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VOL. IV.

FEBRUARY, 1882.

NO. 2.

THE  
**BEE-KEEPERS'**  
INSTRUCTOR.



A MONTHLY JOURNAL

Devoted to the Science of Bee-Keeping in All its Branches.

Webster Thomas, Editor.

WEBSTER THOMAS & SONS,  
PUBLISHERS AND PROPRIETORS,  
SOMERSET, KENTUCKY.



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1 2-frame nucleus and queen in April.....	\$4.50
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Importers and Breeders of CHOICE

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**CYPRIAN AND ALBINO**

**BEES AND QUEENS,**

And Dealers in APIARIAN SUPPLIES.

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Send for our large ILLUSTRATED CATALOGUE before making your purchases for 1882. It will PAY you to do so. 212



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Breeder of those Beautiful Albino and Italian queens and bees, which gave universal satisfaction last season. Send for circular. 27



# THE Bee-Keepers' Instructor.

Devoted to Practical Bee-Keeping in All Its Branches.

VOL. IV.

SOMERSET, KY., FEBRUARY, 1882.

NO. 2.

Published the mid-  
dle of each month.

“EXCELSIOR.”

{ Terms, 50c. per year,  
{ or 30c. for 6 months.

## PROCEEDINGS

OF THE

### 12th Convention of the North-East- ern Bee-Keepers' Society,

HELD AT

Utica, New York, Commencing January  
25th, 1882, and Continuing Over  
the 26th and 27th.

The twelfth annual Convention of this Association assembled in the City Hall, Utica, New York, on the 25th of last month; and as the President, Dr. A. H. Marks, and Vice President G. M. Doolittle were both absent on account of sickness, the Convention was called to order about 2 o'clock by the Secretary, G. W. House, when on motion of Mr. Schofield W. E. Clark, of Oriskany, was chosen President *pro tem*.

Among members of the Association present before organizing, were W. E. Clark, of Oriskany; A. J. King, of New York; S. M. Locke, of Canajoharie; I. L. Schofield, of Chenango Bridge; Oscar Dines, of Fulton; S. Snow, of Fayetteville; S. Baum, of Little Falls; L. E. St. John, of Greene; C. G. Dickinson, of South Oxford; Lyman Reed, of West Windfield; F. A. Schmit, of Clinton; L. C. Root, of Mohawk; W. A. House, and George W. House, of Fayetteville; T. O. Peet, of Canajoharie; H. N. Waters, of Lowville, G. S. Irish, of Lake George, Sewall Boyce, North Norwich, and others. Many who had signified their intention of being present arrived on later trains.

The meeting of the afternoon was mostly of a business character, consisting of calling the roll, reading minutes of last meeting, receiving reports of officers and committees, paying dues, receiving new members, etc.

After the above business had been at-

tended to the Sec. read the following essay from T. G. Newman, Chicago:

#### Suggestions About Conventions.

**BROTHER APIARISTS:**—New York has several organizations of bee-keepers, but the “North-Eastern Bee-Keepers Association” is the father of them all, and of right, is, and should be, looked up to as the State Society. So long presided over by that illustrious, but lamented bee master, father Quinby, its fame is world-wide, and its influence not exceeded by any Society on the American Continent. Its members include some of the most progressive and successful apiarists of the age.

It would, therefore, be eminently proper for the North-Eastern Convention to take advance ground, and inaugurate some of the many reforms necessary to the well being and permanent good of American apiarists. Allow me to make a few suggestions. I seldom write essays for Conventions, and had it not been the special request of your excellent Secretary, I should not have written this, and now content myself with simply throwing out a few “hints,” and trust that you will give them your best attention.

