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Moon's bee world : a guide to bee-keepers. Vol 2, No 2 January, 1875

Rome, Georgia: A. F. Moon and Company, January, 1875

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MOON'S BEE WORLD,

—A GUIDE TO—

BEE-KEEPERS.

VOLUME 2.

JANUARY, 1875.

NUMBER 2

CORRESPONDENCE.

ONE OR TWO STRAY THOUGHTS.

BY FRANK BENTON.

In our rambles through the North and the South we have not failed to notice the vast difference in the state of bee-culture which exists in the respective sections. Close scrutiny shows a few neglected "gums" propped up in some out-of-the-way spot near a few of the Southern planter's homes, while the same observation North reveals full twice as many colonies and a larger proportion of them in improved hives.

Honey seems to be more fully appreciated in the North, as witness the active demand for it at remunerative prices. Several good bee-journals are supported in the North, thus showing an interest in the real science of the the pursuit. Why these differences, when the North labors under the disadvantage of winters which cause the

loss of thousands of colonies, and prevents the work of the remainder during the greater part of the year?

Plainly a lack of general information in the South concerning this most delightful subject—modern bee-culture. A country rich in the production of honey-producing plants, and where there need be no losses in wintering, the South might rejoice in the contented hum of thousands of busy colonies of bees—a living emblem of the peace, thrift and intelligence of the country.

The great linn forests of the North have given, under the improved system of managing bees, wonderful yields of honey to reward the intelligent apiarist. There are many sections in the South where linn, poplar, white clover, and the wild aster can be found and which produce also an abundant sub-tropical flora, and hence are well fitted by nature to support the honey-gatherers. Nearly every planter, at the expense of a few dollars and some careful study and attention, might

make, in the shape of honey, a most delicious addition to his varied productions, and also not an inconsiderable one financially.

The prices and the demand for good honey in the North, have increased with its increased production. It is generally the case in any agricultural region that until considerable attention is given to the production of a certain article of food there is comparatively no demand or market price for the article in that particular locality. We are confident that if every farmer in this country kept five or ten colonies of bees the average yield per hive would not be lessened, and if all these bees were kept on the improved system of management, thus securing the honey in a marketable shape, we believe there would be to-day a good demand for honey in the city of Nashville, and at a well-established remunerative price.

Now what is wanted is for the people of the South to take the real interest in the science and art of keeping bees that is felt by their Northern neighbors, and to manifest that interest by a liberal support of their own bee journal. Here the genuine Moon sends forth each month rays of apicultural light, and the evidence is that these practical moonbeams are penetrating many dark corners and forming the support for many fine structures of apicultural knowledge, yet we must inquire: "Why do (some) men love darkness rather than light?"

Edgefield Junction, Tenn., Dec. 1874.

It is stated from experience that an application of spirits of turpentine is a certain relief for the pain of a bee-sting.

RENEW your subscription.

BEES IN SHELBYVILLE, ILLINOIS.

BY J. W. JOHNSON.

DEAR BRO. MOON:—My bees have done well. I wintered fifteen colonies on their summer stands, they coming through without the loss of a single swarm, and in fine condition. In February I commenced to feed them and kept it up until they began to carry in buckwheat flour, when I fed them from a common receptacle. In cold weather I fed them in the hive. The result was that when fruit flowers came I had full colonies of bees gathering.

On the morning of June 1st I commenced taking box honey, and up to the present have sold \$105.65 worth of honey, at twenty-five cents per pound. None for more, and none for less. I should have said honey in the comb, for some of it was not box honey, but taken from the body of the hive, empty frames being given in place of those taken out. I sold two young swarms at \$10.00 each, and 21½ pounds of wax at 25 cents per pound—\$5.37, making \$131.02 profit from fifteen colonies of bees. Besides, I have four young colonies in addition, and have consumed a large amount of honey in my family of nine persons, who are all honey eaters.

Honey has been on my table at every meal, and all can use it, and in such amounts as they wish.

Now I call this a pretty good yield, and yet I do not consider it anything extra, or at least worth bragging about.

I did not desire swarms, but surplus honey; but they got the "bulge" on me, and I was compelled to take six, four of which I now have, disposing of

the others as above stated. I do not have time to give my bees such attention as they should have. And I think fifteen swarms are enough for me, living in the city, and running a lumber yard and hardware store. I have very little time to see to them—more than to rest me from my other labors.

The point of success is to take the honey as soon as capped, but not before, as uncapped honey is not as fine flavored as that which has gone through the whole treatment that bees give it, if left to themselves.

I forgot to state that I have honey enough put up to supply my family until next June, and I feel confident that there is fifty pounds in each hive now. I shall put them into shape for winter soon, when I may take more honey from them.

I shall give no upward ventilation, but close up tightly below, and have center opening for air. Very little does them in cold weather, and no warm air should be allowed to escape, is my theory. Follow nature as closely as possible. Leave them on their summer stands, place a board in front of the hive so they will not leave it when snow is on the ground, but remove it two or three times during the winter on very fine days to give the bees a chance to fly. I am no friend to upward ventilation, as you know. Have never lost a swarm of bees from any disease whatever. Have attempted to winter very weak colonies, and have let them die from sheer neglect. I think a great amount of the mortality among bees may justly be attributed to a meddlesome disposition on the part of the owner. Look at Novice—putting his bees out in a hot bed.

There is much to learn in bee culture, but foolishness will not be more

likely to succeed in this, than any other employment. I may be called "old foggy," but while I can make as good a showing as above, I shall continue to winter and handle my bees as I have done in the past, venturing to change when common sense teaches me that change is necessary.

Shelbyville, Ill., Nov. 1874.

REPORT, CHEAP QUEENS, ETC.

BY R. M. ARGO.

MR. EDITOR:—The last number of BEE WORLD entered on its second year, or volume. The first volume has been a readable one, and I hope the second will be still better improved.

Its articles are nearly all original. No progressive bee-man, or farmer with a few stands of bees, can afford to be without it, in the Middle, Southern or Western States, if they wish to know how to handle bees with ease and profit.

The want of a proper knowledge of how to handle bees right, has been the cause of the neglect of this branch of rural industry. But I note that the Southern bee-keepers are making rapid improvements in the care of bees. This is as it should be, for the South may, with great propriety, be said to be the home of the honey bee.

The only fault I find with the WORLD is its tardiness and too often failure to come to time. But with a newly started journal in the South in such a time as this, it easy to account for, and must be borne with the hope that it will come to time at last.

If those who write for its columns would write punctually, it would help you along and enable you to be more prompt in coming to time. I am well pleased with the writers for the WORLD

and to read their communications once a month, but some of them write without date, and a few under a fictitious name. This is what I dislike. I am now determined that Connoisseur must give his true name and postoffice in the course of time. I see on first page of last number of *WORLD* that we have traced him to Maryland. If he does not give his name and postoffice against April I will excavate him from his mole-hill, and expose him to the full gaze of the *BEE WORLD*. I would never write a line for publication if I were afraid to write under my full name and date.

You want us to give a report of our last year's proceeds with the apiary. I am unable to give a correct report, from the fact that I have kept no account of any honey but what I sold. I and my oldest son being very fond of honey use it continually on the table, and generally three times a day, so I think what we have consumed and given away may be set down at 200 lbs, have sold 816 lbs, and have on hand about 500 lbs, besides several caps not yet taken off. Also my stands are all full of sealed honey—two New Idea hives, 12x14 and 48 long, being as full of honey as they can be, from the late fall bloom. So I can safely take about 100 lbs from each one of them, and can set down the amount at 2,000 lbs, half comb.

Now to give the number of stands and their condition in the spring, the reader is referred to page 271, August number of *WORLD*, where he will see my stands had been reduced by sale to thirty, which if united on last of April would have made ten strong stands. The reason I did not unite was that I had a large number of queens engaged, and could not buy

bees in the neighborhood to raise them, and had to depend on these thirty weak stands. The queens were reared and the orders filled, and the colonies increased to sixty-seven by artificial swarming, each of that sixty-seven now being pretty strong. Now when it is taken into consideration that my location is a poor one for bees, and the eight week's drought from first of May to July, and the number of queens raised and sold during that time, it will be seen that this is no easy thing to beat.

I have not heard a word as yet of the proceedings of the N. A. B. Convention that was held in Pittsburg, Nov. 11 and 12. I do not look for the proceedings with half the anxiety I used to. It is now almost made a party concern, that I dislike very much. Some have hinted at getting up a Southern convention. I cannot say I approve of it. I will leave it to Southern bee-keepers to have their say on it through the *WORLD*. I am for "no North, no South," but the nation, both in religion and politics. I hate all church and political divisions on the North and South. In fact I hate the very word North and South, and therefore hope to be excused from any participation in the discussion of the question of a Southern Bee Keeper's Convention.

We read in September number "Sketches from Tennessee," that friend McLean complains of the Italian bee's being brought into disrepute by careless, and I may add, unprincipled breeders. I am not the least surprised at this, for it is just what I knew the dollar-queen business would lead to. Such men sending off impure queens for tested ones do not consider how they injure the business, and make

the impression that the Italian bee business is a humbug.

Several prominent breeders have been to great expense to get the best imported bee that could be gotten, and to raise the best for their customers, and after all their trouble and expense, of both time and money, they are to sell for a price that will not pay expenses.

This is doubtless the reason why several of them have quit the business of queen-rearing. If I were in a good location for honey, I would not sell queens as low as I do now, for it would not pay. I would use my bees for honey gathering, which would pay far better at 15 cents per pound.

I believe it best to pay a fair price and get a good queen, tested, at the start. I paid \$12.00 for my first queen, and have paid as high as \$17.50 for imported ones. If you will buy a queen warranted tested from one of those cheap queen raisers, and she lives thirty days you will see and know—YOU KNOW WHAT.

Lowell, Ky., Dec. 3d, 1874.

Friend Argo allow us to put in a word for Connoisseur. Shortly after the publication of the article referred to, he wrote us that he had, by mistake, left out a clause, which would have materially altered the meaning of the article. "But," he wrote, "let it go; it will help elucidate the question, for your contributors will notice it, and, no doubt, take me to task for my blunder." This was not written for publication, but we mention it out of sympathy, as we know he is a better bee-keeper than that would make him appear. We hope the matter will be explained to the satisfaction of all, in a short time.—Ed.

SCRAPS FROM ILLINOIS.

BY W. M. KELLOGG.

QUEEN SHIPPING BOX.

Friend Palmer in "Chips from Sweet Home," describes his queen shipping box.

