to them. I have taken between 125 lbs. and 150 lbs. of nice comb honey during the season. The early honey here is much clearer and nicer than the late. We get the most of our surplus in May and June, though the bees gather enough to keep them breeding until about the first of November and sometimes a surplus.

I would be pleased if you or some of your correspondents would give the most practical way of Italianizing black bees and raising queens and getting them purely fertilized.

Waxahatchie, Texas, December, 15, 1875.

A NEGLECTED INDUSTRY.—BEE CULTURE.

There is one industry in this country which is not overworked nor overcrowded, and which offers reasonably large and sure profits, because for its products there is always a demand. It is one which hundreds of people can carry on without interfering with their regular occupations, and which might serve to give employment to many now seeking labor, or additional income to others of straightened means. We refer to beekeeping, and we speak of it now because the opening of spring is a good time, for those who may heed our advice, to make a beginning. Out of the 40,000,000 people in this country, only 70,000 are beekeepers, and these send to market about 15,000,000 lbs. of honey and wax yearly. Now to see how enormously below the average, of what the country ought to produce, the above yield is, we have only to

make a brief calculation based on the assertion of the late Mr. Quinby, one of the best and most reliable authorities on apiculture. He says that, on an average, every acre of ground ought to yield 1 lb. of honey—cities and all, be it remembered, because it has been practically demonstrated that the bees will find excellent materials for honey in the refuse and garbage as well as in the few green spots enclosed within brick and mortar walls. There are 1,897,146,250 acres in our national domain; and even if we deduct 50 per cent of this for utterly uninhabited localities, the yield should be about sixty times greater than it is. To proceed a step further, every pound of honey is worth, on an average, 25 cents, and each pound of wax, 30 cents. Taking the figures in the last census as a basis, the value of the annual products is: Wax \$189,338, and honey \$3,676,703, total \$3,866,041. But this is only 1-62 of the value which might be produced, and therefore the said possible value is worth \$240,000,000, consequently there is a waste of \$236,000,000 worth of valuable produce, which evaporates into the air. One well known authority plainly asserts that the amount of honey lost, in California alone, yearly, exceeds in value the quantity of gold gathered in the State during the same period. The census says that, in 1870, there were but 136 professional apiarists in the country; a monthly publication devoted entirely to discussion of bee culture is our authority for the statement that, altogether, 70,000 persons keep bees. Only 1 person, then, out of every 570 in the United States, is engaged in preventing the above named waste, or, more strictly speaking, in trying to divert some of the

evaporated value into his own pockets: 1 person in about every 300,000 is engaged in doing this as an exclusive business. The census says that there are nearly 290,000 clerks alone in the country, clerks and salesmen be it noticed, not employees in general, one to every 144 of the population. There is not a year elapses that does not see hundreds of young men and women swarming into the great cities looking for clerical employments, nor can a winter pass but that we are not brought face to face with terrible destitution, and merchants everywhere are compelled to deny, for their own immediate welfare, appeal after appeal which strongly excites both sympathy and charitable feeling. An advertisement in a daily journal of this city for clerical help results in answers by the hundred, as we personally know. Now is there not something wrong in a system under which, on one hand, an industry, not a new one yesterday, but one almost as old as the human race itself, goes begging for people to follow it, the resources of which are suffered to run to absolute waste to the extent of millions of dollars yearly; and under which, on the other hand, thousands of the best part of the population manage to crowd into big cities and there starve because there is no honest labor for them?

We do not argue that each and everybody should instantly provide himself with an improved hive and a swarm of bees, and therein find sooner or later a fortune; we merely point out one industry, more thoroughly and uniformly neglected than any other that we can recall. It is, moreover, in the development of industries of this kind that the solution of the much agitated women question lies.

Apiculture is one of the few pursuits that a woman is physically able to follow in its every branch; herein it is of especial advantage. Again, its development would prove a general blessing in that, besides enlarging the field of labor for every one it might serve to attract men out from behind counters in millinery and dry goods stores, away from the cities and into the open air of the country where, in agriculture, men's natural calling, the muscles which Nature has given them, and denied the weaker sex, could be put to profitable use.

