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VOL. 4

TERMS \$2.00 A YEAR.

NO. 1.



JANUARY,
1877.

MOON'S
Bee World,

A MONTHLY PERIODICAL

DEVOTED TO

BEE CULTURE.



A. F. MOON & CO., Publishers, Rome, Ga.



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MOON'S BEE WORLD.

—A GUIDE TO—

BEE-KEEPERS.

VOLUME 4.

JANUARY, 1877.

NUMBER 1.

For the Bee World,
Bits of Wisdom, from Various Authors.

SITUATION OF APIARY.

It is commonly believed that an apiary is not well situated unless it stands in the sun. This is an error; bees like the shade when working, and like the sun only when in the fields, which then animates and sustains them. They thrive well in thick forrests, and delight in them, because there they find an even temperature and a propitious shade. It is a mistake to suppose that hives, exposed to the sun, produce the earliest and strongest swarms. I have oftener than once experienced the reverse. My earliest swarms have generally come from the best shaded hives, and which only receive the sun late.

DEGELIEN.

While heaven born instinct bounds
their measured view,

From age to age, from Zamble to
Pern,

Their snow white cell the ordered art-
ists frame,

In size, in forme, in symetry, the
same.

EVANS.

Their geometry appears in the fabric of their combs, and their Astromy in the knowledge of the weather, for they foreknow and presage winds and storms and either keep themselves in their kives or go not far and quickly return.

PURCHAS.

MILD AND SEVERE WINTERS ON BEES.

It is said by many writers on this subject that a fine winter is dangerous to the bees, and that many more die in a mild than a severe one. They argue that as the appetite of the bees increase by their going often out, they consume their provisions and die of famine; whereas, when long confined in their hives they hardly eat any. I acknowledge that in a mild winter they do eat more food than in a cold one when they cannot get out, but this, as well as the fine air, contributes greatly to their health. Besides that, they hatch earlier, and consequently increase in the number of bees in the hive sooner. The fact is, that experience may convince any person that many more bees die in severe than in mild winters,

the winter 1776, which was very cold, a great many bees perished; and also during last winter (1874-75), being an excessively severe one, many more hives were destroyed from that cause alone; whereas, in winter 1779, which was remarkably mild, not one hive in twenty failed, and the bees in general swarmed a month earlier than usual.

BONNER.

A clear exposition of errors generally leads to improved practice.

BAGSTER.

ARTIFICIAL HEAT.

Artificial heat is not as favorable to the breeding of bees, nor to their health and lives as natural heat. I have set them to breeding in January, but I found the heat produced by the fire, though moderate, in the course of two weeks, caused death in many of the old bees, and a chill destroyed the larvae, and I was compelled to relinquish the winter enterprise as unprofitable business. I am inclined to think that a room may be so constructed and warmed by heated air, that swarms may be forwarded in the Spring to great advantage.

WEEKS.

WEAK STOCKS.

All stocks in common hives, that are light should be taken, and none left unless about twenty pounds weight. Weak stocks seldom survive the next Spring; but, if by the chance they do, turn to little account, not adequate to the trouble and expense of feeding.

KEYS.

Whenever drones are observed to remain in a hive in the Autumn, it is held to be a bad sign of the state of the hive.

MILLS.

Bees must be treated according to their instincts, and if constantly thwarted by the ignorance of their master,

will never thrive properly. Indeed, a man who hopes to get a decent harvest from his hives, and at the same time to manage them on a wrong principle, will effect about as much success as a gardener might who strove to improve the quality of a peach by grafting it upon a strawberry. The principle of grafting here is right enough but the application is wrong. So if a man learns any number of correct ideas from books, yet if, at the same time, he does not learn the application, he will do but little good.

WOOD.

Any one who is so circumstanced as to be able to afford the time, who has means of obtaining the necessary supplies, and who will bestow on them a patient and careful examination, will find both pleasure and gratification in the study, and it is very questionable whether any portion of the animal creation is capable of returning to man greater profit, in comparison with his outlay, than bees.

MILTON.

MANAGEMENT.

So much difference is in their strength, one stock from another, and in the places they stand in, besides the uncertainty of the weather, that almost no general rules can be set down for directions, but may in some sort, and in some places, admit of some exceptions and small alterations, therefore circumspection must be used until experience shows you how to order bees rightly.

RUSDEN.

ENTRANCE TO HIVES.

The mouths of the hives should be lessened so much during the winter, by means of a slider fitted to it, that there may be room left only for air, and to afford a passage to two or three bees.

WILDMAN.

DILIGENCE AND PRUDENCE.

Bees neither beg nor borrow, and spare no pains in Summer to lay in their winter stores. Herein they are patterns for us. THORLEY.

PRESERVATION OF BEEE IN WINTER.

According to my judgment, the principles requisite for the preservation of bees in Winter, are that the hive contain a sufficient number of bees to maintain a certain degree of warmth; that they have a plentiful store of honey; and that they be secluded from the inclemency of snow and rain; and out of the influence of the sun; to be kept still and undisturbed. It is a philosophical truth, that the vital principle is cherished and promoted by heat, and that all animals and insects flourish and prosper most when under its influence. Analogy, therefore, would seem to dictate that bees be kept moderately, and as far as possible uniformly warm. TOWNLEY.

When to the eye of man there is no visible token of a sudden shower, or other immediate change from fine weather to foul, bees are aware it, and by their sudden, hurried return to their hives are the first to prognosticate a change is near; nor often as I have observed them have I ever found them wrong in this respect. NUTT.

—o—
For the Bee World.
Two Queens in one Hive.

—
REV. M. MAHIN, D. D.
—

Last fall I observed two instances of two queens in one hive. One case was that of a queen in her fourth year, and a young one by which she was finally superceded. I noticed, in looking through the hive, a single queen cell; and being apprehensive that the old queen would not live through the win-

ter I did not destroy it. On examining the hive a week later I found a fine young queen, and the old one was still there and apparently laying. I continued to examine the hive occasionally, and for at least three weeks continued to find both queens, and sometimes not only on the same comb, but on the same side of it.

The other case was more peculiar than this. I had procured a queen of a friend, and removed one to make room for her. At the usual time for liberating her the bees seemed hostile to her. I thought their hostility grew out of the fact that the cage contained a considerable number of bees which I had brought home with the queen. So I turned them out, and put the cage containing the queen alone back into the hive, and the next day liberated her. A week afterwards I examined the hive and found matured queen cells, but saw neither queen nor eggs, and took it for granted that the queen had been destroyed, and so wrote to the gentleman of whom I had obtained her. Four weeks after I introduced her, I was looking through the hive and was very much surprised to find my old queen alive and well, and seeming to feel quite at home, and as I proceeded with my examination I found a fine young queen which I removed. In this case the two queens, which were not mother and daughter, had been joint occupants of the hive for at least two weeks. I suppose that queen cells had been started before the queen was uncaged, and the bees did not destroy them.

I tried some experiments this fall in introducing queens. I had a number of *nuclei* containing pure queens with which to replace some impure ones. So I took out the impure queens and then went to the *nuclei* and removing the

queens, put the impure ones among the bees as nearly as possible in the spot from which the queen had just been removed. This I did in five cases, and in every one the queen was accepted. In one case I put the new queen by mistake on the opposite side of the comb, and in another she passed round to the other side, and in both these cases the bees imprisoned them for a time but released them uninjured. In the three other cases they did not seem to know that their own queen had been removed, and a stranger introduced.

This was done at a time when there was no brood in the hives. I would not advise anybody to introduce a valuable queen in this way as I would not be willing to do it myself. It may be that with eggs and brood in the hive the plan would not succeed.

My bees have had a good fly to-day. We have just had an unusually severe spell of weather, and it has made some impression on the bees. Some of the hives had nearly half a pint of dead bees in them, and the snow and the hives are stained by the drippings of the bees to an unusual degree for this time in the year. Should the winter continue cold there will be some loss of stocks.

Newcastle, Ind., Dec., 13th, 1876.

—o—

For the Bee World.

Pure vs. Hybred Bees.

GEO. W. BARCLAY.

FRIEND MOON:—It has been a long time since I wrote anything for the "Dear old Journal." (Please allow us to use the word old just once out of respect for our beloved journal.)

Brother Moon, we can't help but say it, and when you come to read this part of our "piece" just look some other way.

You are doing a great work for the bee-keeping interest of this country. Your journal is replete, and overflowing with the best thoughts of practical apiarians. Moreover, we are glad to see the good that has been done by our brother bee-keepers in their controversies.

But we have wandered from our text. By the way brother Moon, you are aware that experience is a dear school and many will learn in any other—so it has been with the writer, and we will give you our experience under the heading, "Pure vs. Hybred Bees."

Our experience and observation in handling bees has proved to us, that for beautiful straight comb and ease in managing the pure Italian bee is the best; and in making this statement, we believe all who have handled the pure bee and all grades and shades of hybrids will agree with us.

During the month of September I cut four bee trees. One of the swarms was nearly if not quite pure, two others were probably two thirds pure, the fourth about one fourth. We saved all of the four swarms. The first three had as nice comb as I ever looked upon. The fourth was very different and built in the most fantastic shapes. A very small portion of it brood comb and a comparatively small store of honey for the size of the swarm. These two certainly two of the finest and most prolific queens I ever handled. The purest swarm was not as large by perhaps one fifth as the other two, neither had they so much honey. But, Mr. Editor it would have done you so much good to have seen those beautiful combs, some of them nearly five feet long and about ten inches wide in the middle.