1. Some plan should be devised to make a more perfect organization, and knit together, more closely, all the apiarists of our country. County Societies should be auxiliary to the State Society (for such is yours, except in name), and all the members of the county organizations should thereby become members of the State Society, entitled to all its benefits and privileges, and proportionately bear the expenses of holding such. The Presidents of State Societies should become *ex-officio*, the Vice Presidents of the National Society, and thus co-operate unitedly for the general good—and delegates should be sent from the Counties to the State—and from the States to the National Society. This can easily be accomplished, and would contribute to the general welfare. Organization is LIFE; in union there is strength. Disorganization is WEAKNESS, and leads to dissolution—DEATH!

2. The present method of conducting conventions, by so many and such long essays, is killing in its influence, and often works positive damage to all concerned. To illustrate: A long essay is read, and before it is ended, those who listen to it are tired out, and forget or do not quite comprehend the points, and so it passes, without being sufficiently understood or discussed—goes into the minutes, and under the sanction of the Society, is published to the world as its views, when, perhaps, it represents the opinions or feelings of but a moiety of those present, thereby doing positive DAMAGE, because it misrepresents the society in general. If essays are admitted, but one should be thrust upon a session, and if possible that one should be printed, and placed in the hands of the members to be discussed at the next session. In this way some of the difficulty could be overcome,



and the detrimental effects avoided.

3. If such organization was obtained it would facilitate correct statistics, and the united power of the apiarists of the Nation could be exerted to demand legislation against fraud and adulteration; obtain redress for injurious rulings of the Postal Department, such as denying the admission of bees to the mails, etc., and correct the unjust discrimination of railroads in classing honey at exorbitant rates when they carry similar staple articles at one-fourth the freight demanded for honey.

These are but a FEW of the things that could be accomplished by united effort, but I only wish to throw out these suggestions, and leave it with the members of this honorable body to discuss the matter, and devise a scheme for carrying the matter to a successful issue.

Again, a BROTHERLY tie would be formed—helping one another—not only in the matter of marketing our crops, but perhaps in helping the unfortunate, succoring the families of deceased members, and possibly providing for those overtaken by calamities, etc.

But I will not weary your patience by further particularizing—while I am absent in body, I shall be present in spirit, and sincerely hope your meeting will be a success, and beneficial not only to yourselves but apiarists everywhere.

Thanking you for making me an honorary member of your Society, I remain yours fraternally.

The Secretary then read an essay, written by James Heddon, of Dowagiac, Michigan, on "The Improvement of the American-Italians." The subject was an important one, and was earnestly discussed at considerable length. Finally Mr. Dickenson offered a resolution, which was amended by Mr. King, of New York, and adopted as follows:

*Resolved*, After due investigation of well-known and numerous cases, the convention unanimously asserts that the honey bee never punctures the skin of a perfect grape or any other fruit, but that the sucking of juices from fruits is only from that which has been punctured by other insects, birds or natural causes.

The Secretary was directed to have 200 copies of the resolution printed, and cause them to be distributed among the members, and the several publications devoted to bee culture.

#### EVENING SESSION.

The convention was called to order by President Clark. Secretary House read a communication from Messrs. Bingham & Hetherington, asking that their smoker and honey knife should not be entered for premiums or competition. The request was complied with. Secretary House also read a communication from James Nipe, of Spring Prairie, Wis., making a complaint that the *American Bee Journal* continually misquotes, and endeavors to weaken the honey market. After some discussion, Mr. House moved that the matter be laid on the table, to be called up at the next annual meeting,

and that a committee be appointed to investigate the matter and report next year. Mr. Dickenson was appointed as that committee.

A paper on "Dysentery, Its Causes, Effects and Prevention," written by Charles Dadant, Hamilton, Ill., was next read by L. E. St. John. The essayist took the ground that the causes of the disease are bad honey, an insufficient population to warm the hives, an excessive and prolonged bad spell and a too long seclusion in a place either too cold or too variable. But none of the causes stated would injure the bees, if they were enabled to fly out as soon as they experienced the need of it. He had never used a stove to warm the bees.

Quite an animated discussion followed the reading of this essay.

After a general talk on "The Disposal of Our Products," in which the opinion prevailed that honey should only be sold to reputable beer manufacturers, to prevent its adulteration with glucose, the convention adjourned for the day.