I may be mistaken, but I think the one I saw when on a visit to T. G. McGaw, Monmouth, Ill., is easier and quicker made. May be the "Chip man" has seen it too. Make a strip $2\frac{1}{4}$ inches wide, $\frac{3}{8}$ inches thick, and as long as you please. Bore this full of $1\frac{1}{2}$ inch auger holes, leaving about $\frac{1}{2}$ inch between the edges of each hole. Turn the strip up on edge and with a $\frac{3}{8}$ inch bit bore two holes $1\frac{1}{4}$ inches apart into each auger hole, and with a knife or chisel cut out the little block between the two holes. Next take a thin strip like that used for backing pictures, the width of strip with holes in and glue it on over the $1\frac{1}{2}$ inch holes. Then saw the strip into between each hole and you have a block about $2\frac{1}{4}$ inches square. Cut wire cloth just large enough to cover the $1\frac{1}{2}$ inch hole and tack on. Put in your queen with a dozen or two of workers, put a sponge soaked in honey in the small hole, and put a tack through to hold the sponge. Wrap it around with writing paper, seal it with a one cent stamp, and away it goes.

It takes some time to describe it, but a man can make a hundred in short order.

Friend Palmer the next time you are so near Oneida (Galesburg), just take a long step and call and see us.

Oneida, Ill., Dec. 6, 1874.

The word honey is undoubtedly derived from the Hebrew "ghoneg," which means "delight," an appropriate title.

CHIPS FROM SWEET HOME.

BY D. D. PALMER.

Our bees have not had a fly since Nov. 8, till Dec. 1, when the sun shone nicely, and the thermometer showed 60 deg. in the shade. Our yellow pets took the opportunity of showing us that they were an even 100 hives alive. They are now nicely ensconced in the cellar, where they are very quiet at from 40 to 50 deg.

The best robber-stop that we ever used was grass. One day I was absent, and on returning in the afternoon, I discovered a neucleus was being robbed. I quickly pulled a handful of grass, with which I covered the entrance; those inside found their way out, but those outside failed to find the entrance, and next morning I found that they had all left. Here was a stand which had no bees to defend it, but the robbing was prevented by grass, which I always use.

"G" says in BEE WORLD, page 370, that we all have different knowledge, and think unlike—it being entailed on the race by Adam's fall.

Now, friend "G," we think quite different, for,

Through misconception, or lack of skill at the start,

In making man, he left out knowledge, the most useful part.

With Adam, lacking knowledge of what good and evil might be,

For God had left that out, and in a fruit hung it on a tree,

And the first pair were told by God that all the way to suit

Was to abstain from eating this knowledge-giving fruit.

But it happened that in the garden there walked a snake,

Who advised them to pick this fruit, and freely partake.

Some think that every farmer ought to keep at least a few bees. I think quite different, for they almost invariably have, and will, neglect them; some because they are not posted, and have not the time or means to do so, and many have too much else to do. A farmer, a few days since came to me and said: "You can raise honey cheaper than I can, and I can raise corn cheaper than you can; you have honey to sell, and I corn; how will you trade?" That told the reason in a nutshell.

Nearly every novice must learn by experience. Nearly all beginners must put nails, tacks, bent wire or some other invention, to keep the frames apart. I used them, years ago, but now use nothing but gravitation. Make your frames true, so that they will hang plumb when your hive is perpendicular, and you will find your frames more easily moved.

BEES IN AFRICA.

Dr. David Livingstone gives some account of bees in Africa, and for the information of those who have not read his travels I will make a few extracts. He often speaks of different tribes giving him strained honey, and of beeswax being an article of commerce. Of the honey bird he says: "The honey bird is one of the singular birds of Africa; as soon as he sees a man, he flies toward him, and having attracted his attention, leads him to a nest of wild honey. * * *

Wishing to ascertain the truth of the native assertion that this bird is a deceiver, and by its call sometimes leads to a wild beast and not to honey, I inquired if any of my men had been led by this friendly little bird to anything else than what its name implied. Only one of the one hundred and fourteen could say he had been led to an ele-

phant instead of a hive. I am quite convinced that the majority of people who commit themselves to its guidance are led to honey and to it alone. *

* * The honey-guides were very assiduous in their friendly offices, and enabled my men to get a large quantity of honey. But, though bees abound, the wax of these parts forms no article of trade. In Loanda it may be said to be fully cared for, as you find hives placed upon trees in the most lonesome forests. We often met strings of carriers laden with large blocks of this substance, each eighty or a hundred pounds in weight, and pieces were offered us for sale at every village; but we never saw a single artificial hive here. The bees were always found in the natural cavities of mopane trees. It is probable that the good market for wax afforded to Angola by the churches of Brazil led to the gradual development of that branch of commerce there. I saw even on the banks of the Quango as much as six pence (10 cents) paid for a pound. In many parts of the Batoka country bees exist in vast numbers, and the tribute due to Sekeltu is often paid in large jars of honey; but having no market nor use for the wax, it is thrown away. * * * In these forests we first encountered the artificial bee hives so commonly met with all the way from this to Angola. They consist of about five feet of the bark of a tree fifteen or eighteen inches in diameter. Two incisions are made right round the tree at points five feet apart, then one longitudinal slit from one of these to the other; the workman next lifts up the bark on each side of this slit, and detaches it from the trunk, taking care not to break it, until the whole comes

from the tree. The elasticity of the bark makes it assume the form it had before; the slit is sewed or pegged up with wooden pins, and ends made of coiled grass rope are inserted, one of which has a hole for the ingress of the bees in the center, and the hive is complete. These hives are placed in a horizontal position on high trees in different parts of the forest, and in this way all the wax exported from Benguela and Loanda is collected. It is all the produce of free labor. A 'piece of medicine' is tied round the tree, and proves sufficient protection against thieves. The natives seldom rob each other, for all believe that certain medicines can inflict disease and death, and though they consider these are only known to a few, they act on the principle that it is best to let them all alone. The gloom of these forests strengthens the superstitious feelings of the people."

Eliza, Mercer Co., Ill., Dec. 8, 1874.

WINTERING BEES IN THE SOUTH.

BY D. STAPLES.

MR. EDITOR:—Perhaps some of your readers may think that we need to say but little, and do less, about wintering bees here in the South, where they can fly out almost every fair day during winter. But if they will for a moment, look around among the bee-keepers of the country, they will see that the mortality among bees in the South comes near par with those of the North, and for the very reason that they need but little care, and do not get that little. Now, Mr. Editor, as practice is what we want, and not theory, perhaps some one of

your readers may wish to know how I manage my bees through winter.

Well, I will tell you: In the first place I have my hives made of good material, and perfectly tight, except the entrance, which I close up very small for winter. I then equalize my stocks by taking from the strong and giving to the weak, until they are as nearly equal as possible. Then I cover the tops of the frames with a sheet of straw wrapping paper, on which I put a little cotton seed. The paper and cotton seed absorb the moisture, thus keeping the bees dry and warm. Out of two hundred stocks put up in this way last winter, I lost but two, being only one per cent., and I think they died for want of food.

Bees do not make honey in winter. I do not care for extra large colonies, but when spring comes I want my stocks numerous, and to that effect I commence to stimulate my bees by feeding as early as January, or the first of February, so that when the honey harvest comes I have a strong force of harvesters. And, in the meantime, I have my bees build all the combs possible, for every good apiarian very well knows that when he has plenty of bees, and a good supply of nice combs, he seldom fails to have plenty of work to sling the honey when the harvest comes.

Perhaps some of your readers may wish to know how I induce my bees to build combs and raise a large amount young, but I see this is already too long, and will defer giving it at present, but if they wish I will give it in my next with pleasure, for I consider it one of the greatest measures of success in bee-culture.

Columbia, Tenn., Nov. 30, 1874.

Give us the method by all means.
—Ed.

A MOVE IN THE RIGHT DIRECTION.

BY HARRY GOODLANDER.

A. F. MOON:—What I am now going to call your attention to is no humbug, nor wild chimera. You know that I have been engaged for some years, at a heavy expense, in experimenting on the bee disease. At the same time I have carried forward experiments to find the very best timber for hives. Trivial as this subject may appear to a casual observer, yet it is one of vast importance to bee-keepers, who wish to know for a certainty what timber to use to have their bees winter better in than they have in the past. From close observation I find that the material of which the hive is made has a great deal to do with the success and failure of bee culture.

What I am carrying forward now I should like to finish, and furnish to the readers of the *WORLD*, free, the result, which I am satisfied would be of benefit to you as well as myself. Understand, that I am able to make a living, but not able to carry forward the experiments that I have worked on for years, at my own expense. Bee keepers, are you willing to assist with a small remittance from each one of you, and let me go ahead? I think it will be money well invested, at least I hope so. Your attention was called to the matter in a former number of the *WORLD* by the editor, to which no one responded.

I should like to get through so that I could commence giving you facts and figures—not theories, for you have had enough of them—in the April number of all the bee journals.

What say you, bee-keepers, will you assist, for stop I will not, though it

takes a life-time to solve the problem at the rate I am now going.

Understand that I am too old a man to want to humbug my brother bee-keepers. What I write is in good faith.

Leesburg, Kosciusco Co., Ind., Nov. 15, 1874.

This is truly a "move in the right direction," and should be supported. Let everyone interested in bee culture forward a sum equal to their ability, a small sum from each, and give "Uncle Harry" a chance to demonstrate his theories. And while he is about it he may be able to throw more light on that fatal disease, dysentery. The money will not be thrown away.

A DUTCHMAN'S EXPERIENCE WITH BEES.

BY H.

The season of honey gathering closed with us,

"When chill November's surly blast,
Made fields and forests bare,"

and while our little favorites are closely housed amid walls of honey and comb this bleak December's night, we thought to pen a Dutchman's experience with bees, being all we could think of for the good of the fraternity, at present.

He lives near us, and is a frequent visitor, and if we have a hive open, or are working with the bees, he stands far off, and though fearless and brave, he cannot be induced to come near them, with every assurance of their docility and kindness. We could hardly account for his timidity and shyness, until a few evenings ago he gave his experience with bees, while he was on a sparking frolic.

At a camp-meeting he became acquainted with two young ladies, sisters, fat, rosy-cheeked, bouncing girls from

the hills. He was struck with their appearance—they looked more like the girls look in the old country, than any he had met. He liked them. Thought they could handle pots and skillets, make good bread and milk cows. Was invited there to a candy-pulling on Christmas day, and made several visits afterwards during the winter. Was there the fourth Sunday in May, which brings us to his story.

Unbeknown to anyone, except the old lady, who was at home, the bees swarmed that day and settled on an apple-tree, overhanging the roof of the house. The old man had gone with the girls to meeting, and was the only person on the place who attended to hiving, robbing, etc. There being a crack in the board roof, near the swarm, and the sun shining hot, they had crawled in and hung in a great cluster on one of the rafters.