But give me those hybrids which are about two thirds Italian for honey gath-

ers. As with the bee tree swarms, so has been my experience with all hybrids. They are hardy and great workers and the queens are very prolific.

For those who have the matter of dollars and cents in view, (that is those who view the matter from a honey stand-point,) the hybrid is certainly the best.

We volunteer, by the way of advice, don't let your stock run down. Queens are very cheap, and like all other stock bees are capable of great improvement and we should select our queens from those stocks that show the honey gathering instinct and qualities the most fully developed.

We would like to have this hybrid question discussed in the journal, and hear from those who are more competent to handle the subject than I am.

Mr. Editor, we leave this subject for the present, but will refer to it again.

We have noted down several subjects for future consideration, such as ventilation gives their form and size.

Tipton, Iowa.

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For the Bee World.
Wintering Bees.

In the keeping our stocks of bees through the Winter and carrying them safely through to another honey season, there are some difficult ties; and sometimes they prove fatal to some of the colonies. At other times all perish. In the few experiments I have made in the business, I have been best satisfied in the result of cellar wintering. With the cellars above the freezing point and the windows darkened, the following advantages were secured:

1. Swarms that were weak and with little honey could be supplied from a feeder placed upon the bars of the hive

and feed supplied them the whole winter with very little trouble. When I had not a feeder, I have removed the top board and placed a sheet of empty comb upon the top and filled it with cheap honey, or sugar or syrup, and the bees would come upon the comb and feed and return again into the hive.

2. All swarms may be fed from February, or earlier, according to climate, and with the encouragement given by starting, the queen will begin her course of laying from the encouragement of a certain supply of feed and have an increasing force, ready to enter the field early in the season. If we succeed in getting a large working force into the field early in the season, and give them room to store 200 lbs. of surplus honey, forty 5-lb. boxes, worth 25 cts. a pound, I think this is about as easy way as any farmer can raise \$50. His colony of bees and hives would cost him, perhaps, \$12, and be good for ten, twenty and sometimes they have exceeded thirty years.

If your reader starts in bee-keeping he may find it both pleasant and profitable in proportion to the money expended, and he would hardly expect his family would complain if he had honey to set upon the table for his family and visitors very frequently.

The same estimates may answer for ten, twenty or more hives, according to the field. In your section of country you know, probably, little about the difficulties we meet with here. But every country has its flowering season for honey, and then is the time for bees to store it for the season when there are no flowers. In that season they will want a store to feed upon, and your useful paper is not confined to a Southern climate.

JASPER HAZEN.
Woodstock, Vermont.

For the Bee World.

Scraps from Missouri.

E. C- L. LARCH.

DEAR READERS:—Volume 3, of the BEE WORLD, was closed last issue, and I am happy to say, has been worth many times its cost to the beginner and not without value to the most experienced apiarian. Readers, do not expect too much of its editor, as he is necessarily engaged a large part of his time in his apiary, and cannot always give it the personal supervision necessary. Therefore, I earnestly appeal to try to do something to render the journal more valuable in the future. Some will perhaps say that everything has been written time and again, and that there is nothing new. Well, let it be written again for the benefit of the beginner. But the science is far from perfection; there are many discoveries and improvements yet to be made in bee-keeping, and many disputed points, not yet settled, of sufficient importance to demand attention. On reading the last number, I was very much surprised to find that several correspondents have not been paying for their advertisements except by their valuable communications. That any one would impose upon an editor in this way is more than I was willing to believe; but such must have been the case, or it never would have been admitted. Every intelligent apiarian knows that it is to their interest to write for the journals occasionally, especially if they are advertising bees or queens for sale, and then to ask or accept pay in the way of advertising is enough to shake the faith of any one in regard to their honesty. If they are not able to pay for advertising, it would be better for them to abandon

the field to those who find it profitable to advertise and pay for it in dollars and cents. This method of cheap advertising has occasioned great loss to the editor, as well as occasioning many losses and disappointments, and has encouraged unprincipled persons to advertise, thereby possibly leading to some disagreeable controversies. I sincerely hope that such advertisements will be excluded in the future and their place filled with something more profitable. Editors must live, and cannot do it by gratuitous advertising.

Ashland, Missouri.

For the Bee World.

Items.

JEWELL DAVIS.

MR. EDITOR:—My last article was written some months since, and notwithstanding I have failed to appear in the columns of the BEE WORLD, I have not forgotten the admired journal. Press of business in other directions is the only excuse I plead, and trust I may not be so hindered in the future.

The honey season during the months of May and June last was remarkably good. In this part of our State, (Illinois), and was tolerably fair until the middle of July. After that time the secretion of honey only amounted to enough for the daily consumption of the colonies, and keep up the swarming fever until the 6th of September, when the last swarm for 1876 was cast in my apiary. Of course, during this period of time no storing in boxes was done. During the whole month of August the swarms which came off did not gather honey enough, without feeding, to keep up the necessary comb building to fill the hives, and hence would swarm out again, and leave for part unknown, unless immediately re-

turned to their hive and liberally fed.

This disposition of things to such an extent, never occurred with my bees before. In the first part of the season, I put the second and third swarms together—making them equal to first swarms, but this they refused in the late swarming—being intent on slaughtering one another most fearfully.

The winter is upon us, and we may fear that if it should be long and severe as in some of the years gone by, (when the bees died so numerous,) that the mortality may be very great again. It is true they have better feed, or stores to live upon than they did then, and may do well unless the cold should be too long protracted, at any one time, or their stores should be consumed within their reach, they being kept too long from them and starve.

I have been wishing that some of our chief-bee men, who have been writing for the BEE WORLD would leave out of their communications some of the mishaps in business transactions, and fill the space with something that does not infringe upon, or malign the character of other parties.

It is true there may be some who do not deal honestly with their patrons, and at the same time there are others who do not intentionally do wrong, and are abused in their innocence, or under circumstances beyond their control. A hint to the reflecting is sufficient.

Charleston, Ill., Dec. 4th, 1876.

Friend Davis, the article you allude to has not been received, or would appeared in season.—ED.

Do Bees Make Honey or do They Gather It?

At our last State Fair, held at Macon, Ga., a gentleman of science from one of the New England States, whose

name and address we have forgotten—he was a man of science, and seemed well posted upon most all topics except bee culture.

While we were exhibiting bees, explaining their nature, habits, workings, etc., this gentleman approached us seemingly with a good deal of interest, and exclaimed:

“Sir; you don’t say that bees gather honey from the flowers, do you?”

“Most assuredly, sir, I do.”

The stranger said:

“Well, that is news to me. I did suppose that bees made honey from the flowers and elsewhere, and I cannot but still think so.”

How strange it is, that men of science—etomologists—men who we would suppose understood the insect and floral word far better than to even suppose that bees made honey, when the simple fact can be made known to the novice in apiculture in the short space of an hour.

PROFESSOR RILEY’S VIEWS.

While we regard the Professor’s views on most all subjects connected with his profession, yet we must confess our surprise at such an idea emanating from a professional man, the Professor’s views has created quite a sensation among novices, both in this and the old country. Many years ago a gentleman from Dartford, England, visited our apiary one morning. The bees were very busy bringing in honey. We were examining an observatory hive. He remarked:

“Just see them making honey.”

We told him the bees were only unloading their honey they had just brought in.

“No;” says he, “they are making honey. That is the way they do in the old country.”

This was news to us, and we resolved to test the matter. At this time white clover was in full bloom, and yielding richly in honey. We had two very strong hives, standing close by each other. We took from one of them a frame of brood, placed it in a new hive. this was done in the morning, when a greaer portion of the bees were in the field, we filled our new hive with nice empty comb, and placed the new hive between the two old one, and removed the old hives several rods away. This gave our new swarm an unusual large quantity of bees—just what we wated. The bees, for a few minutes, seemed frustrated, but soon resumed their usual energy. The next morning when the great bulk of the bees were out for honey, we took from them the frames containg the empty comb given them the morning previous, and found on two combs a number of empty cells already capped over. We then gave them a new set of empty combs, leaving the frame of brood with them. This was done at seven o'clock in the morning. At ten o'clock we took from them the comb given them at seven, and found they had deposited three and a quarter pounds of as fine honey as we ever saw. The next morning we repeated the experiment, only giving them one hour and a half, and found the same quality of honey we did the morning previous; and had we continued to repeat this experiment and given the bees ten to fifteen minutes' time, the honey would have been the same. Now, we cannot see why any one could for one moment believe that bees made honey unless they adopt the churning process; and perhaps this is the ground that Professor Riley takes, but whether or not, we will give the readers a synopsis of it. A writer not long since

in the *American Bee Journal* said that bees gathered something from the flowers and elsewhere and started for their hive, and by the time they had arrived the substance gathered had gone through a churning process and came out honey. The writer forgot to tell how far the bees had to travel before it was churned. Now this looks about as consistent as it does to think that bees make honey. Flowers differ in their nature and sweetness—some will yield double the amount of the saccharine juice than others will, there is a flower called honeysuckle; this flower grows spontaneous on Bay Islands, near New Zeland, and a single flower has been known to contain nearly one half teaspoon full of pure honey at one time, this we have from the men who have often witnessed it.

Of course the quality and quantity of honey is governed by climatic influences. Honey is a natural secretian a saccharine juice that is eminating from the floral world, and is lost unless gathered by the bees or other insects. When bees gather honey from white clover, it has that peculiar flavor adopted to that one particular flower. When they gather from Buckwheat it has also a particular flavor, which the bees cannot remove, and so we may say with all plants, each emitting its peculiar flavor.