THURSDAY, JAN. 26.

#### MORNING SESSION.

The convention was called to order by acting President Clark at 9:15, and after the reading and approval of the minutes of the previous session, several additional new members were received.

The Chair appointed as Committee on Implements L. E. St. John, U. W. Bet-singer and W. A. House; on Question Drawer I. Schofield, S. M. Locke and A. J. King.

"Experiences with Comb Foundation" was then taken up for discussion. L. C. Root thought the use of comb foundation was absolutely indispensable. He claimed that much of the foundation was adulterated to some extent, and that some wax was improperly rendered.

Mr. Bacon agreed substantially with Mr. Root, but was not an advocate of a heavy foundation. He wanted nothing but pure wax.

Mr. Dickinson desired a heavy foundation for the brood chamber, but light foundation for surplus boxes. After a thorough trial of the various kinds he preferred by all means the thin Vandervort for surplus boxes. He did not see much difference in the brood chamber between the Dunham and Vandervort.

Mr. Locke preferred a foundation for the brood chamber measuring about six feet to the pound, and gave some information in regard to rendering wax, etc.

Mr. Vrooman preferred the Van Deusen



flat bottom foundation for the surplus boxes. He had used the Dunham, Root and Van Deusen side by side. The Dunham was accepted by the bees in the brood chamber the soonest.

Mr. Van Deusen said he was unable to procure wax enough in his own locality for his use, and was therefore forced to buy market wax. He was always anxious to obtain the best quality of wax for making foundation. He exhibited and explained a specimen of foundation partly drawn out on the flat bottom style. He thought there was much difference in the samples of foundation sent out and that sent to purchasers.

Mr. Betsinger asked Mr. Van Deusen if he could detect the adulteration of wax with ceresin or paraffine.

Mr. Van Deusen—If it is largely adulterated it can be detected by the smell.

Speaking of the weight of foundation, Mr. Van Deusen said that 10 or 11 feet to the pound was advisable for surplus boxes. He thought foundation less than four feet to the pound could not be depended upon for the brood chamber without sagging, unless it was wired. Mr. Root did not want foundation too light. He preferred foundation with a thin base and weighing about eight feet to the pound.

The subject was also exhaustively discussed by Secretary House, Messrs. St. John, King and others, resulting in the following resolution by Mr. Dickinson, which was adopted:

*Resolved*, That the adulteration of comb foundation in any manner is to be and is denounced by this Convention as much as the use of glucose should be.

"The Best Means of Raising Queens" was the title of the essay of the morning, written by W. J. Davis of Youngsville, Pa. and read by Secretary House.

The essayist began by paying a high compliment to Mr. Quinby, the pioneer of practical and scientific bee culture. He then asserted that the queen bee is the main-spring of the hive, and consequently, the highest excellence, should be developed. The first trait that should be fostered, is vigor, strength and power of endurance; the second is beauty; the third is longevity. The queen that lays the greatest amount of eggs in a given time, is not always desirable. The fourth trait that should be fostered is gentleness or amiability of temper. Every consideration of wisdom, peace and comfort makes this trait an important one. Vigorous, long-lived queens can not be reared outside the swarming season, and

no interference of man can produce better queens than the old-fashioned way of natural swarming, provided the swarming colonies are of the type indicated. In selecting a queen mother the extremes of life should be avoided. We should not breed from a queen less than one or more than three years old. Probably the best age is the summer that the mother bee is two years old. The hypothesis may be submitted, that the continued breeding of queens from young queens will stimulate to excessive breeding at the expense of vigor, longevity and honey-storing qualities.