We shall revert to this subject of bee culture in its more practical bearing at some future time.—[Scientific American.

—o—

NATIONAL BEE-KEEPER'S ASSOCIATION.

The annual meeting of the National Bee-Keeper's Association was held at Toledo, Ohio, Dec. 1, 2. As the Secretary has not furnished us with the detailed report, we glean the following from the Toledo Blade :

The first question discussed was, "What is the best method of preparing bees for winter and spring management; also, how many bees are necessary?"

Captain W. F. Williams, of Liberty Center, Ohio, said he was in favor of plenty of ventilation. Had had a colony of bees for the last eight years that had openings in the hive, so that the little fellows could look out at any time and admire the starry heavens, and those which were thus exposed were always strong and healthy. His motto was to keep strong, full colonies, with plenty of ventilation, dry and quiet. Successful spring management depended upon successful fall and

winter management. He had tried double-walled hives, with no better success than those with a single wall.

Mr. B. B. Overmeyer, of Findlay, Ohio, said that his experience had taught him that the best time to begin to prepare bees for winter was about the first of August, and see that they got plenty of stores and young bees until frost came, as the weather became cold, to contract the size of the hive so that there would be no unnecessary room to keep warm, with plenty of comb to cluster in and over and down two sides of swarms with a little ventilation in the cap, and about one third summer fly-hole open below, to protect hives from storms of rain and snow, and let the bees rest in peace until spring, then stimulate them and enlarge the room as needed, but no faster.

The next question discussed was, "What Caused the Great Mortality of Bees Throughout the Country last Winter?" Mr. Jonas Schell, of Connelville, Indiana, said that in his section starvation was principally caused by bees not being able to get any honey on account of the cold. Mr. Blair thought that bees did not freeze, as a general thing. The good honey season, bees crowded the queen bee out so that the swarms were too small, and in consequence of the same they froze.

Mr. G. W. Zimmerman thought young bees were wanting according to his idea, and recommended placing in a warm place frequently to recuperate. President Benedict thought that when there was too much honey it should be extracted in time, and bees should not be too young to Winter. A swarm too small would chill, of course.

The President thought the mortality among bees last Winter was caused by a disease.

The question of what, how and when bees should be fed, was next taken up and discussed.

S. L. Diehl thought sugar syrup was an excellent food for bees, and cited an instance where one bee-keeper had fed over a hundred pounds of sugar and with good success. Mr. Zimmerman wished to know if the bees did not cap over the honey made where sugar was fed. Mr. Diehl replied that they did not. Mr. J. W. Lindley, of Iowa, said he lived where they had honey by the bushel. He had generally taken a sharp shovel, and shoveled off the top of the comb, and given the bees free access to it. The thing worked well in the fall, but he did not know how it would do in winter. Mr. H. R. Boardman had successfully fed bees a composition of two pounds of sugar to a gallon of water, and a pound of flour. This made a food something like honey, and he had been successful in feeding it. The President said it would not do to give bees honey or molasses through the winter as it would occasion dysentery. He fed clarified "A" sugar, eight pints of sugar to five pints of water, it made as good food as honey itself.

The next question debated was, "The best Mode of Increasing Swarms." Mr. J. W. Lindley had used all styles of hives. His wife said if he raised bees he most do so naturally. He put the new queen back in the hive and generally had large swarms in two or three months after. Mr. A. Bair said he had read that Quinby remarked that a queen bee introduce to a few bees was equal to a swarm of bees. Mr.

Lindley had had a different experience only a fertile pueen put back in the hive, as he had experimented, was equal to a swarm of bees. In twenty-four hours after she was put back he would have plenty of nurses. Mr. Hill thought that this process was well enough where the object was to make honey, but where increase of stock was desired, he thought that the better plan was to divide up the swarms. He had done so several times, and subdivided them as often as he found queens, and very successfully too. Mr. Lindley always caged the old queen, and had most generally been successful in so doing.

M. J. W. Zimmerman had made swarms in August from strong swarms. It was always proper to consider the condition of bees when swarms were made. They should be divided into as many cells as there were swarms desired. He would advise that course more than any other.