It has been contended by some if we feed bees a good syrup made from white sugar that they will make honey from it, this is a mistaken Idea. Should the syrup be removed very soon after being deposited, it would be syrup still. On the other hand if it be allowed to remain some little time in the hive the scent and heat of the bees will in a measure change its flavor. And perhaps some little honey will be deposited in

the cells which will help change its taste. Bees have a very peculiar smell and a very pleasant one, except when enraged. A strong swarm of bees by their heat and scent will change the taste of butter in twenty four hours.

Try it ye novices and report, and when you write for the "BEE WORLD." Please don't say that your bees have "churned" or made so much honey—they have gathered it from the floral world.—[ED.]

For the Bee World,

Bee Notes from Tompkins County New York.

D. W. FLETCHER.

FRIEND MOON. — The November number of the BEE WORLD has just come to hand, full of interesting matter to bee-keepers as usual. It has been a long time since I have written anything for your journal, and as I have a little leisure I thought I would write you a few notes. The honey harvest closed in this locality about the 5th of September and bees as a general thing are in good condition as far as I have seen, better than one year ago, I think. One apiary some ten miles from here I visited a short time ago. It consists of about one hundred colonies, and most of them are in fine condition; are in Langstroth hives. The proprietor told me he received no profit from them aside from a little honey for family use. This apiary is worse than a farm overrun with weeds. A great many of the combs are built very irregular and crooked and the proprietor requested me to ask you what to do with them. He wishes to reduce them to fifty stocks in the spring, in case they winter, and then he does not want any more swarms, but wants them to work

in the boxes instead of swarming, and further says if this inquiry is answered satisfactory, he will subscribe for the paper. He has Langstroth's book and several others, and has been rather unsuccessful in the bee business since he begun. The comb guides that he uses are the triangle or sharp edge, and all put at an equal distance apart and hives set level. Yet, the bees will build crooked combs and in some hives the combs are as true as could be wished for, his bees are of the black variety, have been crossed a trifle with the Italians.

What kind of boxes do you use and what kind would you recommend for market if you were to raise comb honey exclusively? Also, what sort of a top bar or comb guide would you use in your frames; and how many frames to a hive, if you were located in Central New York State?

I think much of your opinion as you have devoted much of your time to bee culture, and your instruction and advice to a novice would be of great value. I read every number of the WORLD with much interest. Some say that is adapted to the bee-keepers residing in the South, and is of no particular use to bee-keepers residing in the North. Now I think it very instructive and interesting to any bee-keeper if he resides as far North as Maine. One thing to be considered is: the editor of the BEE WORLD is a practical apiarian, of many years' experience. This is worth a great deal to any bee-keeper—a practical bee-keeper at the helm. I also read many interesting and instructive notes from the pen of W. J. Andrews, of Columbia, Tenn.; in fact, all are good and I hope during the year 1877, which is close on hand, will be a good year on bees and bee-

keepers throughout the country; and I hope they will not forget the BEE WORLD, and all try and increase its circulation, both at home and abroad. With the best wishes and the kindest regards for yourself and all the readers of the BEE WORLD, and bee-keepers in general, I will close by wishing you all a happy new Year.

Lansingville, Jompkins county, N. Y.

—o—
For the Bee World.

Our Centennial Letter.

WM. J. ANDREWS.

EDITOR BEE WORLD:—We returned from a visit to the Centennial on the first instant. While in New York, we called on Mr. A. J. King, one of the editors of the *Bee-Keepers' Magazine*, with whom we spent a very pleasant hour. Mr. King placed us under obligations to him for bound volumes of the *National Bee Journal*. We left New York on the morning of the 25th inst., with the hopes of being able to reach Philadelphia in time to be present at the meeting of the National Bee-Keepers' Society, but owing to delays, the train did not arrive at Philadelphia until one o'clock, and by the time we secured a room and had our dinner it was three o'clock, so we did not visit the grounds until the following morning. On our arrival at the grounds on the following morning, we immediately repaired to the honey display of Capt. J. E. Hethington, of Cherry Valley, N. Y. The display by Capt. H. was very fine. After considerable effort we found the display of Mr. Harbison, of California. While the latter was good, it could not begin to compete with that of Capt. Hethington. At both these stands we were in hopes of meeting some one who could

give us some information regarding the meeting of the society, but were disappointed. A placard was hanging at each, stating that the meeting had adjourned, to 7 P. M., at the Atlas Hotel. At 4 P. M. we went to the Atlas Hotel to try and ascertain if they intended holding another session, but we could get no information whatever. We concluded, however, that we would be on hand at 7 P. M., and so we were. Doubtless there were a number of bee-keepers in the city who would have been in attendance had the place of meeting been better known. Although we had made it the chief object of our visit, we were near being entirely deprived of that pleasure.

On entering the room in which the meeting was being held, we found a good attendance, but every face a strange one to us. We, however, did not long remain a stranger. We sought out and soon introduced ourself to Mr. J. H. Nellis. With Mr. N. we have had dealings for sometime, and had formed a very favorable impression of him, which was by no means changed in making his personal acquaintance—on the contrary, we were still more favorably impressed. To know him is to like him. We had long been seated in the room until Mr. Pitman, of Virginia, introduced himself.

On our entrance Mr. T. G. Newman, of Chicago, was addressing the Society on organization. It was quite gratifying to us to hear his eulogy on our Maury County Bee-Keepers' Society, of which he spoke in high terms, the more so, too, because he was totally unaware that it had a representative present. Soon after the close of Mr. Newman's remarks, his eyes fell on us, and recognized us from a photograph and at once introduced himself. Mr.,

Newman we take to be a good worker, and, if we mistake not, "a jolly good soul is he."

The next speaker was Mr. Root, of New York, the former partner and co-laborer of Quinby. He is a man of practical ideas and means business.

Mr. Root was interrupted in his speech by the appearance of the committee on organization. You cannot imagine our utter surprise when the committee submitted its report and recommended your humble servant for its chief officer for the next ensuing year. Why we should be selected in preference to the many distinguished gentlemen who were present and stand eminent as apairians, we cannot imagine. It was an honor, certainly, unthought of and unsought for, but one, we assure you, duly appreciated, and we shall endeavor to recompense it by giving all the energies and whatever talents we possess, to fostering and building up the Society, and placing it on a footing where it will be an honor to American apairians. To this end we ask the aid and assistance of all apairians, and would be glad to have any suggestions looking to that end. Immediately after the election we assumed the chair and presided over the meeting for the meeting for the remainder of the evening. Quite a number of essays were read, then a running discussion on "Wintering," which was participated in by quite a number of the members present. New York was chosen as the next place of meeting, and, if we remember aright, the third Monday in October as the time.

At the close of the meeting, quite a number of those present came forward and made themselves know to us, among whom we call to mind Mr. Coe, of House Apairy fame, to whom, as

you requested, we presented your kind regards; Mr. Hill, of Ohio; Mr. J. P. Moore, of New York; Mr. Alley, of Massachusetts; and a host of others, whose names we cannot now call to mind.

The display of apairian supplies at the Centennial was very poor indeed. Mr. Coe had a neat house on the grounds, and although we visited it as many as a dozen times, we never saw it open. Another gentleman, whose name we have forgotten, had his hives on exhibition, these, with the honey displays of Capt. Hetherington and Mr. Harbisen constituted, so far as we saw, everything in the way of the apairy.

Columbia, Tenn., Nov. 6. 1876.

P. S.—At Cincinnati, we failed to make connection, and having a few hours to put in at that place, we called on Mr. Chas. F. Muth. The day was beautiful—the sun was shining in all its grandeur, and Mr. Muth's bees were flying as though they had a holiday. No sign-boards were necessary to tell us of our arrival at Mr. Muth's, for the front of his store house was lined with barrels containing nature's sweet nectar, and his golden pets were smarming around them, sipping up such as ooze from the bungs and other crevices.

Mr. Muth exhibited to us various samples of honey, some from our own country, the product of the apairy of Mr. Orman, near Spring, Tenn. But the prettiest we saw or ever expect to see, for we cannot conceive how it can be any prettier, was the honey he showed us of Mr. Hill's, near Cincinnati. Mr. Muth also showed us the various improvements he used in connection with his apairy. Lastly we wended our way up stairs and out on top of his building. Here an array of hives met our view, for Mr. Muth's apairy is lo-

cated on top of his store house. He opened to us hive after hive, showing his golden pets. He also had some of the Egyptians, which he pronounced good honey gathers, but said Mitchell told the truth for once, if no more, when he said "they were the duce to handle."

We found Mr. Muth a very pleasant social, agreeable gentleman, and we can confidently say that we believe that all who have dealings with him will be fairly dealt with. In our conversation with him, he expressed regrets that there was not that pains taken by southern bee-keepers with their honey as should be, and from the several samples shown us clearly demonstrated the fact. With extracted honey he told us, did not make so much difference, but with box honey it should, to command the highest market price, be as light and transparent as possible.

Our visit to Mr. Muth will long be remembered as a pleasant, agreeable and profitable one.

For the Bee World.
Scraps from Illinois--Dual Royalty.

WILL M. KELLOGG.

In the Nov. number, friend Peters has an article on two queens in one hive and goes on to prove it. No one who knows anything about it, doubts the fact of there sometimes being two and even more queens in one hive. But I have yet to hear of two "perfect prolific" queens being let to live any length of time in the same hive.

A great many have seen the two queens in one hive, but did any one ever see it, where one of the queens was not deformed or improlific from old age or injury?