The essay was attentively listened to, and the sentiments were in the main cordially indorsed. The discussion was opened by asking the question whether there was any law against keeping bees in incorporated towns or cities. In reply to this question, Mr. House gave an instance of a man keeping bees in Syracuse, who was driven from the city by the authorities on account of his swarms being a public nuisance, and Mr. King of New York ridiculed that idea, and gave instances of his bees, which are kept in a building in Park Place, New York, swarming on an Italian stand at the corner of Park Place and Broadway. It was an object of curiosity, and not only was it not considered a nuisance, but he received the best advertisement that he ever obtained. The papers took up the matter and the incident was circulated widely.

Mr. Root thought that the essay was a most important one, and proper action should be taken with regard to the selling of queens.

At this point the hour for adjournment arrived, and in accordance with a motion, the convention took a recess for one hour and a half.

#### AFTERNOON SESSION

The convention reassembled at 1:45 P. M. Secretary House appointed L. E. St. John Assistant Secretary. The following officers for the ensuing year were then elected:

President, W. E. Clark, Oriskany; Vice President, L. E. St. John, Greene; Secretary, Geo. W. House, Fayetteville; Treasurer, R. Bacon.

The convention then balloted for the next place of meeting, with the following result: Syracuse 16, Albany 12, Utica 11. Syracuse was therefore chosen, and the 3d Tuesday in January, 1883, selected as the time for meeting, the session to continue three days.

The Secretary then read the President's annual address. The subject was



### Wintering Bees.

As soon as possible after the honey season has closed, I examine my bees thoroughly and see what condition they are in for the coming winter. I am particularly careful to see that they are strong in bees, for I consider that very essential to success. I find that it is poor policy to attempt to winter weak stocks. If they are too weak I make them strong by uniting early, until they are all strong. If any are queenless, now is the time to supply them, as we can use the surplus queens for that purpose. There is no difficulty in uniting this time of year if we give them a thorough smoking, so that they may all have the same scent and fill themselves with honey. In uniting, the hive that is left empty should be removed from the stand, and then the bees will not return. My next care is to see that they are well supplied with stores for winter. They should have from 20 to 25 pounds of good, capped honey, to be safe. I feed the light by taking frames of honey from those that have more than they need; it is a very easy matter to make them all safe in this respect. If they are short of stores feed seven parts loaf sugar to four of water, putting it into tin dishes, oblong in shape. They may be made to hold six or eight pounds. Put a float of wood in the dish. Feed on top of brood chamber, until they have sufficient stores for winter use. My next care is to remove combs from the brood chamber until the bees fill all the combs that are left. I use the new Quinby hive, and winter them on from five to six frames. Stocks that do not fill five frames I do not consider strong enough to winter well. I unhook the frames from the bottom board, and hook them on a frame that raises them just an inch from bottom of the hive. I put them at right angles to the position they occupy in summer, as this allows me to completely surround them with the packing, which consists of dry pine planing mill shavings. I then cover my frames with pieces of heavy hop bailing, which is the best and cheapest cover I can find. I also fill the space over the frames with the same packing, and leave an air chamber of two inches under top board for the moisture from the bees to collect and pass out at a wire screen near top of hive.

I have the entrance of hive open to give the bees a chance to fly whenever an opportunity presents itself. When the weather is stormy, cold or windy I put a board in front of entrance, against the hive to prevent a direct draft. When bees are thus cared for, they will winter very safely on their summer stands. I have usually wintered in this way without the loss of a colony. Last winter my loss was about 25 per cent., but was owing to the fact that they were moved and packed after cold weather set in. I could not get the shavings to pack them with until then. Most of my bees the past winter were wintered in a cellar, and my loss was 75 per cent. I have tried very hard to winter indoors successfully, but have not succeeded very well, and have become disgusted with it, as my experience has been very sad. When wintered on their summer stands as I have described and prepared early for winter, I feel perfectly safe for I know they will winter well. When thus prepared, they will not fly in winter unless it is warm enough for them to return safely to their hives. But what is best of all they do not dwindle in the spring. I have used the Quinby hives since 1872, and do not believe there is as good a hive made for wintering and carrying bees safely through the spring. When speaking of winter management I can not close without referring to spring. The winter packing is very essential in spring, and it prevents the bees from flying when they should not. It also retains the heat which is so necessary to successful brood rearing. The packing should not be removed until we have settled warm weather. I usually leave it until the bees are nearly ready to swarm. When brood rearing begins in earnest the cloth cover should

be removed from top of brood chamber, and be replaced by enamel cloth, in order to retain the moisture which the bees need so much at this time of year. If they can not obtain it in the hive they will leave many times when the weather is too cold for them to return. This brings me to spring management, which I will reserve for a future occasion.