M. A. Bair would advise artificial swarming

Mr. H. R. Boardman's plan was to double the hives one over the other. When they brooded in both hives, and the queen could not lay enough eggs to keep them busy, he separated them and let them fly in either hive.

Mr. Snidley calculated to have about 300 pounds of surplus honey each fall with which to buy swarms. Mr. Schell had given up artificial for natural swarming. A colony previous to swarming were not inclined to worker comb. To increase worker comb, he found nothing like an old swarm being put into an empty hive. The bees would cluster in that hive and if not given comb, would generate wax and fill the comb with honey. Mr. Deihl had found artificial swarming always

successful where there had been a division of the swarms. Mr. Bair would prefer natural swarming for honey, but not for increase.

The Convention seemed about evenly divided in opinion as to the propriety of natural and artificial swarming, both methods having a number of warm supporters. All agreed, however, that artificial swarming should be made as nearly natural as possible.

Mr. Bondman moved that a vote of the Convention be taken. The motion was carried, and the vote showed that 18 were in favor of artificial swarming, six in favor of natural and 12 were in favor of using both methods, as the case might be.

The next general question, "What is the best method, of rearing and introducing queens?" was then taken up. Mr. A. J. Hill of Mt. Healthy, stated that he was engaged in the raising of queens, and said that he took three nice bees, divided his stock, and put half with the queens and half without. As soon as the queens cells are ready to hatch out he cuts them out and puts them in new frames, and puts the old combs into the former frames and continues this through the season. Raises all queens in large hives. In introducing queens he takes out the old queen, puts the Italian queen in a wire gauze frame, and places that in the center of the hive, and in a few days it is generally perfectly at home.

Mrs. M. A. Bills wanted to know if it was a common thing for queens to leave their stock, and of their own accord go to queenless hives, and wanted to know how the custom could be kept up, for it was a very desirable one.

It seemed to be the opinion of the

majority of the members that the case was of frequent occurrence, but that it was seldom that it occurs as often as was mentioned by Mrs. Bills.

Mr. Zimmerman was in favor of introducing queens in cages.

Mr. Butler said he got his stock in the best possible condition; then removed the queen, and on the twelfth day divided the stock that had been making queen cells and then after a few days put them together again. Didn't think the queen could be introduced except by caging, unless it was put in as soon as the queen was taken out.

Mr. Benedict had a novel way to introduce imported queens. He drummed up the queen and destroyed it. He then took a cup of water, put some essence of peppermint and threw them into, they would accept the new queen without any trouble.

Several numbers took the queen to be introduced, put her in a wire cloth cage, put it in the hive and put the honey around it. The bees will then come there, recognize the flavor of the honey, and soon they recognize her and accept her into the hive.

For the ensuing year, J. W. Zimmerman, of Napoleon, Ohio, was chosen President; B. B. Overmeyer, Lindsey, Ohio, Recording and J. W. Lindsey, Mitchell, Iowa, Corresponding Secretary; J. S. Hill, Mt. Healthy Ohio, Treasurer, with a list of Vice President representing various States.

Philadelphia was selected as the place and the first Wednesday of September, 1876, as the time for holding the next annual meeting.

SEND us six subscribers at two dollars each, and we will send you a queen.

Notes and Queries.

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

Our bees are in good condition, and well advanced in brood. In a few weeks more we shall have new swarms. Fruit trees are in full bloom, also the orange, maple, willow, blackberry, &c.; and honey is now plenty in our fields and forests.

E. STAHL, JR.

Jefferson Parish, La., January 21, 1876.

I have sown some lucerne, and it is looking splendid y. Bees did finely this year—no disease this winter. Never had any trouble with mine in winter or spring.

C. H. ENGLISH,

Sullivan, Missouri, January 18, 1876.

I succeeded admirably with my bees last season, both in getting honey and Italianizing, considering that was my first effort. I could give you a report, but, with the standard bee men of the country as writers, you do not need anything I could say. I started with one Italian stock, movable frames, and six black stocks in box hives, which I transferred. I have sold two stocks of Italian bees, and now have four stocks pure Italians, four of hybrids, and two of blacks.