The girls bringing home a beaux with them, the old woman must get up something extra for dinner, which so engaged her mind she forgot all about the bees' swarming for the balance of the day.

There were but three rooms to the house; one large room containing two beds and a stairway, leading to a room over it. This is what is termed a half story, and over this half story room the bees had settled on the tree. The rafters and boards were the only ceiling in the room, and was occupied by the girls as a bed-room, except when company came. The third was a shed, or L room, and served for the cook and dining room. As our young friend had "roosted" there before, he was told that he could occupy the same bed whenever he felt like retiring.

Byron says:

" 'Tis sweet to be awakened by the lark,
Or lulled by falling waters; sweet the hum
Of bees, the voice of girls, the song of birds," etc.

But it was not the case with our Dutchman. The moon shone in at the window, and as he lay inviting sleep, he heard a sort of murmuring, rumbling sound, apparently not far off, he was not accustomed to hear. It sounded, he said, something like the noise of a distant train of cars, then again like the murmuring of a gentle stream of water. He knew he was near no stream of water, or in the hearing of cars. What was it? Was it the wind blowing through some auger hole?—that could not be, for the air was still as a tomb-stone. It sounded like a big pot boiling. That couldn't be. Was the house haunted, or his ears out of gear, and he appearing to hear something not heard? Certainly no one could be drumming Sunday night, and it went like one occasionally. The more he thought about it the wider awake he became, when all at once a wad of bees, almost the size of a sugar bowl, broke down from above and struck upon the bed where he was laying uncovered. In a moment they were flying and crawling everywhere, and from the noise seemed to be upon everything in the room. What must he do? They were peeping him from heels to head. It wouldn't do for a courting man to raise an alarm and wake the family, and he couldn't endure the stinging. He noiselessly crawled out of the window upon the roof of the shed-room, to free himself of the bees, and had been knocking and brushing but a short time when the dogs discovered him and set to barking and kept it up until he heard the door open below,

and fearing he might get a worse peeping from the old man's shot gun than he had already received from the bees, he speedily and noiselessly crept back into the room. He was smarting all over, and getting hold of his vest and pants, intended to dress, but they were alive with bees. He couldn't think of going back to bed, and sleep had left entirely.

"Most glorious night!

Thou wert not sent for slumber! let me be."

So making himself as small as possible, he crouched down in a corner farthest from the bees and awaited daylight.

With the earliest dawn of the morning he was ready to come down, and was such a sight he did not intend to be seen by the girls.

"His flesh was a picture for painters to study,
The fat was so fat and the lean was so ruddy."

He said he could see but little out of one eye, and his jaws looked as tho' he had the mumps on both sides.

He had pressing business engagements elsewhere, and left very unceremoniously, and to this day says before he will keep bees, the flowers about him may

"Waste their sweetness on the desert air."

Murfreesboro, Tenn., Dec. 17, 1874.

SKETCHES FROM TENNESSEE.

BY S. D. MC'LEAN.

MR. EDITOR:—The omission of a word or two frequently changes the sense a writer wishes to convey. It was so in my article for December. It was not my intention to convey the idea that all correspondents were not traceable, but those only who hide themselves behind fictitious names.

CORRESPONDENTS.

We agree with Dr. Davis that cor-

respondents should send in their communications early.

We would be pleased to see the BEE WORLD come out by the first of the month, and suggest that communications be sent in by the 20th of the preceeding month, or so soon as the editor desires. While on this subject may we not express a desire that the corps of contributors be increased by additions, and that the old veterans again fall in rank with their experience, potent with good advice for younger apiarians? We would be pleased to read articles in the WORLD from the pens of Gallup, Grimm, Quinby and many others who have been lights to us in former days.

ADULTERATING HONEY.

The steps taken by the North American Bee-Keeper's Society in reference to the adulteration of honey is a move in the right direction, and should meet the approval of every bee-keeper. Our ears have been greeted with "patent hive," and "swindle," until these terms seem to have lost their force; but here is a class of swindlers, not directly concerned in the production of honey, who have done more mischief to bee-keepers than all the sharks that "Uncle Harry," or friend Argo ever read of.

Extracted honey has been brought into disrepute by them, and purchasers hesitate to buy, suspecting fraud has been practiced. We say then of all who persist in the adulteration of honey, give them a free advertisement in every journal in the land, that honey-producers may be on their guard in selling, and honest dealers may not have to compete with such villians.

APIARY FOR JANUARY.

To those who have their bees in proper trim there will not be much

work in the apiary for January. However the apiarian should be vigilant in his watch over his bees to keep down robbers, and more especially should he watch his weaker colonies. The great secret of success in apiculture consists in having a heavy working force in each hive when the harvest opens, and to have this the bee-keeper could not wait the slow process of nature to develop the strength of his colonies, but should assist her in her efforts to recuperate her weakened forces by stimulative feeding. In the more Southern states the process would begin this month.

We do not advise giving much liquid food where there is much honey in the hives, but if honey is wanting it should be supplied by exchanging a frame or two with stocks that can spare it, or else feed on syrup made of A. coffee sugar instead.

The great drawback during this season of the year consists in a want of pollen, or bee-bread, and as there is no flowers for bees to gather from, we must supply the place by a substitute.

Unbolted rye meal seems to be the best and most accessible substitute. Begin by giving a little in a long shallow box, placed in the sun and out of the wind as far as practicable, and attract the bees to it by means of honey, or otherwise. When a few get to work on it they will soon attract others, and in a short time they will literally swarm over it.

Culleoka, Maury Co., Tenn., Dec. 14, 1874.

MANAGE your colonies so that they may be strong when honey is abundant. A strong swarm will fill up rapidly where weak ones will actually starve.

ADAM GRIMM'S BEES AND HONEY.

BY JASPER HAZEN.

EDITOR WORLD:—I observe the following statement in a late number of the WORLD: "One of the largest honey-raisers in the world is Adam Grimm of Jefferson, Wis. His crop for this year was 25,919 lbs, and his apiary consists of 1,158 colonies."

I think, from my recollection of the past, Mr. Grimm's bees are divided into several apiaries, occupying different fields. But this fact is unimportant to the few thoughts that occur to me for present notice.

1st. The amount of surplus honey is less in proportion to the product of the field than he should receive. A colony of bees will probably consume 60 lbs in the one full year. 1,158 colonies will consume, at that rate, 69,480 lbs; add surplus—25,919 equals 95,399 lbs.

This is 5,880 lbs less than one-third of the product of the field. Five hundred and ninety seven non-swarmers, at an average of 100 lbs surplus, and 60 lbs consumption each, would gather the field, giving, in surplus, 59,700 lbs out of the 95,399 lbs in the field, consuming 35,699 lbs.

2d. There are several advantages secured by this change.

1st. We secure nearly double the amount from the same field. In one case 25,919 lbs—2,070 lbs more than one-quarter of the honey in the field. In the other case 59,700 lbs—more than double the amount secured by the swarmers, and almost two-thirds the product of the field.

2d. Another advantage is the more than double amount is secured at but

little more than half the expense. In the first case 1,158 colonies are employed to gather 25,919 lbs by swarmers; 579 non-swarmers gather 59,700. Here 579 non-swarmers, only, are employed to secure nearly double the amount of surplus secured by almost double the number of colonies in the swarmer hives.

3d. The care and trouble of 1,158 swarmer hives, against 579 non-swarmers, is worth taking into consideration; and would more than raise the expense of swarmers to the double of the non-swarmers, and raise their product to the full double of the swarmers.

4th. It should be further recollected that this is given as an extraordinary harvest of one of the largest honey-raisers in the world. It is more than double the amount estimated by M. Quinby of the average amount of the swarmer hive. Our estimate for the non-swarmer is twenty per cent. below our first average in the Eureka hive. That gave us 500 lbs from four hives—an average of 125 lbs—and our surplus has gone as high as 200 lbs of box honey in one hive. Compared with these results, what is \$5.00 expense for a hive that will last thirty years? This would be 16 6-10ths of a cent a year; a little more than the cost of one-half pound of surplus honey.

Those who still neglect the improvements, may keep their old scythes, and dingle their whet-stones in their hay fields.

Woodstock, Vt., Dec. 4, 1874.

The working bees form the life and prosperity of the hive. To them belong industry, labor, patience, ingenuity—in short, all the virtues of the race; each one knows his own duty, and does it.

N. A. B. CONVENTION.

We published a portion of the proceedings of the above Convention in our last, and select the more important of the balance from the following Report sent us by Dr. Rush:

QUEEN REARING, DRONE PRESERVATION, AND
BEST METHOD OF INTRODUCING QUEENS.

Mr. Benedict.—I generally have a hive that holds a half barrel, such a hive keeps a great many drones, tho' large hives keep drones until late or very cold weather, while small colonies will kill them as soon as the honey season is over if they have a fertile queen. I am generally successful with this kind of a hive and they fly out strong and they seem to enjoy themselves and fly finely. Large hives also raise drones two weeks earlier, and they are better ones and more active. To introduce queens, put them right in. I sometimes wait a day, and sometimes longer. I make no difference between a frame or box hive. I use a drum box, take old queen out and kill her, take essence of cinnamon in my mouth and wet them completely and put the queen in the top of the hive and let her go down among the bees. Sometimes I cage the queen and put her between the frames and leave her twenty-four hours, then I go to liberate her. I see whether the bees are inclined to sting her, and if they are, I shut the hive and go back the next day again, and they generally are all right.

Mr. A. Chapman.—I generally introduce same way as Mr. Benedict does; but another way is to put her in a wire cage and put in a cork of comb the size of the hole in the cage and stick it in, they find the queen caged and loose her by eating the end out and liberating her. I never lose one in this way.

Mr. Zimmerman.—When I introduce her I take her to the hive, and put the comb and honey in the end of the cage and to make it more sure, put a lot of bees in the bottom of the hive at the same time, and thereby disorganize

the colony and they are less disposed to kill the queen.

Mr. Chapman.—I take a comb of bees from another hive with brood in it, and a strange queen from another and put them together and they do well.

Mrs. Tupper.—Queen raising is the most important of all. Each one must understand it well. The way I take is one that anyone can follow. Take the best queen you have, a good hive, put her in in the fall for spring operations, stimulate by feeding early, have them strong in the fall and spring both, also feed in the fall; no difference where, so it seems to come from the outside of the hive. Go to the colony early in the spring, take out the queen, put her in another hive, disturb them as little as possible, put in frames in another hive with enough bees to keep them warm, get 4 frames from another hive, move the hive and put it in the place of the old hive, and if too many leave the old hive change them and continue; in this way you can get ten nuclei, and as soon as it is warm you will have queens. As soon as one comes out, put in another cell and continue this rotation. Cage or change queens between ten and two o'clock and you can have from ten to sixteen nuclei all the time without much care. Mark the entrance for queens before they fly.