N. N. Betsinger, of Marcellus, addressed the convention on "Wintering Bees," and the cause and prevention of dysentery. His remarks were applauded.

Mr. Barber, of St. Lawrence county, spoke next, corroborating Mr. Betsinger's ideas in regard to heat. Bees should not be removed from the cellar in the spring before willow bloom. He did not allow any cold air in the cellar.

Mr. Root related the experience of Mr. Hoffman in wintering, which substantiated the arguments of Messrs. Betsinger and Barber. He thought that bees which wintered best consumed the least honey, and advocated a high temperature.

Mr. Barber—I have 193 swarms in a cellar 16x19 feet.

Mr. Betsinger said the temperature and the atmosphere should be changed every two hours if necessary. To do this the house should be under perfect control. If the bees are easy they will make no noise. Bees should make no noise. When bees fly in the spring and spot the snow, it is a sign of dysentery.

Mr. Bacon said he found his bees all right, and he believed them healthy, when they made a low murmur, like distant roar of wind in distant woods.

Mr. Barber said bees should not be set out when there was snow on the ground. He had found that the colder the day the greater the deposit of excrement.

A. J. King said he thought heat was good for bees.

Mr. Barber said that last year he had wintered 200 colonies, with a loss of eight, four by mice and four by starvation. He had wintered as many as 160 colonies without losing any. The farmers in his section all wintered their bees according to his plan, and did so successfully. To ventilate he used a 3-inch tin pipe, twenty-four feet long, going from the cellar to the outside. He did not ventilate the hives at all, but left them open at the top. He thought more bees were killed by ventilation than in any other way. There was no way in which fresh air could get in except through cracks and crevices, as no cellar was perfectly air-tight. L. M. Barber and D. Barber each wintered over 100 colonies last winter, and lost none, either by wintering or springing. In his own cellar he found some dead bees in the spring.



There were about three bushels to a hundred colonies.

Mr. Bacon said he covered the tops of his hives with straw to prevent a current of air going through.

In reply to a question, Mr. Barber said that he would not think of wintering fifteen or twenty swarms in the same manner as he did one hundred colonies. There would not be heat enough in the ordinary cellar. He found excrement only in the shape of dust. The bees did not besmear the hives.

Mr. Betsinger said the latter statement showed that his assertion that feeding honey causes dysentery, to be correct. He had not finished his experiments, but should continue. He had been at school, and should continue to go to school. The late mortality among his bees had proved very valuable by giving him experience.

Mr. Bacon asked what kind of foundation was best for surplus honey. The question was not answered.

Mr. Vrooman gave the Schoharie county method of wintering, which he said was the best of all. Box hives were placed on strips in the cellar, which is kept at a temperature of 48°. These bees wintered dry, and without consuming scarcely any honey. In the spring, out of 85 colonies, about a peck of dead bees were swept up. The tops of the hives were entirely tight.

Mr. Bosworth moved that a vote of thanks be tendered Mr. Betsinger for his able essay; carried.

L. C. Root, of Mohawk, then read the following very able and comprehensive essay on

### The Most Successful Method for the Prevention of Swarming.

I am asked by the executive committee of this association to give my experience as to the most successful method of preventing swarming. Much has been written and said upon this subject by many bee-keepers of the day, yet a successful method of controlling the desire to swarm in all cases has not yet been given us. It is therefore one of the hidden mysteries of bee-keeping upon which more light must be shed. As this can only be accomplished by continued study and the adding of our mites to the general fund, I will offer a few facts as they have been developed by a somewhat extended experience.