WM. H. LLOYD,

Pine Apple, Alabama, January 24, 1876.

We made an examination of many of our hives January 21st, and found them with plenty of stores, and the majority of the queens laying. Some had sealed brood.

On the 23d, which was a very pleasant but windy day with us, we lost a hive of bees by swarming. The queen was one of my own rearing last season. She took her departure early in the morning, and found new quarters in a hive of one of my neighbors. On examination of the hive she left we found it to contain an abundance of honey, both capped and uncapped; also, pollen and fresh laid eggs, as well as sealed brood. Can anyone tell why they left?

WM. J. ANDREWS,

Columbia, Tennessee, January 26, 1876.

It must be that the hive in question was being robbed. We have known instances where a colony gave up their

stores without resistance, and immediately repaired to the home of their enemy. In such a case it would be a hard matter to detect any signs of robbing until too late. Perhaps some of our readers can give a more satisfactory solution of the case. It is constantly occurring in our apiaries, and a remedy suggested would be of great value.

—o—

There has been a great deal said and written about queens and drones, their origin, habits, &c., and I am a little puzzled on the subject. It is universally acknowledged that the queen is a perfect insect, and that she never enjoys but one honeymoon, or the embrace of the drone but once, which is unlike everything else, unless some other insect. It is also acknowledged that the drone is an imperfect insect, &c. What or whose theory is it that says that a queen that is perfect, and a drone that is imperfect will produce a queen like the mother and a drone that is like the father?

My bees are in fine trim, commenced to carry in pollen January 15th, and were as busy as they were in March last year. You may look out this year; I am going for the silver pitcher and greenbacks. Give me a "world" of moonlight once a month and I will make you look slim at the next State fair. My bees are more docile this winter than they have ever been before. I think more of them than anything else I have; cannot wait till spring to commence working with them.

J. S. DEVITTE,

Taylorville, Georgia, January 27, 1876.

The drone and queen are both perfect insects, and the worker is an imperfect one. All arguments must be predicated upon that theory. Quinby asserted that he had never succeeded in having a queen fertilized by a drone from an unimpregnated queen. McGaw states that he sees no difference in their capacity for reproduction. It is a question that will have supporters on both sides. Standard authorities differ on many points relative to the fecundation of the queen.

MOON'S BEE WORLD.

A. F. MOON & CO.,

Cor. Broad and Elm streets., Rome, Georgia.

FEBRUARY, 1876.

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BEE PASTURAGE.

MANY inquiries come to us regarding the best honey producing plants to cultivate for bees, time of sowing or planting, manner of cultivation, &c. We cannot answer these questions except in a general way. Differences in latitude make corresponding differences in the honey yield of the same plants. The seasons have a controlling influence upon the secretions of plants, also, and, above all, the ravages of civilization are making changes in the honey yield, through the rapid decimation of the forests, that make it difficult to decide upon the wants of a country.

Where the linden, poplar (basswood of the North), and white clover grows bees generally do well. We have seen the linden and poplar transplanted from its native soils— heavy and rich—successfully to the higher and poorer soils of the hills, and think it advisable to encourage their growth in all

portions of our beautiful country. For not only do they stand preeminent as honey yielders, but they are of the utmost value to the whole human race—for manufacturing purposes in the case of the former, and grazing in the latter.

It is a well-known fact that all animated nature depends upon the earths yielding her fruits and sweets in their appointed season, and in the greatest abundance. Hence we find the bee to increase and flourish best where the earth yields the greatest profusion of flowers through the greatest number of months in the year. But we can greatly assist nature in her labor by planting and caring for such plants as we may not find in our immediate vicinity, and add materially to profits of our apiary at the same time. If a little pains is taken a rich harvest can be reasonably hoped for. In this portion of Georgia there has been a heavy honey dew the present winter. Properly speaking, though, it is not a honey dew, as it is produced by the aphid or plant louse. But such an occurrence is rare. It may not occur again in years. The different kinds of mustard will bloom quite freely through the winter, and affords considerable pasturage for the bees. Sow it freely. Sow buckwheat, Alsike clover, luzerne, rape, catnip, or anything that will help the bees. Other branches of industry require care and expense, and just the same must be expected of bee keeping.