Mr. Benedict.—Those large hives, which have drones, which fly early in the day, stop in the drones early, and put in a teaspoonful of honey in the big hive to feed and excite the bees and drones. Open the hive about five o'clock and liberate the drones and young queens and they will come right out and fly finely after all the rest of the drones are done flying.

Mr. Chapman.—I keep my hives large and strong, and in the spring of the year take out a few drone combs and put them in two hives that have no other comb in their hives and kill all the drones except those in the two hives. I killed all my drones in this way last spring. Have practiced this for a long time, and my best success

has been with large hives to keep drones.

Mr. J. S. Hill.—I have introduced queens and have been successful; lose one once in a while. I do not like the method of wintering bees, they do not like the method of wetting the queen, the bees do not clean her off. When you want to change the queen, catch the old one, put her in a cage, raise the hive and lay the cage with the old queen in it on the bottom of the hive, and in two days if they are quiet, change the old for a new one, and put her in the same place, stop the cage with bits of comb, getting your comb from uncapped honey. In two days after, examine to see if she has been liberated; if they have not let her go, then uncage her.

Mr. Benedict.—I would have my queen to breed from in a good strong hive, and in spring as soon as warm enough, put her in another hive, and on the ninth day cut out the cells. Next day move the old hive and put the nucleus in its place. Have plenty of drones in the old hive.

Mr. Anderson.—As soon as capped over I put them in a wire cage and leave them an exit.

Mr. Chapman.—Queen cells put in on the ninth day will hatch in three days.

Mr. R. B. Price.—I put a new queen in a cage, take out the old one and kill her, and put her in the same dead. Leave them in 24 hours and liberate her. I succeed well in this way.

Mr. Hill.—I generally leave bees two weeks before I disturb after introducing a new queen.

Mr. Zimmerman.—I have lost queens two days after they were liberated; and to make doubly sure I would take the bees out and let them go back into the hive very slowly.

Mr. Benedict.—Be sure and conquer your bees first. Send smoke among them thoroughly. Kill the old queen, put the new one in a cage with comb stopper, in 48 hours examine and see if she has been liberated, if not wait one week before liberating her.

BEE FORAGE.

Mr. Chapman.—I have been a farmer and will give an idea. I will say take a field in a good state of cultivation; and I can draw moisture from the surrounding land; I will not want it plowed up; the field will deposit more evaporation than a field poorly cultivated, and will secrete a large amount.

Pres. Hoagland.—I do not know that I am prepared to express myself on this topic. I cultivate from 20 to 60 acres of black buckwheat. The gray variety superceded the black some three years ago, then we got the silver-skinned variety, and it produced more honey two years ago than it has since. Sometimes clover is the best, then linn; but now clover is our best honey resource, as our linn has been cut down for timber. I wish to say that buckwheat is not so exhausting as some think. I had a new field in for sixteen years, and an adjoining field four years, and always had good crops. Three years ago I sowed both fields with oats, then wheat and timothy and had excellent crops; clover grew finely, though I cannot tell where it came from.

Mr. Benedict.—In my locality they do well on clover and locust; the idea to go on would be to select a locality where it is good to secrete honey. Our honey ceases at the end of clover time—the season lasts about five weeks. Linn is the best that we can cultivate—easily transplanted—I set out a great deal of it last spring and it did well; set out as soon as the frost is out of the ground; blooms last of June with us.

Mr. Zimmerman.—I discover in my experience more honey along the rivers, and bees do better on bottom timber. We have clover and basswood. I would recommend that all would cultivate catnip. Basswood (linn) is abundant in my grove and I cultivate some of it; it is next to fall flowers. Boneset, golden-rod (three kinds of it),—the low sort is the best. Use extractor in summer, and get winter stores from fall flowers, and sometimes

when these begin I make three hives of one.

Mr. N. N. Betsinger.—Asked if sowing two acres of catnip would pay.

Mr. Zimmerman.—I think it will.

Mr. Benedict.—I think it will pay better to sow white clover where the ground is moist.

Mr. Betsinger.—Two years ago I sowed Alsike, and it came on last June. In passing through the Alsike clover, saw bees swarming on it—sowed it on low damp ground—while white clover did not do near so well.

Mr. Zimmerman.—Which does the best?

Mr. Betsinger.—Alsike, is my experience.

Mr. Benedict.—Bees work equally as well on Alsike as on white clover; I think Alsike will secrete more honey.

Mr. Abner J. Pope.—I went to the Shenandoah Valley, Va., was there from June 21st to Oct 30th. I saw the "blue thistle" in bloom, and some told me it was their best honey source. Some fields were full of it, and was troublesome; in another field beside of it I saw white clover. Thistle is the best honey source and does not hinder cultivation; it enriches the soil and never fails to produce honey. I also saw it in Maryland.

Mr. Clarke.—I would say that there is a Canadian thistle and you are welcome to all of it.

Mr. J. W. Sherif.—I notice growing a species of clover, which grows three feet high, and I saw as many as twenty bees on a flower, both black and Italians. Blooms last of August.

Mr. John Stevenson.—I planted sunflower for ornament and my bees did well on it this summer.

Mr. Rush.—I planted plenty of it and never saw a bee on it only for pollen.

Mr. J. Winder.—A friend recommended it highly for honey.

Mrs. Tupper.—We need a locality which has locust, clover and fruit bloom. This year my bees did well on fruit bloom, but it does not occur one season in ten. We should arrange

to have our bees ready for the honey harvest. I would begin to rear brood freely, early. I would give them empty comb in the middle of the hive and get brood in it, and have the hive strong, and may have as high as two bushels of bees; continue to feed and keep the queen going. Everyone should study their locality. When I use empty comb I keep them from swarming.

Mr. Betsinger.—What kind of a hive do you use.

Mrs. Tupper.—I use a plain box hive with frames 12x12. Alsike clover when sown in a good locality is the best I have, even better than white clover.

Mr. King.—I think if I should go into honey gathering again I should look to fall plants, such as golden rod and aster. The golden-rod is rather yellow but aster is much clearer honey. All through Ohio we do not have much fall blooms, and even east of it.

Mr. Chapman.—I am of the opinion of Mrs. Tupper; I can control swarms by giving empty comb.

Mrs. Tupper.—Many persons have more fall pasture than they think they have, if they would take the honey out and give them a chance of gathering it.

Mr. Replogle.—What is the difference of the same kind of flowers in different localities and same climate?

Mr. Betsinger.—Where I am located now in Onondaga county, N. Y., we have all kinds. I saw basswood so plenty that if you would shake a tree it would fall in profusion and daub you with honey; it lasted one week each year. Last year I got all my surplus honey from teasel. It is not best to raise over three acres of it, although it is a valuable plant, and I would give up bees if I had nothing better than clover.

Mr. J. E. Moore.—I think with me it would pay to keep bees on white clover, near Rochester, Pa. I got 107 lbs. from one hive from May 20th to July 4th.

WINTERING BEES.

Mr. Benedict.—I have a plan better

than glass. I have a box made square to put on top of my hives and the bees go up in the top of my hive to fly and fall back on the frames; have a quilt over the frames, the box a foot high. When feeding it is necessary for bees to fly and discharge their faeces.

Mr. Zimmerman.—My experience at Cleveland, O., was, put the bees in a room and place a mosquito bar between them and the window, so as to keep them from the glass, give them light in the room by the window, and as they cool off, they fall down and go back. Do not put them in until after a cold spell in March, and then take them in a room and feed them up. I intend to continue the experiments. The one made was in 1873.

Mr. Benedict.—I can feed my bees by taking them in a room.

Mr. D. L. Browne.—How many times have you tried the experiment? We never put them in winter quarters or in a room.

Mr. Benedict.—I think it a good plan. I have had bees cured of the disease in that way; received them when they had the disease mildly and they recovered, and came out in good condition from the room. I can fly a good many in that way. If the weather is cold for a long time I bring them in for a flight.

Mr. Stetsers.—Will your bees keep quiet?

Mr. Benedict.—When you put them in they will take their flight and fall down (in the top of the hive) and fall back, and do not seem to be much uneasy.

J. W. Parker.—A friend keeps his bees in a room, well warmed and ventilated, and they consume a good deal of honey and he expects to lose money.

Mr. Rush.—Mr. Benedict, what do you cover hives with, and what do you put on your hive to give them a flight?

Mr. Benedict.—I cover the boxes with screen wire.

Mr. Rush.—If you put on glass they will fret too much, and if you put on

wire it is too cool, and they will worry too much to get out. I put on a good article of muslin (brown) and they have plenty of light cannot see out and thus save them so much uneasiness to get out.

Mr. Zimmerman.—My mosquito bar keeps the bees from coming in contact with the glass.

Mr. Rush.—It's too open and they see out too much.

Mr. Harrison.—Mr. Benedict, will not bees fall down and get daubed on the frames?

Mr. Benedict.—A few times it may occur. When I let them fly in February they don't daub themselves, but in some days in March they will daub themselves some. I let my room cool off gradually, to induce them to go back. I have fed up my bees in the fall on white sugar syrup.

Mrs. Tupper.—I don't want the idea that we are to winter bees this way, but must feed up in the fall and you have no more trouble. This talk is only applicable to weak colonies which have been neglected.

PREVENTION OF HONEY CANDYING.

Mr. Pope.—I took honey out and put it in a cold place and it would candy; bring it back and it would become fluid again. Keep it in a warm, dry, dark place and it will keep a long time.

Mr. Chapman.—That is my experience.

Mr. McLane.—What causes honey to become thin?

Mr. Clarke.—Souring or fermenting causes it to become thin.

Mr. Betsinger.—My experience in keeping comb honey is this: I kept it in the cellar and it would get thin and run out. I moved in a thin walled frame house, with tin roof, and when the weather gets cool I build a fire in the room and the honey becomes thicker instead of thinner.

Mr. Zimmerman.—I had a few barrels of honey, some were tight and some not, the ones air tight did not candy and the others did.

Mr. Betsinger.—A neighbor extracted some honey and bunged it up tight

and in two months it was solid.

Mr. Zimmerman.—We extracted a barrel of honey, bunged it tight and left it some time; opened it and took out some and it was all right, shut it up and looked in a month and it was all solid.

Mr. Zimmermrn.—Will honey, air tight, keep longer in the dark than in the light?

Mr. King.—I understand that there is a man here who has a receipt for keeping honey; will he give his receipt, as I see he has offered to, in the A. B. Journal?