In considering this question we must keep it closely by the side of the thought of our desire to keep our bees fully and constantly at work. It will be generally acknowledged that bees seldom swarm unless honey is being gathered to some extent. The great question is, how can we keep our bees all at work storing surplus honey without the interruptions occasioned by the desire to swarm, and its results. Let it be borne in mind that the conditions which hinder our bees from storing the greatest amount of surplus honey are the same as will create the desire to swarm. We have been told that the size of the hive has little to do with this desire. In contradiction to this I wish to say that in my experience it has much to

do with it. When you pass through an apiary, during the flow of honey, and see from one to eight quarts of bees lying upon the front of the hives, it indicates not only that the conditions are such as to induce swarms, but also that the bees are not as fully occupied in gathering honey as they should and might be if proper precautions were observed.

Let us notice some of the conditions necessary. I shall indicate as the first requisite a good prolific queen; second, sufficient room for the queen to deposit eggs; third, plenty of room for the bees to store honey; fourth, suitable ventilation; fifth, the proper shading of hives.

While I do not assert that in anything bees never deviate from the general rule, I have ample reason for believing that if the rules I lay down are observed, fair success may be obtained. While my conclusions here reached are based largely upon experience of past years, they are more largely the result of that of the past season, during which time we have had more than ordinary opportunities for observation. It is generally known that our yield of honey for 1881 was very large. In fact, I believe that our yield from one apiary of 40 swarms, of a little over 243 pounds average per stock, is the largest yield from an entire apiary of the size, ever obtained. I speak of this to mark the fact that this was an apiary where the stocks were the most populous of any I had ever known, and yet we had not the slightest trouble in preventing swarming where the requirements named were supplied. I may be asked what the first-mentioned essential of a good, prolific queen has to do with the desire to swarm. I shall not be questioned as to the desirability of such a queen in other respects. My answer is, that when other conditions have been complied with, our troubles with swarming have been with such colonies as have contained queens that the bees desire to supersede. When the queen cells were sufficiently advanced, such old queens would leave the hive with the swarm, or they would be destroyed and the first young queen hatched would lead the swarm. It should be remembered that our surplus honey the past season was nearly all taken with the extractor. Our second and third points of furnishing sufficient room for both queen and bees to be fully occupied may easily be attained when the combs are extracted and interchanged, as may readily be done; but when box honey is desired, more difficulties arise. We may by the most approved methods add boxes which will afford sufficient room to store all the honey the bees would gather, but we find that the combs in the brood nest must be kept so thoroughly occupied with brood and honey to induce the bees to work freely in the boxes, that often the desire to swarm is produced. The fourth and fifth requisites, which are in the direction of preventing the hive from becoming overheated, are very important. In a hive which is very populous, the necessary labor performed creates a great amount of heat. If the weather is very warm, and the hives are sheltered from such breeze as might be afforded, work will be almost entirely discontinued. This is one of the greatest reasons why bees on high ground, where there is a better circulation of air, and where it is generally cooler, gather the most honey, other things being equal. Our home apiary is in a very warm location. During the past season, as the stocks became populous, and the weather warm, I noticed the bees lying out upon the front of several hives. I sent an assistant to draw the slide in the bottom board which closed an opening 5x10 inches. The next day in passing through the yard I observed the bees all freely at work except in two hives. Upon examination I found these two had been missed, and the ventilators were yet closed.

My conclusions, then, are that in securing extracted honey, with proper management, swarming may in most instances be easily controlled; but when box honey is produced it is much more difficult. Surplus boxes filled with starters of



choicest comb foundation, with free and immediate access, may be supplied as soon as the bees will occupy them. It is very important that this be not delayed until the bees have already the disposition to swarm. Proper ventilation and shade may be given, and combs of brood may be taken from the brood chamber, and empty ones supplied. Yet during some seasons, and with some stocks, it will fail to prevent swarming. If we continue to investigate and unite our experiences, we shall yet attain the desired end.