A FEMALE FORGER.

(Special telegram to the Inter-Ocean, Chicago.)
Des Moines, Iowa, Jan. 25, 1876.

A warrant for the arrest of Mrs. E. S. Tupper, the noted apiarist, was received by the officers in this city to-day. She is charged with committing forgery for \$2,000 on the bank of Monticello. Several weeks since she forged the names of several parties at Marshalltown for about \$1,000, among others Senator Harlin. The matter was compromised by friends, and no prosecution resulted. She is undoubtedly deranged. She has been suspected for several months.

In view of the above let us think this unfortunate lady as we would like to be thought of under like circumstances.

BROOD.

The mild weather we have been having this winter, during which time queen laying and brood rearing went on almost uninterruptedly, suddenly changed to severe cold on the 2d of this month. The result will be disastrous to the brood, as the bees were driven together to keep warm, thereby exposing the combs to the cold, causing the brood to become chilled. We presume our readers, as a general thing, expected this casualty to occur sooner or later, and will not be alarmed for the consequences. The bees will be compelled to clean their combs out, and carry out their dead. They will save the brood they managed to cover, and will, with fine weather, be as prosperous as ever in a short time.

GLEANINGS IN BEE CULTURE has been enlarged and a cover added. The price will be \$1. We congratulate Mr. Root on his success, and hope the bee-keepers will appreciate his energy. We shall not change the price for the four Journals, but will send them as before, for \$5.

On another page will be found the advertisement of C. R. Isham, relative to honey boxes. We believe it to the interest of our readers to avail themselves of the opportunity presented by him, and secure at least one set, that they may be satisfied as to their merits.

NATIONAL BEE-KEEPERS'
ASSOCIATION.

On the first of December last the National Bee Keepers' Association convened at Toledo, Ohio. Through the neglect of the Secretary it was not

announced in the BEE WORLD, although the publishers would gladly have done so had they been authorized to by that worthy. But we are still more failure at his failure to forward a report of the proceedings of the meeting? The Bee Journals have been compelled to take extracts from the local papers, and present them to their readers, in lieu of an official report! Candidly, does the N. B. A. amount to as much as some of our State Associations? Is not our Union too large to make a National Association a success? Does not the results justify us in putting forth the query? Any number of the BEE WORLD contains information of as much practical worth as is found in their reports; and at a great difference in expense.

We would like to have our contributors give their articles the proper heading or name before sending them to us for publication. We do not like to do this ourselves as we may not at all times do justice to the writer.

FRIEND PIKE advertises his Albino queens in this month's issue. They are certainly beauties, and will please almost anybody.

EARLY QUEENS.

We shall have some tested queens to spare early in April, from premium stock. They will be guaranteed pure, from good working stock, and be young and healthy. Parties desiring to work for the BEE WORLD in the way of getting up clubs can do so, and receive a queen as a premium. A queen will be given for a club of five. Or for a club of three and two dollars extra; or a club of two and three dollars extra.

Publisher's Department.

ADVERTISING RATES.

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

Fourth page of cover, double rates. Third page of cover, 50 per cent added to rates. WORLD included in all advertisements of eight dollars and over. Advertisements continued longer than ordered. Bills of reg. lar 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 ten lines or less. For each additional line one dollar will be charged. A line will average eight words.

EVERY SUBSCRIBER

Remitting us \$5.00, will receive the Bee World for 1876 and a tested Italian Queen in April. Queens will be sent by express at expense of purchaser.

On receipt of \$4.00 we will send a Queen—tested—in May, and Bee World one year. Queens sent by mail.

On receipt of \$3.50 we will send a tested queen in June, July, &c., and Bee World one year, queens sent by mail.

A. F. MOON & CO.



are the best the world produces. They are planted by a million people in America, and the result is beautiful Flowers and splendid Vegetables. A priced catalogue sent free to all who inclose the postage—a 2 cent stamp.