M. Tush.—I have been experimenting with the receipt and it has succeeded well so far, and as soon as the terms are complied with in the Journal I will let up.

Mr. King.—Some one sitting by me told me to ask for it, but I see the joke comes on me for a queen.

THURSDAY AFTERNOON.

President Hoagland.—There will be one hour given to the exhibition of articles pertaining to the apiary.

Mr. J. E. Moore exhibited his sectional honey hive.

Mr. King exhibited Barker & Dicer's sectional honey box, and added a few words on their hives. He also exhibited Mr. Quinby's bee smoker for quieting bees; it works by a bellows.

Mr. J. Winder exhibited his honey extractor No. 3, with stationary can, and his No. 1, with revolving can, and gave his manner of using both.

Mr. Hoagland exhibited an annual herb called "blue thistle," same as Mr. Pope referred to.

Mr. George Hardesty exhibited his Ne Plus Ultra hive, and his remarks and hive attracted a good deal of notice, and criticisms were freely offered and the hive condemned because of unnecessary space between the end of frames and hive.

SELECTING QUEEN RAISING LOCALITY.

The advisability of selecting a locality where queens may be raised by a committee appointed for the purpose, and save importation.

Mr. Benedict.—There is so much risk in raising queens, and so many

queens are impure, I believe there are impure bees in Italy, in some localities, but in others they are up to the standard of purity.

Mr. Browne.—I am called on, but cannot say much; will wait to hear from others.

Mr. Hoagland.—I think it would be better to appoint a committee to take the matter in charge, and after due consideration report at our next meeting.

Mr. Chapman.—I agree with Mr. Hoagland and put it to get the mind of the Convention.

Mrs. Tupper.—I imported queens ten years ago by Colvin at \$50 each. I imported by Dadant and lost heavily. I have imported since through friends and done better. But I think we have better queens in this country than in Italy. I sent queens to a man in Germany and he replies that they are better than those he gets from Italy. I think there is danger in importing of getting a taint of black stock, as they may have mixed some of the Egyptian blood in them. It is like importing cattle and sheep; they have improved so that they are sending them back to where they came from. I have got fine queens from both North and South Italy.

Mr. Chapman.—I would earnestly recommend, that in sending queens, you put in comb from the hive from which the comb was taken.

Mrs. Tupper.—There is not the least difference to me.

Mr. Chapman.—I think they should not take old comb, that is, comb long out of the hive.

Mr. King.—There are persons advertising queens of both imported and home breed as breeders of the same, and at the same time do not own a hive of bees. I travelled in Europe and stopped in a German apiary and found no pure stock, and that same man was sending queens to this country. I stopped with another man and found five stocks of blacks. In Italy I visited another apiary, and one that advertised largely in Europe, and had not a pure colony. We ought to issue a diploma to the old queen

breeders who have long been successful, and the one who keeps his bees right. Select a number of queens and raise queens from them, and select queens to raise drones from only. In raising queens, as I pass over my apiary, I find drones just hatching in a comb, and place this comb in a hive which has a young queen, and *vica versa* with the queens. To keep drones in working with my bees one day, late in the summer, I found a hive with no queen, and the drones when drummed out came back in large numbers; and if they are excited they will attract others—throw the bees out, raise the excitement and you will have a fine lot of drones.

Mrs. Tupper.—This is a free country and everyone has the liberty of buying where he wishes, and no diploma will control the queen trade.

Mr. Anderson.—If our stock continues good we keep it; if not, we turn it off. Some queens are more prolific, and workers more industrious, and when we find a good producing hive keep them, and if we find them poor kill the queen; but how to get good drones is the question.

Mr. Clarke.—Believe giving diplomas impracticable. Let every one get their own diploma. If this subject is brought up to the right pitch we must pay a good price for queens.

Mr. King.—Every one knows that premiums have been paid all over the country. Give premiums to persons for extra queens. I move that a committee of three be appointed to get up resolutions in regard to it. A premium should be given.

Mrs. Tupper.—I have attended my State Fair and it gave high premiums for the best black and Italian queens caged. What did it amount to? They could tell nothing by the queens; they must see their workers. It is the wrong time of the year to handle bees, when the Society meets.

Mr. King.—I can tell a good queen anywhere.

Mr. Hoagland.—There are many present who wish to hear Dr. Rush. I understand that he has some means or a recipe for keeping honey or syrup.

I am informed that the Dr. has consented to favor us this evening. Will he please do it now?

Mr. Rush.—I have a recipe for keeping syrup from souring or granulating, also to keep honey from souring. I cannot say that it is a certain specific; not at all, but can truthfully say, that as far as I have experimented with it, it has not failed a single time. I believe it will succeed in a majority of cases. I have given it to Messrs. J. S. Hill and G. W. Zimmerman to be tested, and given them special directions, and if they succeed with it, in a majority of experiments, then I expect pay for it, and will leave each one to be guided by conscientious duty. If it fails I do not want anything for it.

The following is the recipe: Flavoring extract of lemon; to one gallon of syrup or honey add one teaspoonful of the extract—more may be added with safety. Do not add until syrup or honey is cool. It gives a fine flavor. Stir gently.

BEST METHOD OF SPRINGING BEES.

Mrs. Tupper.—The best way to keep bees through spring is to winter them right. One says he went through finely on my plan. I take my bees out of the cellar in the night before I expect them to fly, and about the time I want to commence to stimulate, bring them out quietly. If you take them out on a sunny day, they come out and fly too sudden and many are lost; when it is warm enough I begin to feed, and as soon as safe I examine them and generally find brood; also feed rye meal as long as they will take it, and as soon as they have plenty of brood I open the hive and give an empty comb-place in the middle of the hive; keep quilts on hives so as to protect the brood. I would rather have bees out than in a cellar, if not frost proof. But to keep them out doors, set a store box round your hives and fill in with chaff or manure and leave the entrance open. Bees that are in a cellar must not be disturbed at all, but until time for setting out in the spring, for when they are

disturbed they consume more honey.

Mr. Benedict.—Bees consume but little honey from Dec. 1st, to Feb. 1st, but after that they consume a good deal, for brood rearing requires much more food.

Mr. Chapman.—I cool my cellar before I go into it to see my bees, and do not disturb them. I carry them out in March to fly, and if the weather gets too cold I carry them back. I feed syrup warm, and get water from a brook to make syrup with; also feed rye meal.

Mr. Betsinger.—Let your bees be quiet in their winter quarters. I have had experience in feeding syrup, and find comb honey the best to winter on. I winter on summer stands. I find a cluster of bees 4 inches thick will not freeze. I open the hive on a cold day and out come the bees quite active to meet me. I put a quilt on the frames first. I put on a paper about 1st of April. As soon as warm enough, and brood commences, I put in empty comb in middle of the hive and soon find plenty of brood. I find we must keep them dry.

Mr. King.—Read a paper on the coming "Frama."

Mrs. Tupper.—I never have any trouble in securing comb when I have plenty of bees and the weather is favorable. Put a frame in the middle of a brood chamber in the night when honey is plenty, sometimes put in three a day. I don't think it pays to build comb. I would not build it for less than \$5 per comb; 12x12. I am in for a standard frame, and that they be 12x12.

Mr. Benedict.—I breed queens for sale and not for honey. I put frames in the middle of the hive at night, and have got three frames of comb in a day. I attach great importance to a tight fitting frame, and have them fit tight on the sides of the hive.

Mr. Rush.—I obtained four nice frames of comb by feeding syrup just at the close of the honey season. Feed 10 lbs. of sugar, one of sugar and one of water; feed in the evening.

Mrs. Tupper.—I tried some twenty times by feeding to get comb and did

not succeed but three times, and then they would soon cease taking the syrup.

Mr. Clarke.—I think square frames good in the North, in the South a shallow one. In Canada we need a deep frame. I have no experience with shallow frames. I find extreme difficulties with tight fitting frames in the fall of the year, and I cannot use a Quinby hive, as I find it produces a bad temper among bees. I would give up something else in its stead.

COMMITTEES

Committee on Adulteration of Honey.—H. A. King, A. Benedict, Seth Hoagland, W. F. Clark.

Publishing.—A. J. Pope, W. B. Rush, D. L. Browne.

Queen Rearing.—Mrs. Tupper, H. A. King, Aaron Benedict.

Centennial.—Mrs. Tupper, A. Benedict, H. A. King, Seth Hoagland, J. W. Winder.

Next Session at Toledo, Ohio, first Wednesday of December, 1875.

W. F. Clarke, President,
D. L. Browne, Secretary,
W. B. Rush, Reporter,
H. A. King, Cor. Secretary.

MICHIGAN BEE-KEEPER'S CONVENTION.

The seventh annual session of the Michigan Bee-Keeper's Association convened in Corporation Hall, at two o'clock p. m., President Balch in the Chair. Notwithstanding the universal complaint of hard times, the attendance was unusually large; evincing a growing interest in this fascinating pursuit.

After the transaction of some preliminary business, the convention listened to an Opening Address, by President A. C. Balch, welcoming the members to the hospitalities of the large-hearted and whole-souled people of this loveliest of villages—Kalamazoo.

The regular programme of the convention was then taken up. Secretary Burch read a paper from Charles Dant, of Hamilton, Ill., on the best size of frames, in which the writer strongly

avored a large frame as giving the greatest advantages to the apiarian. He also urged that American apiarians adopt a uniform-size standard frame, as being a long-sought desideratum; in proof of which, he cited to the beneficial results that had followed such adoption in Italy. The paper elicited much discussion, the most important of which we give, as follows:

James Heddon—Large frames, the size of Quinby's are, in my opinion, too large. I prefer a small, shallow frame, as it offers the most advantages, and gives the best results in amount of box honey. It has been almost universally recommended that a hive should not hold less than 2,000 cubic inches; yet a smaller size will give better proportionate results. It is better not to give the queen all the room that she will use, than to go to the opposite extreme. Quality of bees, and not quantity is what we should aim to get.

Dr. A. L. Haskins—I use the American frame, 12 inches square, and think it about the right size. Like it better than Quinby's.

Prof. A. J. Cook—In this country of Yankee ingenuity and invention, it will be quite impossible to adopt a standard frame, as scarcely any two apiarians will agree on any one size, much less the whole fraternity. I have experienced much difficulty in handling the Quinby frame, in having the combs fall out, which is decidedly unpleasant. The bees do not fasten large combs as securely as smaller ones. They are inconvenient for queen raising, which is objectionable, as all bee-keepers wish to raise queens for their own use. I prefer the Gallup frame, as combs do not break out so easily, and are more convenient for rearing queens. They are also better for wintering, as the bees are in a compact cluster, just as they should be. Bees that cluster in an oblong shape, as they do in Langstroth's, will get away from the outside of the cluster and die.