Under the head of miscellaneous, the subject of wintering was taken up again. In reply to a question, Mr. Barber said from 15 to 20 per cent. of his bees were found brooding in the spring.

One delegate said he had had very good success, but he was compelled to put an absorbent in top of the hive to prevent the combs molding from moisture.

Mr. Betsinger said he kept such a high temperature as to drive moisture out of the hives through the pores of the wood.

Several delegates said that this could not be done, because the inside of the hive was covered with propolis, and the outside painted with two coats of paint.

Mr. King said moisture would accumulate during the breeding. This contained a certain amount of carbonic acid gas, which was deadly poison. He opposed upward ventilation, except as afforded through chaff or other loose material.

Mr. Dickinson said a colony would consume about 25 pounds of honey during the winter. About 75 per cent. of this was moisture or about three quarts of water. He would like to know how this amount of water would pass off.

Mr. Betsinger said the amount of water would pass off through a hole as large as a knitting needle in thirty-five months, and no one would know it.

Mr. Barber said the cellar he wintered in was moist, and sometimes very moist. He thought the moisture was beneficial. His bees were certainly not injured by it. He thought it not half so dangerous as wintering outdoors.

Mr. Barber said he even had six inches of water in his cellar many winters. He set every hive on the bottom board, except the lower tier of hives.

On motion of Mr. Dickinson, a vote of thanks was tendered to Mr. Barber for his ready and clear replies.

#### EVENING SESSION.

The following new members were admitted: T. O. Peet, Canajoharie; E. B. Ross, Syracuse; C. H. Clark, Oriskany; W. B. Osgood, Vienna; M. B. Warner, Cardiff; H. Fox, North Western; C. W. Frost, Oriskany Falls.

The evening was devoted to an inspection of the various exhibits, and an in-

formal discussion of their merits. Following is a list of the articles exhibited:

A. J. King—Schofield's honey knife; King's honey extractor; Chaff Eclectic bee hive; Russian hair felt.

J. C. Stoddard—Extension bee hive, ingeniously constructed; Dover egg beater; anti-propolis compound; ingeniously constructed model for lift bridge.

D. A. Jones—Bee hive; labels for extracted honey.

Houck & Peet—Perforated tin with meshes 5-32 inch in width, for separating drones and queens from workers; Shuck feeders in pairs for top of hive; Eureka feeder for top feeding; crate for surplus comb honey; Bingham honey knife and cap catcher; Novice honey knife; Quinby knife; prize box; Bingham smoker; Quinby smoker, with cold blast; Van Deusen clamp; the new Quinby clamp; wire nails; Nellis chaff hive with Langstroth frame combined.

S. M. Locke—Perforated zinc for preventing absconding of swarms; wax extractor; queen cage.

S. Snow—Instrument for cleaning propolis from sections; crate of honey and crate; crate with paper cap for bottom.

I. L. Schofield—Vandervort foundation for brood chambers and for sections.

Charles Dadant—Dunham and Vandervort foundation for brood chambers and for sections.

J. Van Deusen—Frame of wired flat-bottomed foundation; specimens of flat-bottomed foundation for use in sections and brood chambers.

[Concluded next month.]

## Our Contributors.

For the Bee-Keepers' Instructor.

### Sweet Clover.

D. KEPLER.

Seeing that there is some interest taken in this excellent honey plant of late, I will give your readers the results of my observations concerning it.

About four years ago my attention was called to it when visiting some of my fellow bee-keepers in the vicinity of South Toledo, Waterville and other villages along the Maumee river, Wabash railroad, and the canal in Lucas county, Ohio. I found the mellilot growing on the hard and barren soil, denuded in excavating and constructing embankments, fillings, etc., it being so abundant in some places as to amount to several acres in extent within reach of an apiary.