Vick's Floral Guide Quarterly, 25 cents a year. Vick's Flower and Vegetable Garden, 35 cents; with cloth covers 65 c. nts. Address JAMES VICE, Rochester, N. Y.

Glass Honey Boxes!

Practicable and profitable to use. Just the thing for Box Honey and admirably adapted to the wants of

SOUTHERN BEE-KEEPERS.

Honey in them took First Premium at New York State Fair 1874 and 1875. Circulars sent free. C. R. ISHAM, Peoria, Wyoming County, N. Y.

Pure Italian Queens and Full Colonies for Sale

The swarm of bees that took the first prize at the Georgia State Fair was bred from my stock

ALSO,

Pure Albino Queens,

The best in the world. Safe arrival guarantee. Send for price list. D. A. PIKE, Smithsburg, Md.

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AND

Full Colonies.

Bred from IMPORTED MOTHERS.

PURITY AND SAFE ARRIVAL GUARANTEED.

Orders booked now. Send for Circular and price list. Address M. PARSE, Pine Bluff, Ark

HONEY

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BEESWAX,

Bought for Cash.—Highest Prices Paid.

Address John K. McAllister & Co., 1071 49 E. Harrison St., Chicago.

AMERICAN BEE JOURNAL.

Every Bee-keeper should subscribe for this Monthly. It is the OLDEST AND BEST scientific and practical Journal of Apiculture in the world. The most successful and experienced Aparians in this country and Europe contribute to its pages. Terms Two Dollars a year in advance. SEND STAMP FOR A SAMPLE COPY. Address THOS. G. NEWMAN, 196 & 198 South Clark St., Chicago, Ill.

"COLUMBIA APIARY."

Queens From Imported Mothers for 1876.

We will sell Queens the coming season as follows:

1	Tested Queen from Imported Mother,	\$ 4 00
2	" " " " " "	7 50
3	" " " " " "	10 00
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	Untested Queens " " " "	1 00

Safe arrival of *all* Queens guaranteed.

Staples & Andrews, Columbia, Tenn.

Kind reader, if you are in any way interested i

BEES OR HONEY,

we will with pleasure send you a sample copy of our Monthly "GLEANINGS IN BEE CULTURE." Simply write your address plainly on a postal card and a dress
A. I. ROOT & CO., Medina, Ohio

A Valuable Book for Bee-Keepers!

THE APIARY PRICE, 50 CENTS.

This is the title of a work on Bee-Culture, recently written by Mr. A. F. MOON, and designed for the use of beginners.

PLAIN, PRACTICAL AND TO THE POINT.

Address A. F. Moon & Co., Rome, Ga.

EARLY ITALIAN QUEENS AND FULL COLONIES FOR 1876.

Tested Queens in nucleus colonies sent out in February and March. All Queens bred from Imported mothers. Full colonies, hives, the best honey extractor, improved smoker, feeder, etc. for sale.

IMPORTED QUEENS.

"This is to certify that Dr. J. P. H. Brown receives Italian Queen Bees through this office, imported direct from Italy.—C. H. BUCKLEY
Agent So. Express Co.,
Augusta, Ga., Oct. 11, 1875.

In order to supply the wants of my customers, I have made arrangements this season to receive every few weeks, Queens from the districts in Italy where the finest type of the Liguarian or Italian bee is found. Send for circular to

Dr. J. P. H. BROWN,
Augusta, Georgia.

BIND THE BEE WORLD!

The Emerson Binder is neat and durable. Every subscriber should have one. We will send, on receipt of \$2.50 the BEE WORLD for 1876, and one Binder. Price of Binder alone, 75 cents. A. F. Moon & Co., Rome, Ga.

Special Notices.

A Gem worth Reading!—A Diamond worth Seeing!

SAVE YOUR EYES!

Restore your Sight!
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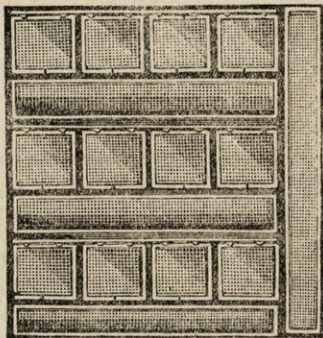
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