Last spring I had a stock that had

two queens for over six weeks. One of them was all right, as she should be, while the other was a very small one, laying queen with no wings. And every case of the kind I have heard of personally, or had in my own yard, has been of the same kind. The case friend Peters describes, where they killed his Italian queen, was probably a similar one, and they were superceding the old queen, (which the assistant found I think,) with the new one just hatched from the queen cell he found. When the bees "stick like burrs" to the caged queen, look out for trouble and don't let her loose till you can take the cage out of the hive with but few bees on it.

I think many queens are lost by the bees being roused up so in opening the hive to get at the cage placed down among the combs. I would advise placing the cage on top of the frames, where it can be examined at a glance and without scarcely a bee knowing it.

I would say to friend Larch, in regard to the BEE WORLD being behind time, "once upon a time," that awhile ago, I did not get the WORLD for two months and they both finally came on the same day; all on account of the mails I suppose.

RESULT OF THE SEASON.

I began last spring with 11 light stocks, with not over one lb. of honey on the average to the stock. When flowers came, or rather weather for the bees, for the flowers were in bloom long before the bees could work on them. Had a short spurt of a yield, enough to give the bees plenty for winter and spring and vs. 312 lbs. extracted honey. The fall was cold and wet, so we got no honey at all. Bought three stocks and nucleus. Sold three and now have packed away in our bee hou-

ses and in the barn twenty-two good heavy stocks. The fall and winter so far has been all that we could wish for; cold enough to keep the bees in a torpid state, with the exception of a few days.

CRIPPLED BEES.

We too have had them, one with a hole stove in its side as large as the head of a pin, who came regularly to our fish tank for water for a number of days.

Friend Moon, a few days ago I sent you a stereoscopic view of our bee yard, hope you got it all safe.

Oneida, Ill., Nov. 26th, 1876.

For the Bee World, That Barrel of Honey.

J. F. MONTGOMERY.

FRIEND MOON:—As I have not wrote nothing for the WORLD in some time, I will drop you a few lines this morning which you can publish if you deem it worthy. The past has been the worst season for honey that I ever experienced. I commenced the season with about 50 colonies. There was so much rain the first week of the poplar bloom that we got but little honey from that source, only about 1000 pounds.

The first of June I moved my bees a distance of nine miles to where there is an abundance of Vinewood, but was no more successful there than at home. From the Linn I got a little more than 1000 lbs. but the trouble and expense was more than the profits. Since then bees have done nothing at all. Mine would all have been dead long before this if I had not fed them. The probability is I will have about 45 colonies to commence with next spring.

The two story law suit has been put off till the spring term of the Federal

Court. I have no doubt but what I will be successful. If I am not all users of two story hives may commence feeling for their five dollars, as Gellispie will then be around to see them. Have got no pay yet for that barrel of honey I sent McAllister & Company, Chicago.

Lincoln, Tenn., Dec., 12th, 1876.

For the Bee World. Contributors and Contributions.

J. M. HARRIS.

MR. MOON:—I have been examining the present volume of the BEE WORLD (eleven numbers), and find twenty-one States represented by direct contributions, viz:

States.	No. of Contributors.	No. of Contributions.
Alabama.....	2.....	5
Arkansas.....	1.....	2
California	1.....	1
Florida.....	1.....	1
Georgia.....	11.....	20
Illinois.....	6.....	33
Indiana.....	4.....	13
Kentucky.....	8.....	9
Louisiana.....	6.....	12
Maine	1.....	4
Missouri.....	1.....	8
Maryland	1.....	3
Massachusetts...	1.....	2
Mississippi	5.....	13
New York.....	2.....	3
North Carolina..	1.....	5
South Carolina...	2.....	2
Tennessee.....	11.....	41
Texas.....	2.....	2
Vermont.....	1.....	2
Wisconsin.....	1.....	1
Total.....	61.....	182

This is, perhaps, not exactly correct, but very near it. Tennessee still leads. The greatest number of contributions from one writer is from Tennessee, by

W. J. Andrews (14). The next highest, Mahin, of Indiana (13). Next, from Illinois, Kellogg and Dadant (9 each).

This count does not include "Weather Notes" and "Notes and Queries" by Mr. Andrew. Neither does it include reports of societies. A few contributors I could not locate, as they neglected to give their post office.

Mr. Devitte is, perhaps, the most successful bee-keeper in our county. There are several persons in the county who are keeping a few bees, but how they are succeeding I cannot tell; but fear they will not succeed very well, unless they take and read the BEE WORLD.

We Georgians cannot expect to cope with California and a few other favored localities, but I think with proper knowledge of the business (which we can have if we study the bee journals), and close attention, we can make bee culture pay a handsome dividend. I do not think everybody ought to keep bees. Some men succeed in some business, some in another. A man may be a good farmer and have so little mechanical ingenuity as not to be able to make a handle for an axe, hoe or plow. A blacksmith may be able to make a good axe of iron and steel, and then not be able to make a good handle for it. So we cannot expect any one man to succeed in all trades, or all men to succeed in any one trade. I think, however, all those who have a talent for bee-keeping, ought to have a few bees, for they are the workers, that I know of, that are willing to work and board themselves.

If you think this letter worth anything, you are at liberty to use any part or all of it, but if you reject it all I shall take no exceptions, but think

you treat it as it deserves. You ought to be the judge as to what is fit to appear in the WORLD.

Cedartown, Ga.

—o—
From the Lansing Republican.]

The Agricultural College Apiary.

—
REPORT FOR THE YEAR 1876.

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From forthcoming report of State Board of Agriculture.

Of the ten colonies of bees placed in the new cellar November 26th, all but one, the experimental colony, with none but old bees, came through the winter in fine condition. That one lived till spring, and then died. These colonies were all removed from the cellar once in January, and once in March; that they might have a purifying flight. They were not removed to the summer stands permanently till the middle of April.

During the previous autumn the bees were kept breeding even into October, and consumed nearly all the pollen. Several colonies had none. These had no brood when removed from the cellar. I attempted to supply this lack by feeding meal during the last of April, but found that nearly as soon as the weather would permit the bees to fly they could get pollen, and thus would not touch the meal.

I fed sparingly of syrup till the fruit trees were in bloom, and by that time had six or seven frames of brood in each hive. I also fed a little between the fruit trees' bloom and that of white clover, with the most satisfactory results.

During the season I have increased from nine to twenty colonies, all large and in excellent condition. I also procured two Italian queens imported from Italy, but lost one in introducing. The other has done well, and from her I have

Italianized the whole apiary, though I am in doubt whether all the queens were purely mated.

I did not permit the colonies to swarm, but practiced artificial swarming, or dividing. I lost three colonies, one coming out in the spring, and leaving at once, without waiting to alight even; the other two going off this fall, before I suspected any such thing, choosing Sunday of course as the time for their leave-taking. Had I previously cropped the queen's wings, all of these would have been saved. I have now no queens with uncropped wings.

I have extracted during the season 507 pounds from the brood chamber. About a third of this was from bass-wood, the other two-thirds from fall bloom, and none was extracted except from worker comb, which it was desired to keep free from honey that it might be used for brood.

During the season I have worked for comb-honey, both in boxes and in small frames, and found that I could secure much more in the frames. I find, too, that the honey in small frames is liked quite as well by consumers.

In the spring I surrounded the apiary grounds with numerous honey producing shrubs and trees, among which were bass-woods, locusts, crab-apple, shad-bush etc. Most of these have done well—a few have died. These have been kept mulched, and the ground about them well spaded all the season. I have also set out more evergreens, some for a wind-break, others for shade for bees; and have started some Concord grape-vines and Virginia creeper for shade. Some of the latter has been set about the house, that it may climb upon it, and has already made a fine growth. I have also set out several kinds of bee-plants of more

or less repute, the following of which have done well, and all yielded bloom except the two first, which will not bloom till another season; yellow trefoil clover, yellow Bokhara clover, mignonette, black mustard. Chinese mustard, borage, common and silver-leaf buckwheat, common and Chinese sunflower, and Rocky mountain bee-plant.

The following is the summary of the account with the apiary for the year :

APIARY.

	DR.
To improvement of grounds.....	\$26 17
" experimental plats.....	23 65
" tools.....	20 45
" making hives, feed, queens, and care of bees.....	84 81
Total.....	\$155 08

CR.

By 11 colonies of bees @ 10.....	\$410 00
" 506½ lbs. extracted honey @ 16@22c...	83 19
" 148½ lbs. comb honey @ 22½ c.....	33 90
" 168 lbs. comb honey (unsold) @20c.....	33 60
" 55½ lbs. extracted honey (unsold @ 15c.....	8 32
" 60 frames worker comb @ 10c.....	6 00
" 9 unoccupied bee hives @ \$2.....	18 00
" improved grounds.....	26 17
" experiments on bee plants.....	23 65
" 70 lbs asparagus @ 8c.....	5 69
" tools, record book, etc.....	15 45
" work bench.....	5 00
" lumber, oil, and paint on hand.....	2 33

Total receipts..... \$371 41

Total expenditures..... \$155 08

Net profit on 9 colonies..... \$216 33

" " per colony..... 24 05

CONCLUSIONS FROM YEAR'S WORK.

The experimental hive, strong in the old bees but containing no young bees, as no brood was permitted to hatch after the middle of August, and which died in early spring, indicates that spring dwindling may come from the fact that there are no young bees in the hive when the bees go into winter quarters. This condition may arise either from a poor queen, a poor yield of

honey, or dirth of honey in the autumn, when even the best queens will refuse to do duty; or, has been the case here this fall, such a greet honey yield as to give the queen no opportunity.

NATURAL SWARMING.