C. I. Balch—Would not a shallow frame obviate dampness better than a deeper one?

Prof. Cook—Such has not been my

experience.

T. F. Bingham—Thought the subject an important one. Give a beginner a good hive, and good advice in the shape of a good text book, and if he has a good judgement he is almost sure to succeed. If I used the Langstroth frame I should think a standard frame desirable. Small, shallow combs, give more brood early in the season. Large combs obstruct the easy passage of the queen to various parts of the hive—shallow combs obviate this difficulty. Heat ascends sooner than it radiates; hence, in tall hives, it is lost. In wintering bees we should keep them near the bottom boards, and it will not get clogged up with dead bees. Early in the season the queen will lay in one or two large frames; in a series of smaller ones much more. Again, small, shallow frames are much easier to handle. There are but two methods of obtaining box honey successfully. Either use tall, narrow frame, and side boxes, or a long, shallow one, and top boxes. Small frames are more convenient to manipulate in extracting. I prefer a cloth quilt, hemmed in beeswax, in place of a wooden honey board.

J. H. Everard—Large frames are objectionable; too heavy to handle. In visiting Mr. Bingham's apiary had witnessed the best results with a long, shallow, frame, only six inches in depth.

C. I. Balch—Have always used a frame nine inches deep; would use one not to exceed seven were I to commence again. Mr. Bingham once advocated a deeper frame.

T. F. Bingham—And would to day, if obliged to winter out of doors. By the aid of a good bee-house they can safely be wintered in shallow combs.

Dr. Southard—Use only the regular Langstroth frame. Were I to change, would make them smaller, and more shallow.

Mr. Bryant—Have used ten Bingham frames to the hive with good results. Have used sectional hives but do not like them. Bingham's gave the most box honey.

Prof. Cook—What is "box honey?"

Pres. Balch—Honey stored by the bees in small glass boxes.

Geo. Stray—I get more brood early from a shallow, oblong frame, than from a deeper, square frame, and consequently more honey. In wintering, have no mouldy combs. Leave hives on summer stands, pack well with straw, keeping it dry, and bees winter well.

Prof. Cook—I would like to hear from those who use deeper combs. I hope we shall not fall into the error that honey can be obtained only by the use of shallow frames.

Mr. Bryant—My twenty-five stocks, in shallow, six inch frames, gave me over 2,600 lbs. of box honey.

H. E. Bidwell—I have used all sizes and shapes of frames; now I prefer a frame one inch deeper and one inch shorter than the Langstroth. It will give more honey, but it is more trouble to winter successfully than deeper combs.

James Heddon—Years ago I took the tops off from box hives, putting on a honey board. In using all sizes and shapes I found that a hive 22 inches deep often gave just as much box honey as one only ten. I prefer the latter depth in movable comb hives, as we get a small hive in better shape, offering greater advantages in manipulation.

Mr. Helleney—I am using Langstroth hives; think them preferable; can get more honey from an extra set of combs on top, than from boxes.

James Heddon then favored the convention with an address on the subject of "The Art of Getting Honey into Money," the prominent points of which we give below:

"Apiarians who raise extracted honey, are now obliged to compete with cheap syrup and glucose in all the large cities. Exclusive honey dealers adulterate our honey with this stuff, thereby making one pound of honey sell seven or eight pounds of glucose. Had agitated this subject years ago, and now the dishonest practices of these dealers demand that we meet the question squarely and firmly or

else we shall soon have no market for our honey—it will be utterly overstocked. If we put only a good article on the market, and continually keep it supplied, we can create a demand for our honey, by educating the people's taste for a prime article. Make honey a staple article. Honey dealers will buy honey, and promise to pay, and sometimes will do so, after selling it at double the price, besides selling eight or ten times as much glucose, worth seven or eight cents per pound. We ought to adopt the Grange principle of combination, control our own products, and sell direct to the consumer. We must discriminate between the products of an apiary and a honey-house. Teach the people who eat honey, that the former produces honey—a pure article, the latter a conglomeration of honey, glucose and poor syrup.

C. I. Balch—Many people like to be humbugged, and will buy a spurious article in preference.

James Heddon—Honey dealers have created a demand for jar honey with a little comb in it, as much as to say, "Liquid honey is not good, so we'll put in just a little that is." This ought to be abandoned at once, as extracted honey is even better, because wax is not a wholesome article. I know from experience that, despite prejudice, the people who eat it prefer it.

C. I. Balch—Can honey that is candied in the comb be liquified?

James Heddon—Honey candies from cold. Put it in a warm place and it will liquify, though it takes time.

Pres. Balch—My bees will carry candied honey out of the hive in the spring.

James Heddon—If you put a comb of such uncapped in the middle of the brood nest they will utilize it.

Prof. Cook—Honey is only a kind of sugar. The various kinds are quite readily told by the temperature it will grain. Nearly all syrups are adulterated. How then can we stop adulteration?

James Heddon—If you find a dealer

keeping an adulterated article, publish him. Printer's ink works wonders, sometimes.

J. H. Everard—Create a home demand by keeping a good, pure article.

Mr. Bryan—Detailed his experience in mixing syrup and honey; thought it didn't pay.

James Heddon—Bee-keepers can raise the pure article cheaper than they can manufacture it.

T. F. Bingham—We might undoubtedly create a demand for honey, but it is easier to cater to a demand that already exists. Every man likes his own wife's coffee best. People who have long eaten comb honey prefer it.

After some further discussion, the Convention adjourned until evening.

At the evening session, among the papers read was the following by Prof. A. J. Cook, of the State Agricultural College:

FEEDING AND THE EXTRACTOR IN RELATION TO PROFITS IN APICULTURE.

Success in bee-keeping, as in every other pursuit that looks to nature or natural phenomena for those prospective profits which make the heart glad, demand that we understand and take full cognizance of the science underlying those phenomena. To be sure ignorance may succeed, while full knowledge removes success from the realms of doubt.

Now, as a preface to this essay, let us recall some of those facts, which science has developed, which have a bearing on the subject matter in hand.

Science determines that, in the economy of the hive, the older worker bees gather the honey, the younger do the work of the hives, as comb-building, feeding young bees, etc., while the instincts and structural nature of the queen impels her to do the work of egg-laying alone. Moreover, science taught very early in the world's history, that the instinct of all these classes of the hive incited them to an industry which knows no abatement, save as the stern hand of necessity is laid on them. Thus the gatherers work with unparalleled assiduity, so long as there is honey to gather and room in which

to store it. The indoor laborers build comb so long as room and the proper internal arrangements of the hive will permit. While in the queen, a stronger instinct still cause her to labor untiringly in her work of egg-laying, yet leading her to pause, not simply from necessity, but often from probabilities as well in that the queen ceases from egg laying when the gatherers cease from storing.

Can it be that parental solicitude for the welfare of her offspring, makes her, even in the face of desire, to withhold from sending children to brave scarcity, want, mayhap starvation? What lessons has nature for those wise to read.

Such breadth of instinct, seeming to reason upon surrounding conditions, and what is more wondrous still, seeming to comport with structural peculiarities, is not alone peculiar to the queen bee. The male pigeon for example feeds the young, and with the hatching of the young fledgelings, comes a peculiar development of the crop, which assists in the preparation of suitable nourishment. Here, too then, structural conformation has relation to a peculiar instinct, which takes note of outside circumstances. Another example is found in the common high-holder, *Colaptes Auratus*, which usually lays six eggs, yet if the eggs are taken from the nest, they will continue to lay, often to the number of thirty, which number was actually taken from a nest at our college, by Prof. W. K. Kenzie, now of the Kansas Agricultural College. Here again then we notice that instinct varies with circumstances, and is attended by a structural change of the ovaries.

Hence we see, science teaches that to have honey stored, we must have, not only bees, but honey secreted by the flowers, and room in the hive to store the same. And again, to have bees to store, we must keep the queen laying eggs, which demands, not only room for the same in empty cells, but just as imperatively that storing is continued.

Now, let us see if these requisites are always at hand, without care and

labor by the apiarist.

Suppose, as true of us at Lansing during the past season, we have an excessive yield of honey from the fruit blossoms during May. The workers, ever on the alert for such opportunities, will, in the two weeks of rich harvest, fill every cell in the hive with the precious nectar. What then? The queen-like Othello finds her occupation gone, for if in the interim between fruit and white clover blossoms, the comb-builders do ply their calling, which in the general indolence of the hive is not likely; still in the midst of idleness the queen will not improve such opportunity. So with clover bloom, we have a depopulated colony, all unprepared to make the most of this, the golden era of honey gathering. Yet, even with the fewer bees, insures a repetition of the fruit season experience. With a good harvest of clover, such as the past season gave us, comes storing to repletion and ruinous prosperity, again confronts the apiarist. From white clover to basswood, comes a repetition of former experiences, only augmented, of course, so that the longed-for period of basswood bloom, finds the apiary with depleted colonies, all unprepared to reap the rich reward which a bounteous honey harvest presents. More than this, it never rains, but it pours, as the moth comes to make havoc with colonies too feeble to offer successful resistance. Now, if all these seasons of fruitfulness to the bee-keeper have been productive, as during the past summer, we go on from bad to worse as we near the period of buckwheat and golden rod. And thus autumn finds us with feeble colonies, small returns, and long faces, when nature has been most propitious.

After September we have no gathering, brood-rearing ceases, we approach winter with what few bees we have, old, torn and gray with labor, and ere spring even these succumb, and what wonder if we say, "bee-keeping is played out!" For in just such ways does it far too often become a source of vexation and discouragement.

Now, is there no escape from these

perils? With the science full in mind we see that if we can only keep the bees supplied with empty comb, enabling both working bees and queen to meet their fullest capabilities and more, can keep the worker bees constantly storing, so that the queen will be stimulated to her best efforts, even in the interims of honey secretion, we shall meet both of the above difficulties, and shall welcome such seasons of infinite honey secretion as the past has been, with unalloyed pleasure. Now, thanks to Herr Hruschka of Germany, we are enabled, by use of the honey-extractor, which his inventive genius gave us, to accomplish the former, and by means of feeding limited supplies during the periods of no gathering, using this same extracted honey, should it not find a remunerative market, we meet the second difficulty. Here, then, in use of the extractor, and by judicious feeding, the apiarist has power to leap one of the greatest obstacles in the way of success. And just here let me say that I fully believe that in this use we receive the greatest benefits of this indispensable machine. By its use during the past summer, we have been made to rejoice in one of the best honey seasons I have ever known. Those who have not used it have fallen far behind the amount of profit received. Early during the past season there was an astonishing yield of honey from the fruit blossoms, so that we experienced the peculiarity, new to me, of having our combs filled with this early honey.