I have proved, what reason and a knowledge of the natural history of the honey bee would discover, that natural swarming is always suffered at great sacrifice. This insures a queenless colony for nearly or geneally quite two weeks, which is equivalent to the loss of a fair colony of bees, as a good, fertile young queen will start a fair colony in this time, especially as this is generally at the time of the best honey season of all the year.

THE EXTRACTOR.

The great valne of this machine has been again demonstrated during the wonderous honey yield of August and September. Although the bees had plenty of room in the supers—both boxes and frames—still they would fill up the brood cells as fast as the bees came forth, so as utterly to preclude breeding. By extracting, I kept the brood chamber replete with brood, while, by omitting the same, breeding stopped entirely. I found, too, that this drove the queen into the supers, where sne would lay if there was a possible chance; whereas, she would remain below entirely when room was given her in the brood chamber.

POLLEN A REQUISITE TO BROOD-REARING

The fact that there is no brood reared in colonies destitute of pollen till the bees had gather and stored some, seems a positive demonstration that pollen is an essential element of the food of the larvæ, though it is not required by the natural bees. The rapid increase of brood in the spring would also indicate that it is as well if

not best, that the bees have no pollen till they can fly out in the sprind.

FEEDING MEAL.

The observations the past spring, sustained also by those of 1874, show that bees are pretty apt to be able to gather pollen as soon as it is best for them to fly in the spring—by the middle of April—and that feeding meal is unnecessary.

EVERGREENS FOR SHADE.

Evergreens for shading the coionies, especially Norway spruce, not only serve an excellent purpose, but can be trimmed so as to make the apairy grounds very attractive from their beauty, and are to be strongly recommended.

SAWDUST ABOUT THE HIVES.

The sawdust about the hives, underlaid with brick, by keeping the grass down, serves an excellent purpose, as it enables one to see at a glance any bees that fall upon it, and thus ensuring against loss of the queen.

LATE FALL FEEDING.

As all the bees wintcred so well during the past winter, I could see no special difference between those fed late the previous fall and those that were not. All bred so late as to vitiate the experiment.

HONEY-PLANTS.

The experience of the summer shows that the following honed-plants not only yield well, but that they bloom from early in July till autumn. covering a period when there is a derth of native honey-bloom: mignonette, borage and black mustard. Chinese mustard is inferior to black mustard. It blooms earlier, and the bloom fades away much sooner. Sunflower is unworthy of cultivation, while the Rocky Mountain bee-plant blooms too late to be valuable where there is plenty of fall

bloom native to the region. With no native bloom to furnish autumn honey, it would be valuable. All of the above do well on light sandy soil.

GOLDEN-ROD HONEY.

Our autumn experience proves that golden-rod honey, though rather dark, is of very superior flavor. Several good judges have pronounced it superior even to linn or white clover.

A. J. COOK.

For the Bee World.

Erratta.

CHAS. DADANT.

In my article, November number of BEE WORLD, your type-setter made several *erratta*.

He has printed: "My son, when looking at his *hive* of imported queens were laying;" instead of looking if this *catch*... He printed: "Had remarked *their* queen;" I wrote, had remarked *this* queen... "There seemed no *interrogation*;" I wrote, *interruption*... "Then he *united* a few queens;" I wrote, *raised*... "Two were as *faith* as natives;" I wrote, *black*... "My son was *introducing* a few impurely marked queens;" I wrote, *destroying* and *mated*. There are also a few smaller *errata*, but they do not alter the meaning.

[If Mr. Dadant will *import* us a *Chinaman*, we will put up his writing correctly.—COMP.]

For the Bee World.

Fecundity of the Queen Bee.

CHAS. DADANT.

Under the title, "Age of the Queen Bees," Mr. Alley says: "A good prolific queen, say one that will lay *one hundred thousand eggs in a year*, will play out in two years. Most queens are good for from between two hundred thousand and three hundred thousand eggs during her life."

Now, Baron Burlepph has watched a queen who laid twelve hundred thousand eggs during her life. I have had queens laying as many as three thousand eggs—four or five hundred eggs every day for a whole month. These queens had some seventy thousand workers; cells filled with brood and eggs at the same time. Allowing 21 days for the egg to become a worker, the figures give 3,575 eggs per day. Of course such queens lay from February till November, and if we count their laying for the whole season we will find three or four hundred thousand eggs per year. Besides, such laying has nothing to do with the health of the queen; and she can live longer than a poor laying queen—her workers having no desire to supercede her.

It results from the comparison of the experience of friend Alley with mine, that either he has not examined carefully the laying capacities of his queens, or he has on hand a poor kind of bees as to the laying capacity of their queens.

Mr. Alley is a lover of yellow bees. Our imported queens have never given him satisfaction; they are too dark; they give too many dark queens; their workers are all too poorly marked; their bands as so narrow that, for Mr. Alley, they resemble hybrid bees.

Yes; but are those queens better than the yellow kind? Let those who have tried both, the yellow queens, raised in this country, and the dark queens, imported from Italy, answer.

In the same number, Mr. Larch boasts of having got one hundred pounds of honey from every colony for three years. Would Mr. Larch have had such a success with the yellow kind of bees? No!

Mr. McGaw, in the same number of the BEE WORLD, page 364, announces that he has done with the yellow bees, the daughters of the imported queens being the ones that have given him the honey.

I would multiply these instances but it is unnecessary, for every bee-keeper will readily understand that a stock whose queens lays four times as much as another, ought to be preferred.

Hamilton, Ill.

—o—

For the Bee World.

Items from Maryland.

D. A. PIKE.

Mr. Editor:—I will offer for publication a few facts which every bee-keeper ought to know:

1. That the life of a worker bee, during the working season, is only from six to eight weeks duration, and that a large majority of them never live to see seven weeks.

2. That a worker bee is from five to six days old, before it comes out of the hive for the first time, to take an airing, and that it is from fourteen to sixteen days old before it begins to gather either honey or pollen.

3. That all swarms engaged in building comb, when they not a fertile queen, build only drone and store comb, and that all the comb in the lower or breeding apartment of the hive should be worker or brood comb, except a very small quantity of drone comb, four inches square being amply sufficient.

4. That the more prolific the queen is the more young bees you have, and the more surplus honey will be stored up, other things being equal.

5. That you never ought to cut mouldy combs out of the hives, for the reason that you should never allow it to become mouldy.

6. That you ought never to double swarms or stocks of bees in the fall, because you ought to attend to that and make them strong during the summer by taking brood from strong stocks and giving it to the weaker.

7. That a drone-laying queen should be taken away and one producing workers put in her place, else the colony will soon come to nought.

8. That as a rule, as soon as an Italian queen shows signs of old age or feebleness, the bees themselves will supersede her.

9. That all should be kept strong in order to be successful.

10. That every hive should contain about two thousand cubic inches in the breeding apartment.

11. That beginners in bee-keeping should be very cautious about increasing the number of their swarms or stocks rapidly until they thoroughly understand the business.

12. That the hive itself, if well constructed, is all the bee-house you need in the summer season.

Smithsburg, Md.

—o—

Our National Society.

To the Bee-Keepers of North America:

At a recent meeting of the National Convention of bee-keepers, which assembled in Philadelphia, much to my surprise I was chosen its chief officer. In accepting the position I promised to do all I could to promote interests, and to that end I ask the aid and co-operation of all who desire to see a permanent national organization, and if there are any opposed to a national organization, I would ask why? In our country nearly all trades and occupations have their organizations. We have the Grangers, representing the farming community; the Locomotive Engineers, and

Typographical Unions, representing their interests; besides various others which I might enumerate but deem it unnecessary to do so. If we are to have a national association of bee-keepers, what are the best means of promoting its interests? That there is a need for such associations, for the benefit of bee culture, I have only to refer to the many local associations existing throughout the country. The lamented Quinby once wrote: "I cannot conceive of a plan better adapted to the better diffusion of knowledge of bee-culture than the one already in practice. Let us encourage the formation of as many associations as possible. A half-dozen live bee-keepers cannot meet and talk one hour without gaining something. The best of us are indebted to others for every idea we possess; not always in expressed forms, but for material, that when combined gives it form. Free discussions will not do much; each member can visit these small gatherings, and if he does not know much, he may learn something every time and treasure it up, and with any experience of his own, bring it to the National Convention next year, and present it for the good of all, and in turn, gather up the new ideas that are presented by others to take home to the little circle in exchange for what they furnished; they will again tell it to their neighbors, who put it in practice, and profit by many things that never would have been dreamed of but for this organization."

It occurs to us that Mr. Quinby gives the key note in the above extract, viz: "The encouragement of as many associations as possible." Let such associations be formed by all means. We do not wish to appear egotistical, but would say that it was through our efforts that

the Maury County Bee-Keepers' Society was formed, and it was to us a profound pleasure, to hear it referred to in glowing terms at the National Association. The remarks were not made in spirit of flattery to us, for the speaker was unaware of our presence, and had no acquaintance with us. I have referred to this matter that I might state the manner in which this organization of this society was brought about and suggest it as the means for the formation of others.

I had conversed with the bee-keepers from every portion of the county, and from these conversations learned that there was an interest felt in bee-culture. I addressed postal cards to some twenty-five, requesting them to meet at a certain hour and day at a given place. Some eight or ten responded to the call. We organized by electing officers and adopting a constitution. The names of bee-keepers were called for and about one hundred names obtained. A day of meeting was fixed and a postal card sent to each one, inviting them to be present and participate in the next meeting. The result was that we had about thirty present at the next meeting.