Do you ask me then, when I would extract, and when feed?

I answer that I would extract whenever it was necessary to give the queen empty cells, never allowing all the cells to be filled with honey and brood. Whether I would use it at other times would depend on the market for extracted honey. If I could find ready sale for such honey at 15 cents per pound, I should extract a good deal at other times, especially in the fall, as it is valuable to have empty combs in the spring, as by their use can most easily obtain non-swarming hives.

I would feed sparingly, obliging the bees to carry the honey into the hive from March until October, whenever the bees were gathering no honey. Do you urge the trouble and labor involved? Let me assure you it will prove the most remunerative expended in your apiary.

Very likely some of you will desire to know where to obtain the best extractor, and how to feed in the most convenient manner.

So far as I know, there is no better extractor made than one sold by A. I. Root & Co., Medina, O., for \$10., or made to fit his standard frame which is 11 $\frac{1}{4}$ x 13 $\frac{3}{4}$ —\$9. Just the gearing, I think, can be procured for \$2., in which case, each of us can finish to suit himself.

As to feeding, if we have a close chamber above the brood chamber, all we need to feed is a common tin or wooden box, with a bottom of coarse cotton cloth. Setting the box over a hole the same size in the quilt or honey board, the bees will come up and sip the sweets as they ooze through.

Cloth bags nailed to the top bar of a frame which has a lobe through it and placed in the hive in lieu of one of the frames of the comb, as recommended by Novice, will be cheap, convenient, and easily set aside when not needed."

At the evening session the above subject was discussed as follows:

T. F. Bingham—Did the bees store from apple blossoms to exclude the queen?

Prof. Cook—They did.

T. F. Bingham—Did you have forage from earlier sources?

Prof. Cook—Yes.

T. F. Bingham—At that time of the year (last of May) the hive should be full of brood.

C. I. Balch—In times of scarcity of forage, uncapping the honey in the hive will promote breeding.

T. F. Bingham—You might just as well feed chips to induce brood rearing as honey. If bees are gathering pollen, as they usually are in warm weather, and honey in the hive, the brood will be abundant. Feeding for this pur-

pose is useless. Bees have little discretion—man should have it for them.

Prof. Cook—My bees would not breed when gathering pollen and no honey, and my queens were "yellow," too.

J. Tomlinson—I have had combs stored full of pollen, but got little honey.

Prof. Cook—Would Mr. Bingham ever feed stimulatingly?

T. F. Bingham—Never. It requires lots of discretion, which our family don't possess. It may do for amusement, the same as boys play marbles.

J. H. Everard—Don't localities differ?

T. F. Bingham—I think bees will gather enough in any locality—usually too much for the bees. Bees do not collect honey or pollen because they need it, but because it is their instinct. Bees have no reason.

President Balch—Hives that have an abundance of pollen, do not work as well on flour in spring as those that do not.

Mr. Walker—I tried every method last spring to get brood early, but failed until natural pollen came in, though they had eggs all the time.

Prof. Cook—I had some stocks with no pollen, stimulated, and got lots of brood. Commence the first of April, feed regularly, and you'll be surprised at the amount of brood. Though others claim that brood can be raised without pollen, I don't believe it.

C. I. Balch—Did you ever mix honey and pollen together and feed it?

Prof. Cook—I have never tried it.

H. E. Bidwell—Bees cannot brood without pollen; uncapping honey in the hive is a good method to induce breeding.

T. F. Bingham—If one has lots of leisure it would be good exercise to take a carving knife and go around through the apiary and "carve" 200 stocks.

James Heddon—If your combs contain an abundance of pollen, feeding will pay well. Have tried every plan of feeding, and prefer to fill a Mason fruit jar, puncture the cover full of fine holes, and invert it over the hole

in the honey-board. It will not leak, and you can see at a glance just how fast the bees are taking the feed. Fed sugar syrup in this manner last fall, for winter stores; it is equally good for stimulative feeding. Bees in small hives will have lots of brood, when those in large hives will have less, as they fill up the brood combs with honey. Do not like Root's extractor—it's not strong enough.

Prof. Cook—What one would you use?

James Heddon—I make my own, after having tried several others,

T. F. Bingham—Extractors, to be durable, must be strong. In extracting, we are often compelled to do it in a hurry, as honey sometimes comes in a rush. Would use up a Novice machine in a half day's run. Use a revolving can machine—a Peabody machine, Binghamized. Can extract more in a day from black than from Italian bees.

C. I. Balch—Black bees run off the combs, making it easier to do a big day's work.

James Heddon—I can extract honey so solid that a revolving can would not touch it. As Mr. Burch helped me extract some honey a short time since, I wish to ask him if he thinks any other machine would have done the work.

H. A. Burch—I have seen no other that done as good work.

A paper was then read by the Secretary from James Bolin, West Lodi, Ohio, on the best manner of "Wintering Bees." H. E. Bidwell of South Haven, Mich., read a paper on "Wintering in Cold-Frames."

J. Tomlinson—How many swarms do you put in each cold-frame?

H. E. Bidwell—Sixteen, two deep. Size of frame 6x12 feet, and three feet deep.

J. Tomlinson—Would not a conservatory do?

H. E. Bidwell—It might, but is not necessary. Besides it's too expensive.

J. Tomlinson—How far is the glass above the hives?

H. E. Bidwell—About six inches.

C. I. Balch—Do the bees cluster on the glass?

H. E. Bidwell—Not if the temperature is right. It should not be too cold, nor too warm—about 70 deg. is the best.

H. A. Burch—What is the slope of the glass?

H. E. Bidwell—Eight inches in six feet.

Prof. Cook—Would you confine the bees to the frames in spring and let them work on flour?

H. E. Bidwell—I would. They worked freely on it last spring. Would let them fly occasionally—once in four weeks is often enough—keeping the frames well covered in the intervals.

Dr. Southard—Am trying the experiment of packing hives in a box with straw, so as to guard against sudden changes of temperature. Each box holds 16 hives. Think this better than a cellar, as mine were uneasy when thus housed. Had them covered with quilts which I think injurious. The cellar was well ventilated—mercury 45 deg.

A member—Do not bees when flying in winter go back to their summer location when removed in the fall?

Dr. Southard—Mine do not.

C. I. Balch—As much stress is laid on keeping bees quiet in wintering, I would like to hear from Mr. Milner on this subject.

Mr. Milner—I have wintered stocks that had no honey in the fall by feeding during the winter. The bees were kept in a house cellar, under the living room. When my bees are quiet in the cellar, I stir them up. There are many fine theories that are erroneous.

James Heddon—I think there is an epidemic around the country. If the bees are right you may pound them—they will stand some abuse; but if diseased you must exercise judgment and work hard to save them. I think Mr. Bidwell's plan a good one, yet would prefer a house if that would insure success. Put the bees in carefully; do not let them know it. Carry bees out and in often in spring if necessary.

C. I. Balch—There may be a bee disease.

Mr. Milner—I have handled my bees only moderately careful for the past four years, yet have succeeded well. They are certainly well stirred up in putting them in the cellar.

J. H. Everard—I have drawn bees over a rough road in cold weather, and they wintered well.

James Heddon—When I took my bees out last spring they were so dormant that I had to stir them up to induce them to fly at once. Wintered without loss, though I had lost nearly all in previous winters.

A. C. Balch—Bees do not need upward ventilation at any season of the year, much less in winter.

Mr. Walker—My bees that had no upward ventilation died, others did not. They were wintered in a special repository with a temperature of summer heat—too high. Bees clustered outside of the hives.

A. C. Balch—If the conditions are just right you can seal them up airtight and they will live. I would prefer a tight barrel to a ventilated hive.

T. F. Bingham—I wish I had had 100 swarms "bottled up" last winter. To prevent mold have the comb "chock full" of honey.

A. C. Balch—Related Prof. Cook's experiments in wintering bees in a snow-bank. One hive was sealed hermetically; it came out in good condition.

James Heddon—Can bees live without a change of air in a winter repository.

A. C. Balch—I think they can. In order to insure success, avoid all currents of air, especially in the hive. Have wintered for years in a house cellar, with no ventilation, and no loss.

C. I. Balch—In explanation, I would state that the hives referred to are double walled, and will give some ventilation, even when closed so bees cannot get out.

J. H. Everard—Will Mr. Balch give the the temperature of his cellar?

A. C. Balch—From 40 to 45 deg.—atmosphere perfectly dry.

George Stray—Will Mr. Heddon state his method of wintering?

James Heddon—My winter repository is 12x16 ft., with a foot wall filled with saw dust. Have shelves, so that each hive is separate. Put them in early, before cold weather. If the weather admits of a fly, I carry them out, and rehouse them before it gets cold again. By this means losses in spring may be avoided.

Mr. Milner—The temperature of my cellar was 32 degrees—the success was excellent.

T. F. Bingham—Mr. Quinby and myself (showing the similarity of ideas of great men) tried artificial heat in the winter repository. Have had a hot time the past summer—just a little last winter. Without joking, I want a low temperature—32 degrees—to prevent breeding; and then a judicious use of Mrs. Winslow's soothing syrup will bring them out all right. If the bees are kept quiet, the hives and combs will remain dry.

James Heddon—My bees are more quiet with the mercury at 52 degrees than at 32.

Mr. Walker—The temperature in my cellar was so warm that one swarm built comb in an upper section which was occupied by the queen. Many of the bees left their hives and clustered on the ceiling.

A. C. Balch—Your bees were trying to swarm.

The "Question Drawer," a novel and interesting feature of the present session, was conducted by T. F. Bingham. The most important queries and answers we give as follows:

Are Italians bees superior to blacks? They breed well, but think them no better. They are not good box honey workers.

Are artificial queens as good as natural ones?

They are.

Are queens reared from the larvæ as good as from the egg?

Think there is no difference.

Are small queens as good as large ones?

Just as good.

What is the expense of raising queens when bees are rearing an abundance of food?

Merely nominal.

Can you get as much honey with increase as without?

Yes, and you have a swarm ahead.

Which will gather the most honey relatively, large or small hives?

Small hives, every time, if not too small.

Which are longest lived, Italians or black queens?

The black queen. Italians have to be constantly imported to keep up the stock. If Dadant could get a queen good for four years, he could stock the whole country with queens.

We would state that although the above answers are at direct variance with the generally received opinions of well informed apiarians, they are not so when taken from Mr. Bingham's standpoint.

The Convention then adjourned to meet at nine o'clock a. m., to-morrow.

SECOND DAY—MORNING SESSION.