Now I would suggest that some active bee-keeper in every county (and I am sure there is one such in every county) take it upon himself to pursue a like course, and I will guarantee that a *nucleus* will be formed which will soon become a populous *colony*. A few hints in the formation of these societies we do not think will be amiss. As funds are essential to the successful prosecution of any enterprise, let there be a membership fee—a nominal sum, just sufficient so defray any incidental expenses is ample. In selecting your officers be sure to select a live and ac-

tive man for secretary. Then provide him with blank notes printed on postal cards; require him to fill these blanks and send them out a few days previous to each meeting, to every bee-keeper in your county. The labor with these blank cards is light—a hundred of them can be filled up in an hour. After a few county societies are organized steps might then be taken to organize a State Society.

We hope many such societies will be organized during the year, and would respectfully request the secretaries of all bee-keepers' societies, now in existence or which may hereafter be organized, whether State or county, to forward us their namee and postoffice address, so that we may be able to report their organizations at the next assembling of the National Society.

I would further suggest that all these societies become auxiliary to the National Society, and that there may be an interest in them aside and apart from the benefits to be derived in gaining a wider knowledge of bee-culture—that there may be a beneficiary system adopted, similar to that now in vogue with the Locomotive Engineers; make the National Secretary and Treasurer, salaried and bonded officers. Whenever a member of the fraternity dies, require the latter to give notice to all local secretaries, and call upon the members for such a sum as may be agreed upon, to be paid in a given time. Such sum when collected to be paid over to the widow or nearest relative of the deceased. If such a system is adopted, as a matter of course there will be a number of details necessary in its arrangement which it is useless here to enumerate. We now wish to briefly give a general idea.

It is estimated that there are seventy

thousand bee-keepers in the United States. If a membership of ten thousand can be thus enrolled, a per capita tax of 25 cents would raise the sum to \$2,500, or a 50 cent tax would raise the sum of \$5,000. To obtain a life insurance policy of \$5,000, a person who had arrived at the age of 30 years would have to pay an annual premium of about \$80 or \$85, in the non-participating plan. By the above plan, with a per capita tax of 50 cents there would have to be about 160 or 170 deaths, which is hardly probable, before that sum would be paid out, yet even if it should reach that sum the instalments called for being in small sums the amount would scarcely be missed or felt.

These thoughts have been hurriedly penned and are thrown out with the hope of enlisting an interest on the subject. We hope all bee-keepers will speak out or write out their views for the bee journals, or communicate with us by letter. Let the matter be thoroughly discussed before our next meeting. While these ideas have suggested themselves to my mind, others may have better plans to suggest, if so, I beg you to give them.

In conclusion I will add that many benefits are to be derived from these associations. Those who attend them are brought into closer social relations, thereby promoting harmony and a more fraternal feeling, and those who cannot or do not attend will be amply compensated for their membership fee by a perusal of the proceedings, which shows the progress being made in this important branch of rural pursuit.

Yours truly,

WM. J. ANDREWS,
Presid't National B. K. Society,

For the Bee World,
Items from Illinois.

J. G. THOMPSON.

FRIEND MOON:—I believe I promised sometime ago to report to the BEE WORLD the result of my season's labor in the bee-line. That promise was made when the swarming season was in full blast and everything looked favorable for a good return at the close of the season. Now, it is a very easy and nice thing to do when one looks over his thousand of pounds of honey and can sit easily by his fireside and figures up the bottom line and finds that the season's returns has been satisfactory. I say it is then a very easy thing to make up a report for the Bee Fraternity to read and comment upon, but when the season has closed and no honey and no money on hand, the thing is very different; and yet, I cannot but think that our failures should be reported as well as our success, but I do not think they are often done.

Well, the fact is, the past season—or at least the latter part of it—has been the poorest I have experienced since I have kept bees. The forepart of the season, up to about the middle of July, was good. They swarmed well and more freely than I wished them to, so that I had to put back many after swarms, as I generally do, when they come off.

There was an abundance of white clover, more than I ever saw before, the fields and roads were white with it, but it was too wet and the bees did not get one-half the honey they would have got but for so many heavy showers, which kept the honey all washed from the flowers.

This state of things continued all the fall, and although I had plenty of buck-

wheat sown they got no honey, although they seemed very busy at work upon it. But I had one swarm to starve out during the buckwheat bloom, and many that had boxes pretty nearly filled before, instead of finishing them up as I expected, carried it all below, so that when I came to remove my boxes I had nothing but a great mass of empty comb.

I spoke in one of my communications about my big swarms of bees, and told you that I expected to be able to furnish a few barrels of honey in the comb. Now I will tell you how I came out with them. Late in the fall after the season was passed, I found that they were short of honey, and concluded to save what there was. So I destroyed the bees and took their honey. One barrel had five swarms put into it. One had three and the other two swarms, and from the whole batch I did not get twenty pounds of marketable honey.

The fact is, bee men in this locality look *blue*, and begin to make up their minds that it is not all profit in the bee business by a long ways.

I predict a heavy loss to bees the present winter, for I do not believe that one half the bees in this section have sufficient stores for winter.

J. G. THOMPSON.
Champaign County, Ill.

For the Bee World.

Look Ahead.

J. M. MARVIN.

It is a good plan to calculate what the probabilities will be at a certain time or times.

We house and take out our bees on the recommend of the weather report, that is published by the government and sent to the leading post offices of

the States. The first winter storm is generally predicted in time to have everything ready, and the bees housed in time for their comfort and safety. It will pay to have the bees, at such times, well protected, and especially when there is a scarcity of honey, to check brood rearing. In case of frosts or dry and hot summers, or anything that checks the forage for bees, it is better to put the stock in a dark and cool cellar, or other such rooms as would be suitable. Set them out and feed if they should need it, some days before a yield of honey, while the young bees are hatching, leaving the cells to be occupied by eggs and brood or honey and bread.

Now is the time to calculate and prepare our hives and boxes for the coming spring, not wait until we are pressed with other work; we will have more time now than we will have in the spring.

Which will pay best—comb or extracted honey, or both? How the market is to be run? The stock for breeding; any change to be made in the strain of blood; any queens to be disposed of or surplus kept on hand for increase of stock or renewals?

Look ahead in writing an article that practice and theory are each so separate, and guarded by language as to need no criticism.

St. Charles, Ill.

If your advice was carried out friend Marvin, we might then look forward with anticipation, to see nothing but the best of stock in our country, but we have one serious evil to contend with; what is that "evil?" Mr. A. sends and buys some choice tested queens—he knows them to be pure. Mr. B. prefers to take his chance, and buys some cheap untested queens; of course the breeder

does not warrant their purity; he brings them into the neighborhood where Mr. A. has at some expense bought for himself pure stock; but Mr. B.'s queens are part of them impure; what is the result? Mr. A. suffers a loss, and cannot with any safety breed stock he can recommend, and this very thing has transpired in many places, and the country is being filled up with impure stock and many of their owners does not know the difference. Hybrids or half-breeds are fine honey gatherers, but every cross from them is on the retrograde, and soon run out entirely, unless great care is taken in breeding. This is seen everywhere the Italian bee has been handled; in this way the blacks soon get the ascendancy, and no trace of Italian blood is to be seen. We have something upon this subject that is rich, and we may publish it before long.—Ed.

—o—
For the Bee World.
Absolute Purity.

CHAS. DADANT.

If bee-keepers are silent on the drone question it is because most of them consider it a settled question. I, for one, after years of experiments, endorse the views of D'Zierzon, that the mating of a black drone does not impair the drone progeny of an Italian queen. Let us lay before our readers the facts upon which the law of Parthenogenous is founded:

There are in the queens two ovaries containing some millions of eggs, in all stages of development. These eggs, as soon as mature, slide from the ovaries into two tubes which soon are united in only one. Besides this tube is a globular vesicle, which, when the queen is virgin, contains only a colorless fluid. After the act of copulation the vesicle

is enlarged, the fluid is more advanced, and instead of being transparent, it has become milky. If examined with a powerful microscope, this fluid is seen containing millions of small worms. These worms are the spermatozo.

Similar spermatozo are found in the genital organs of drones; even drones born of virgin queens. The correlative contents of the genital organs of the drones have been forced in vesicle, or spermatozo of the queen.

Now, there are two incontestable facts: 1st. A virgin queen is able to produce living drones, but no workers; 2d. An impregnated queen can lay drones and workers—drones in drone cells and workers in worker cells.

The eggs of bees were carefully examined by Von Siebold, under the eyes and at the apiary of Baron Berleppch. In the worker eggs just laid, Von Siebold discovered the same spermatozo as in the drone sperm; on the other hand, in thirty drone eggs examined, he was unable to find a single spermatozo. Then it was fully demonstrated that the D'Zierzon theory is correct when he says that a virgin queen can lay drone eggs, but that a queen can lay worker eggs only after she has mated with a drone. Now, friend Moon compared the reproduction of vertebrate animals with that of bees. This comparison cannot be exact, without copulation in which animals can lay eggs able to hatch or give health to young animals, and this power of laying hatching eggs without copulation is not exclusive to bees. Moths, and many other insects are endowed with the same power. Barklice can reproduce themselves ten times without copulation; that is, a mother could lay, her daughter can lay without mating, her grand-daughter also, and so on to

the tenth generation. Such being the case, can we reasonably compare the generation of insects with that of the vertebrate animals. Another fact which differ of both the reproduction of insects and that of bigger animals, is that the males have, every one of them, both sexes in the same individual, and in the correlative act both are fecundated. In writing of the oviducts of the seminal receptacle of the queen, friend Moon uses the words "seminal fluid," "fluid blood." It is not the fluid, but the spermatozas, who live in it, which are able to impregnate the eggs and change the sex. If a queen is exposed to be frozen during twenty-four hours the fluid contained in her vesicle is not destroyed, but the spermatozas cease to move. They are killed and the queen can no more lay worker eggs. In the vertebrate animals, to which friend Moon tries to compare the bees, the oval of the female and the spermatozo of the male are indisputable to the fecundation, the ovum is fecundated, not the fully developed egg, as in the bees, then the fecundate ovum is fed by the blood of the female, but it is not the same with the queen bee. There is no intermixture of blood, since the egg of bees can be born without fecundation; and since there is no visible channel through which the copulative vesicle of the queen communicates with the viras of the insect. No microscope has ever been able to show that there is an intermixture of blood from the queen to the spermatoza, and from the spermatozo to the queen. There are only mucaus glands, whose function is to produce the liquid in which the spermatozas swims. So this fluid is not taken up into the circulation of the queen, and cannot reflect upon the male posterity of the queen, as our friend

Moon supposes. These spermatozas cannot be taken in the circulation of the blood of the queen. They remain in the vesale, waiting for their turn to slip in the eggs at the exit of the ovaries. "But," says friend Moon, "these are questions of theorists." No; sir, D'Zierzon is not a theorists; his discovery was based on facts. When it was announced, the theorists, the scientists, refused to believe it, and it required a great many experiments to convince them that a plain bee-keeper had discovered a natural law that they had been unable to find. Now, for experiments, for ten years I have been accustomed to use my best impurely-marked queens to raise drones, and I have raised as many pure queens as any other breeder. Furthermore; having had a queen unimpregnated and drone layer, because she was unable to fly. I have kept her for the purpose of having drones when the drones of other colonies were killed, and I am convinced of having had several queens impregnated by her drones. Besides, very often I have seen the drone progeny of an impurely marked queen lighter in color than the progeny of most any purely marked queens, and it would have been the reverse if the theory of our friend Moon was true.

In fact mother nature does nothing in vain; why would she have endowed the drones, sons of virgin queens, with organs and spermatozas similar to those of the sons of impregnated queens if these organs were unable to fecundate the queens?

Hamilton, Ill.

For the Bee World.

A Bit of Experience.

EDITOR BEE WORLD:—I remember having read in some of the bee journals

something concerning feeding cappings or uncappings to bees for them to work into comb. After thinking over it, I concluded to give to your readers a bit of my experience in that direction. As they all know that there has been a great deal said about artificial comb, and especially foundations, and that it sold at four and five times the price of wax, and I having a desire to economize, they will not be surprised at my experiment. I had occasion to put on some honey boxes last summer, and concluded to try the section boxes, as I had some, and of course to have the bees do their work nicely and quickly must have some foundation for starters, as we term them. We thought \$1.55 per pound too much for machine foundations, when we saw nice pieces, as we supposed, of the very best foundations, in every frame we uncapped, namely, the uncappings. Accordingly I saved several of the nicest pieces to commence operations with. Having fastened them in the sections, I placed them on my hives and watched the results. The honey on the uncappings attracted the bees up into the boxes, and pretty soon I discovered the bees eating or gnawing away the uncapping; and I never saw any of it carried from the hive; and from what I could see, concluded that they built comb with it, as the next morning the uncappings were all gone and nice pieces of comb started, some in the places where the uncappings were, and others by the side of the uncappings, or rather where they were. I don't think I lost my time nor uncappings, as the bees soon had my boxes filled with nice comb and honey, all sealed ready to take off.

T. B. PARKER.

Goldsboro, N. C., Dec. 22.

For the Bee World.
Weather Notes for November, 1876.

Taken between 7 and 8 o'clock, A. M.

WM. J. ANDREWS.

Day.....	Wind.....	Thermometer	Barometer	Weather.
1 N.	62	Fall g	Clear.....	
2 S. W.	72	F.	Rain.....	
3 S. W.	54	R.	Clear.....	
4 S. E.	54	R.	Cloudy.....	
5 N.	54	R.	Clear.....	
6 S. W.	62	F.	Rain.....	
7 N. W.	44	R.	Clear.....	
8 N. W.	46	F.	Cloudy.....	
9 N.	40	R.	Clear.....	
10 N.	36	R.	Clear.....	
11 S. E.	54	R.	Clear.....	
12 S.	56	R.	Clear.....	
13 S.	56	R.	Clear.....	
14 S. E.	54	F.	Cloudy.....	
15 N.	48	R.	Cloudy.....	
16 S. E.	48	F.	Cloudy.....	
17 W.	50	F.	Rain.....	
18 N. W.	52	F.	Rain.....	
19 N. W.	42	F.	Snow.....	
20 S. W.	38	R.	Cloudy.....	
21 S. E.	42	R.	Clear.....	
22 N. W.	40	R.	Clear.....	
23 N.	42	R.	Cloudy.....	
24 N. W.	32	R.	Clear.....	
25 S. W.	40	F.	Rain.....	
26 S.	38	F.	Clear.....	
27 N. W.	48	F.	Cloudy.....	
28 N. E.	44	S.	Cloudy.....	
29 N. E.	44	R.	Clear.....	
30 N. W.	38	R.	Snow.....	

Columbia, Tenn., Dec. 6.

FRIEND MOON:—The honey season was very good this year in our part of the country. Honey is rather cheap in consequence thereof, and of good supplies from California. Honey trade, however, is very lively—at least with me, and has been so for the last two months.

CHARLES F. MUTH.

Cincinnati, Ohio.



Ladies' Department.

For the Bee World.
Sundries from Sunny Side.

ANNIE SAUNDERS.

A very singular thing occurred in my apiary last year. I had to introduce a queen which from various reasons I prized very highly. She was the daughter of a very fine imported queen, a present from an esteemed friend, and I had lost several of my choicest queens. So on every account I was anxious that she should meet with a kind reception in her new home. I gave her to a stock very strong and remarkably industrious hybrids, as we call them. Introduced her in a little wire gauze cage, as usual, and the evening of the following day, a little before dusk, went to release her. I had just smoked the bees when the cook came and begged me to give out supper immediately. She had been away or I would have attended to it earlier, as it was her importuned and the fear of having a lot of hungry boys calling for supper before it was ready, made me leave the apiary for the store-room. By the time I could get back, it was too late to see well, and the bees were cross—so cross, stinging furiously and crawling everywhere. I proceeded anyway, distributed honey over them, took the cork out of the cage and pasted a piece of newspaper smeared with honey over the mouth of it, then

closed the hive, such a closing as it was, and went away with a heavy heart. But it was heavier still when day after day and week after week those bees crawled aimlessly over the hive and hung idly about the door-way, the most utterly miserable bees it has ever been my lot to see. I was almost certain the queen had been destroyed, still to allow every possible chance for her safety in case she had not been, I did not open the hive for over two weeks. You can imagine my delight on finding her safe and sound with eggs and brood all right. Still those bees wore that doleful air, and were certainly mourning for their mother, until after the brood of the new queen commenced hatching out. Scarcely a bee seemed in a cheerful humor all that sad time.

Dec. 22, 1876.

Notes and Queries,

BY

WM. J. ANDREWS.

DEAR SIR:—I received No. 10 of your valued journal, but after the Exhibition. However, I will exhibit your paper at the next exhibition we have.

I was very much pleased to notice in the BEE WORLD an article very correctly translated, by Lewis Meyerhardt, of Rome, Ga., from the *Bienenvater*, my journal. I take the liberty of inserting in my paper an article from the BEE WORLD, "Wanderings of Wild Bees in Japan," and one entitled "The Culture of Bees," etc. Our Association will celebrate their 25th anniversary next year. In September, 1877, there will occur in this city a grand Exhibition of Apiculture. All American bee-keepers are invited to send their productions here. The greatest bee-culturers of

Europe will be present at this Exhibition. We have no idea here in Europe of the progress which apiculture has made in the United States. It behooves Americans to show to Europe what it has done in the way of bee-culture.

Your bee-hives and contrivances for storing honey, etc., are unknown here. America may hereafter have a market in Europe for bee-hives.

It will give us great pleasure to welcome American bee-keepers at our Exhibition. This may lead to a closer knowledge of American bee-culture.

Again inviting you and all American bee-keepers to be present at our Exhibition, I am, dear sir,

Very truly yours,

RUDOLF MEYERHOFFER.

Prague, Austria.

MR. W. J. ANDREWS:—One of the premiums offered by you for the best article written for the Sept. number of the BEE WORLD has been awarded to Rev. Mahin. As it is not very clear which of the two ladies, Mrs. Kate Grayson and Miss Anna Saunders, is entitled to the premium, we think both should receive a premium.

Respectfully,

S. D. McLEAN, Chairman.

We agree with the Committee. Both of the articles by the ladies were well written, and as the Committee say, "should receive a premium," and they both shall receive, as well as the Rev. Mr. Mahin, as fine a queen as I can raise next spring. We hope to hear from the ladies frequently through the BEE WORLD.

W. J. A.

Dec. 4, 1876.

We will give one of the premiums to one of the ladies, as we think both deserving of the prize.—Ed.

MR. MOON:—I have sold three-fourths of my honey crop and most of it I have sold at home. It will all be sold before the next crop comes. My bees are housed and doing well.

E. C. L. LARCH.

Ashland, Mo.