The Convention was called to order at 9½ o'clock this morning, President Balch in the chair. The Secretary read a paper from W. J. Davis of Youngstown, Pa., on "Queen Rearing." The best stock to breed from, and the conditions necessary to insure the most uniform and permanent success was considered at length. He urged bee-keepers to use more care and exercise more judgment in rearing queens. The idea that the best queens could not be raised out of the swarming season, was strongly maintained.

J. Tomlinson—Can we not get good queens late in the season?

C. I. Balch—We can, according to my experience.

Prof. Cook—Good queens can be raised late in the season, but it requires more skill and experience.

James Heddon—I have procured a good many queens from W. J. Davis; have found no others equal to them;

but do not agree with him in regard to the Darwinian theory of reproduction. Our best scientific men agree with Darwin.

Prof. Cook—Our best scientific men believe in evolution, not Darwin. Evolution is—life comes from life—from the lowest to the highest. Darwin teaches natural selection, that the fittest and best survive and the poorer and weaker perish.

Mr. Davis claims that the best time to rear queens is the swarming season; is natural because in accordance with nature. When bees supercede their queens we have a natural process, yet it is often done out of season, usually in the fall.

A. C. Balch—Bees, in superceding a queen, commence from the egg, but when deprived of their queen use larvæ to supply their loss sooner, which accounts for the difference in quality.

Mr. Bryan—Prolificness is dependent on the age of the larvæ when the cell is started. One day old will make good queens, seven days very poor. Have never seen two queens in a hive at once.

Pres. Balch—There is yet room to learn.

C. I. Balch—Will Mr. Bingham favor us with his method of rearing queens?

T. F. Bingham—Man, of himself, can't raise queens, even with the help of science—though that will aid us. New comb will make our success more certain. Cut new comb, containing eggs or larvæ into strips three cells wide by ten long. Cut the cells off on one side near the septum of the comb, and insert in an opening made in a brood comb, with that side down in a vertical position; would use five or six such pieces to the hive. Cells built in this way can be cut out without destroying them. Old combs may be used by cutting the cells closer to the septum of the comb.

H. A. Knapp—What place in the brood comb would you insert these strips?

T. F. Bingham—I prefer the center, though it's immaterial.

Prof. Cook—When bees supersede poor, short-lived queens our stock will grow worse; but one that has been prolific three or four years and then fails will surely produce better stock.

T. F. Bingham—Prof Cook has struck the key note to success in this matter. The queen that lays well for four years, has a fine organism and good constitution, and will give us the finest queen progeny.

James Heddon—A queen that will live four years, and is prolific, will give us the best queen stock if reared when she is in her prime—before she commences to decline. The offspring of young parents are weaklings, as well as those very old.

H. A. Knapp—Yes, and oftener.

C. I. Balch—I once reared queens from one the bees were trying to supersede, for 50 stocks, and they were as good as any I ever saw.

J. Tomlinson—Was she a good layer at the time you reared the queens?

C. I. Balch—She had been very prolific—was moderately so at the time.

Mr. Bryan—There must be a natural cause for poor queens. What is it?

H. E. Bidwell—The eggs consist of many small ovals. When the eggs hatch, if to be used for queens, they should be fed as such from the start, as they are more fully developed. Eggs from old queens are not as good as from those in the prime of life.

Prof. Cook—Why do cows that have proven to be extra good ones, command a higher price when quite old? Is it not because they will then perpetuate their desirable qualities with more certainty, in their offspring?

T. F. Bingham—No, but simply because there is no uncertainty about their good qualities.

C. I. Balch—Would Mr. Bidwell breed from a very young queen in preference to an old one?

H. E. Bidwell—I would, most assuredly.

Papers on the best method of obtaining box honey were read by the Secretary, from Seth Hoagland of

Mercer, Pa., G. M. Doolittle of Boro-dino, N. Y., and J. P. Moore of Binghamton, N. Y. Many valuable ideas were advanced, eliciting considerable discussion.

T. F. Bingham—Prefer boxes on top instead of the side of the hive, as bees will store pollen in the latter, spoiling the quality of the honey. Have no brood in top boxes, if properly managed. If honey comes in fast when building comb, there is no trouble; if not, they must be watched, as the queen might go above.

Mr. Bryan—If you want to obtain the best results, keep the bees crowded—they will then store honey in boxes.

Henry King—I have used side boxes on the Eureka hive with good results. Was not troubled with pollen.

James Heddon—The fabulous tales we hear of side boxes are a myth. By elevating the back end of a hive we have all the supposed advantages of side boxes. To get honey stored above, keep the brood nest well filled with brood and stores. A low, flat hive gives more room on top—just what we want. Honey stored in frames does not sell equal to small glass boxes.

H. E. Bidwell—Put frame honey up in glass and it will sell at the highest market price.

T. F. Bingham—Which plan gives the greatest quantity, boxes or frames?

H. E. Bidwell—I can get from thirty to fifty per cent. more in frames. Think the difference owing to increased facilities for rapid storing which they afford the bees. It sells just as well.

Mr. Bennett—I can get more honey in frames than in boxes, but must sell it to exclusive honey dealers, and they are regular cheats.

Pres. Balch said the time for the election of officers had arrived. The convention proceeded to elect officers for the ensuing year with the following result:

Henry E. Bidwell, South Haven. President.

Arad C. Balch, Kalamazoo, Vice President.

Herbert A. Burch, South Haven, Secretary.

As the time allotted the morning session had not expired, an opportunity was presented for volunteer papers and addresses. The Secretary read interesting letters from R. M. Argo, Lowell, Ky., and James M. Marvin, St. Charles, Ill. T. F. Bingham read a paper on "Importing Bees," condemning in emphatic terms the promiscuous importation of Italian bees, and pointing out the danger of such a course.

Ju. Ius Tomlinson read a paper on "Standard Frames," stating the impracticability of adopting a uniform size, and expressing the opinion that it could never be accomplished.

The convention then resolved itself into an "experience meeting," (to use a Methodist phrase) and many valuable ideas were brought out, the pith of which we give:

T. F. Bingham—Foul brood may be detected in various ways: Hives infected with it have a sickening, nauseous smell.

The capping of the brood is concave instead of convex, as in healthy stocks, and often has a slight opening as if punctured by a pin. It usually commences gradually, finally destroying the colony, and is very contagious. Procuring queens from infected apiaries will communicate the disease; hence the great danger of the importing business.

J. Tomlinson—Will the Secretary give us his experience with the New Idea Hive?

H. A. Burch—It is very valuable—makes tip top kindling wood. For a bee hive it is worthless.

T. F. Bingham—Artificial swarming is the difference between the instinct of the bee and the will of man. Our success depends much upon our knowledge of the instinct of the bee and the honey resources of the locality. Perform the operation when clover begins to yield honey, so as to have the hive full of comb by basswood time,

and you are then ready to secure that harvest in glass boxes. Put on but few boxes at a time—no more than they can occupy.

James Heddon—The New Idea hive will give lots of bees, and some comb honey of poor quality. Will do very well for extracted honey, only it is twice as much work to get it.

C. I. Balch—How small will it do to make hives?

James Heddon—To give us a working force that will keep up animal magnetism—the essence of life.

H. A. Burch—All who wish to manage bees with pleasure and the smallest amount of labor, should use Quinby's bee smoker. It is one of the most valuable implements about an apiary. You can get all the smoke ever needed, direct it just where desired, and it is always ready for service.

J. H. Everard—Let bees out in the spring for a flight and then replace them. Sun entices them out and cold winds destroy them.

James Heddon—In accounting for the loss of bees let us be sure that they have not been wintered, often successfully, in previous years, under precisely similar condition. By this rule, an epidemic is the only explanation, possible.

Mr. Bryan—We can domesticate bees, or rather educate them, so to be perfectly docile; careful handling is indispensable.

James Heddon—Bees are naturally quiet and peaceable. They are made cross by education—improper handling.

T. F. Bingham—The best educator is a plug hat—they need no introduction to that, but will introduce themselves.

James Heddon—Extracted honey kept for several months is just as good as ever when ungrained.

Mr. Walker—Honey that is heated to the boiling point when first extracted will not grain.

The committee on resolutions—H. E. Bidwell and Dr. A. S. Haskins—reported the following, which were adopted without a dissenting voice:

RESOLVED, That the Michigan Bee-Keeper's Association tender to the

kind citizens of Kalamazoo, our heartfelt thanks for the generous hospitality they have given us during this session of our association.

RESOLVED, That we return our hearty thanks to those at a distance who have furnished us valuable papers of great interest to our meeting.

RESOLVED, That this association return our sincere thanks to the reporters and press for their reports.

The convention was also unanimous in its condemnation of those engaged in adulterating honey, and all other dishonest practices.

The sessions were harmonious throughout, and largely attended. It was, in the best sense of the term, a success, evincing a growing interest in this most fascinating pursuit, and marking a new era in the history of apiculture in this country.

Upon adjourning, the convention decided to hold a spring session in Kalamazoo, on the first Wednesday of May, 1875.

HERBERT A. BURCH, Secretary.

Our Club List.

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

Louisville Courier-Journal.....	\$3.00
American Agriculturist (and chromo, unmounted 10c. extra, mounted 25c.).....	2.75
Harper's Magazine, Bazaar or Weekly.....	5.00
New York Weekly Tribune.....	3.25
“ Semi-Weekly Tribune..	4.25
Rome Weekly Commercial.....	3.50
Illustrated Journal of Agriculture	2.75
Peter's Musical Monthly.....	3.75
Peterson's Ladies' National Magazine.....	3.15
New York Sun, Weekly.....	2.75
“ “ Semi-Weekly....	3.75
Fruit Recorder and Cottage Gardener.....	2.35
Gleanings in Bee-Culture.....	2.25
Phrenological Journal.....	3.75

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

MOON'S BEE WORLD.

A. F. MOON & CO.,

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

JANUARY, 1875.

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MICH. BEE-KEEPER'S CONVENTION.

We congratulate the bee keeper's of Michigan on their truly interesting and instructive meeting, the report of which we have published this month. Lack of space forbids comments, but we cannot but protest against the statements made by Mr. Bingham in regard to Italians, queens, etc. Let us have the subject discussed.

BEEES IN FLORIDA.

We received a friendly call from Mr. S. S. Alderman of Iola, Fla., a few days since, his object being to learn something of improved bee-culture. He owns 150 swarms of bees, which cost him \$1.50 and \$2 per swarm, in box hive. He sold several barrels of strained honey in Atlanta the past year at remunerative prices. Bees gather honey very rapidly when the orange is in bloom, of which he owns twelve acres, mostly in bearing. His report of Florida as a good State for bees is enthusiastic.