MR. EDITOR:—For some time I have been looking to find a bee paper that was more adopted to our Southern climate, and the BEE WORLD seems to be near the thing. It has been reported that we have fine Italian bees in this State, but they are hard to find. However, some advertise such for sale. I bought some, a few years ago, but they did not prove good. I received two from Mr. Alley, of Mass., but lost one of them introducing them. I shall try my luck again. I have but few swarms, which are in good condition. Bees are now quite busy carrying in pollen and some honey, from the Maryarito and the Cala Poppy, (wild.) We have a lizzard almost two and a half inches long, that hangs about our hives and licks up bees in a twinkling. Moths are quite troublesome here with those that neglect their bees. My bees are flying nearly all the time. Very little bad weather that keeps them in their hives. The Almond tree blooms here Feb. 1st and Peaches Feb. 15. Besides we have wild flowers every month in the year. Our honey is fine and clear except in the fall. The wild thyme, mint, sage, golden-rod, mountain-balm, besides a great variety of wild flowers, which are constantly blooming. We have a wild buckwheat that affords considerable honey. It is also a forage plant. Wishing you and the BEE WORLD much success, I am, etc.,

J. D. EVANS.

Napa, Cal., Dec. 2.

My bees have done very little good this season except to increase. I have as yet received very little income, but hope I have been benefitted by experimenting with them. The swarms all seem to have sufficient stores to carry them through the winter. Do you think bees need running water.

J. M. HARRIS.

Cedartown, Ga.

Bees are more inclined to frequent still water than running water. My apiary for twenty years was near a stream of running water, but we found the bees generally at work in places where the water was still. A little salt dropped in such places is good for them.



MOON'S BEE WORLD

A. F. MOON & CO.,
ROME, GEORGIA,
JANUARY, 1977.

Table of Contents.

Bits of Wisdom—from various authors.....	Page.. 1
Two Queens in one hive—Makin.....	3
Pure vs. Hybrid Bees—Barclay.....	4
Wintering Bees—Hazen.....	5
Scraps from Missouri—Larch.....	6
Do Bees make Honey or do they Gather it—Editor.....	7
Bee Notes from Tompkins County, N. Y.—Fletcher.....	9
Our Centennial Letter—Andrews.....	10
Scraps from Illinois—Kellogg.....	12
That Barrel of Honey—Montgomery.....	13
Contributors and Contributions—Harris.....	13
Agricultural College Apiary—Cook.....	14
Eratta—Dadant.....	17
Fecundity of the Queen Bee—Dadant.....	17
Items from Maryland—Pike.....	18
Our National Society—Andrews.....	18
Items from Illinois—Thompson.....	21
Look Ahead—Marvin.....	21
Absolute Purity—Dadant.....	22
A Bit of Experience—Parker.....	24
Weather Notes—Andrews.....	25
Sundries from Sunnyside—Annie Saunders.....	25
Notes and Queries—Andrews.....	26

OUR friends will see that we have reduced the price of the BEE WORLD to \$1.50, hoping all may renew soon.

A HAPPY and prosperous year to all our readers, hoping the year 1877 will be one long to be remembered on account of an abundant honey harvest.

THE cold weather the first of December proved very disastrous to weak swarms of bees. All those having plenty of honey are in fine condition.

OUR friend, Wm. M. Kellogg, of Oneida, Ill., will please accept our thanks for a fine stereoscopic view of his apiary.

We advertised for a firm by the name of Urie & Co., Washington, D. C. We have not been able to get our pay, much less any answer from them. Bee keepers look for them. You know they wanted honey—*look out!*

We once thought friend Root, editor of *Gleanings*, was rather hard on swindlers, but when we have it applied to ourselves, we are lead to believe him just right.

ANOTHER firm we advertised for who informed us they had \$1,500,000 in money invested in their business. They also gave us refences to parties as to their responsibility, etc., we done their work and sent for our pay. No answer came; we sent again, and again, and again, and finally concluded that we had been humbuged, and let them keep it. Mr. Root, editor of *Gleanings*, informs us he had difficulted with them in collecting his bill. This firm is H. K. & T. B. Thurlew & Co., New York City.

Absolute Purity.

Our article in the last number of the BEE WORLD, called out our friend Dadant, which we are glad to see. We

shall only review a portion of the article in this number. You are referred to the law of Parthegeuous, by our friend, who says there are two incontestable facts, 1st, a virgin queen is able to produce living drones, but no workers; 2nd, an impregnated queen can lay drones and workers, etc. This is an acknowledged fact by all, we believe. He then gives us the examination made by Siebold, in which they discovered the spermatozas, etc. After their examination they came to the conclusion that Dzierzon "theory" was correct. He further says, we compared the reproduction of vertebrate animals to that of bees. If our friend will read that paragraph over he will find the following, "the physiology of the mixing of bloods, as it is established among all practice breeders of horses, cattle, sheep, etc., *is said not to apply to honey bees*, as the former carries its young, etc." We then asked the question if the laws governing the purity of blood in such animals does not "apply." May we not enquire as to the transimition of race among "fowls," where the law seems to fit very well, as in both cases eggs are laid in which the race is perpetuated. Our friend admits under a "powerful" microscope this fluid is seen to contain "millions" of small "worms," the "spermatozo." Admitting this to be a fact, that these spermatozas are "living" worms, drawing their substance from mother nature, as friend Dadant says, that there are mucus glands, whose functions is to produce the liquid in which the spermatozo swims; but he says no microscope has ever been able to show that there is an intermixture of blood from the queen to the spermatozo, and from the spermatozo to the queen. The reader will see that there are millions of living insects, worms, spermatozas,

who must derive their nourishment, or a portion of it, from mother nature. In a private letter from the late Adam Grimm, in July, 1871, he says:

DEAR SIR:—In regard to your question or opinion about the color of drones, I agree with you, that in numerous instances, that drones from pure mothers, impregnated by "black" or "impure" drones, are higher colored than drones of their mother queen; and he further said that we were correct about those high "colored" drones, and he further says, since I have imported queens largely, from Italy, and many of the queens I reared from mothers with those highly colored drones, proved to be hybrids, in one or two generations. I have seen the prettiest marked drones of the Italian race, from a black queen that I had impregnated by drones from imported mothers, and what looks more strange to me is that some few of our bee-men cannot discover this one important matter, the mixing of "bloods." You ask what I thought of the Dzierzon theory. My opinion expressed would be the same as yours. I am now making experiments, which, when completed, will I think be of interest to all, as to drones from virgin queens being virile I consider another humbug, or at least, it has so proven with me, and this is not only our views upon the subject. Quinby said in his book, I have kept such drones for the purpose of having queens fertilized early, but have failed in every instance. This I am happy to say seems to be the opinion of the best bee men of the day. Here we see the opinion of one of the best and most practical bee men from Germany, whose experience has proven the Dzierzon theory to be "incorrect," but we find our friend Dadant makes this statement, "I have seen the drone pro-

geny of an impurely marked queen." He don't say "impure queen," light in color than the progeny of most of his purely marked queens. Now if friend Dadant understood properly the laws governing all such cases, that we often find in the animal as well as in the human race, where either is pure, that often the offspring is much finer in color. So this is no argument at all, but friend Dadant thinks if this be so about his light drones it would have been the reverse if our theory be correct. We have often seen in some of the pure blood animals, although they of themselves looked insignificant, yet they proved to be superior breeders—and this law or rule holds good through the whole animal world. Some of the finest and best-looking children that we ever saw were from parents of very ordinary calibre. Would it be strange to find fine colored drones from impurely marked queens. He does not say impure queens. Hence we see the beauty of the law carried out that like produces like in all animals or insects that have an established "race." Friend Dadant says furthermore, having had a queen unimpregnated and drone layer, because she was unable to fly, I have kept her for the purpose of having drones, when the "drones" of "other" colonies were killed, and he is sure of having had several queens impregnated by her drones. Had our friend been more explicit in this, and given the particulars in full, then we could have easily answered him. Bee men are aware that when the bees begin to kill off their drones, and drive them from the hive, they are liable to enter any hive, and will *do so*. Now, we must think that your virgin queen swarm received a number of drones from other swarms, hence we see where

your drones came from by which your queens were impregnated. We see that you state you kept her when the drones from other colonies were killed. This explains it satisfactorily to our mind. We have raised many queens late in the season, or after all the drones were killed, and they all became drone layers, and with plenty of drones, we have raised queens to mate with them; but, thus far we can say with Quinby and a host of others, they were worthless. We will answer our friend soon, and see if we can throw any light upon the subject, we think it is looking brighter every time the little bits of evidence make their appearance.—ED.

One Help for Hard Times.

To increase the product of one's labor or business, and then to make the best use of what is obtained, will certainly be helpful in these hard times, or in any other. The hints and suggestions of half a dozen intelligent, practical men and women, who devote themselves to studying and observation on just this topic, must certainly be of great utility to every one. We shall, therefore, do our readers a favor by directing their attention to that most valuable practical journal, the *American Agriculturalist*, which is just now entering upon its 36th year. It is packed full of useful information, that cannot fail to be very helpful to every family, and to every man, whatever his calling, and whether residing in city, village or country. Each volume gives from 600 to 700 fine original engravings, that are both pleasing and instructive—to housekeepers and children, to farmers, mechanics, merchants, professional men, indeed to all classes. Its house plans and improvements, with full particulars of cost, etc., with engravings, its

fearless exposure of humbugs, and quackery, indeed its whole makeup and its thoroughly reliable character, render it worthy a place in every household, and we strongly advise every one to have it. An immense circulation enables the publishers to supply it at the low cost of \$1.60 a year, post paid, or four copies for \$5.40. Take our advice and send now for volume 36, to the publishers, Orange Judd Company, 245 Broadway, New York City.

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