During the very unfavorable season of 1880 I know of two apiaries, consisting of less than 50 colonies each—situated within reach of a large amount of sweet clover—that yielded each of their respective owners about 3,500 pounds of fine honey, besides a large increase of stock, while others not so situated barely lived. The honey possesses the same color and density as that from white clover, and has a particularly fine flavor without the cloying qualities of the linden and some other



common honies. It yields its nectar in this climate from early in July until frost, and the time of greatest production is after the usual honey plants have failed for the season.

It is in no manner a noxious weed, growing, as I have observed it, on ground that is too hard and barren to produce anything else. Since I learned its value I have been collecting its easily-gathered seeds and scattering them along bare roadsides and on commons in reach of my apiary, and have already been rewarded for my labor by the improved flavor and increased quantity of honey.

The plant is sweet-smelling, and grows as high as six feet; has upright, dense, soft, clover-like foliage, till about half grown, when it spreads into slender, profuse, flowering branches, which with the main stalk become woody about the time the flowers appear. On good ground the ordinary height is three to four feet.

It is a biennial, yielding its nectar the second year after sowing. I think any bee-keeper having worn and thin land would do well to sow it in sweet clover. It would not only furnish his store-house with the finest of honey, but would also serve as a fertilizer. If I were to sow a field, I should prepare late in the autumn by plowing shallow and harrow or drag until fine and level, and sow about three or four pounds of seed to the acre. The next autumn after growth had about ceased, I would again harrow the ground lightly, and sow a like amount of seed, after which I think it would yield honey without further attention, as it reseeds itself.

As a forage plant for domestic animals I know but little of it. I have no doubt that to mow and cure before the stock becomes woody, it would be fine to feed with other fodder to dairy cows, giving a sweet flavor to their products. I notice that the cows keep it cropped rather closely wherever they can get at it during the forepart of the season.

The reason for sowing two autumns in succession is to furnish plants to blossom every year, because with but one sowing there would be blossoming plants on the same ground only in alternate years.

Napoleon, Ohio.

For the Bee-Keepers' Instructor.

### Present Condition of Bees.

C. W. MITCHELL.

Now seems to be a good time to study, think and write about the bees, as they

are tucked away for the winter. As far as my observation extended, bees went into winter quarters in good shape. In my own apiary I extracted some from the brood chamber quite late, in order to give the queens laying room, and think it was very beneficial in securing me plenty of young bees to go through the winter. I winter my bees on their summer stands, and think it the best, all things and persons considered. This winter, so far, bees have not been confined for more than a week at any one time, and seem to be in very good condition now.

### "WILLFUL MISREPRESENTATION," ETC.

I am sorry that Mr. House is "forced to believe" himself "wilfully misrepresented," and trust that he will see such is not the case as far as I am concerned. As he has asked me the *second* time "How do I know?" etc., I will answer him as briefly as possible. Mr. Jeffrey has for the last 14 years (to my knowledge) made bee-keeping his whole business, and that with success. He has had under his supervision (not entire care) upwards of 1,000 colonies of bees a good share of the time, and these scattered around in different places, varying in altitude 700 feet, some of them in the coldest of places, and others in the warmest. He has also made a study of an observation hive which would tend to his advancement in bee culture. This is not a "flight of fancy," but fact, and I *know* that a man of ordinary intelligence can not do all this and not be well informed. In the last "Review," sixth paragraph, Mr. House says he does not claim that all he has said is fact. Does Mr. J.? I think he has the same right to *theorize* that any one else has.

In my reference to Mr. House's article on the first page of the July INSTRUCTOR, I merely referred him to the last part of paragraphs 2d and 3d in connection with each other. Read them over and *theorize once more*. I think that either case is conducive to dysentery. Shade-in-as-much as it tends to prevent flight, and also to make the hive damp. Bad food I *still* think to be the chief cause of this disease. Any one who is inclined to disbelieve it had better put one colony of bees on combs full of bee bread and cider, and note the result, if the bees are confined for any length of time. As to "school-boy retaliation," I think you can find as much in Mr. H.'s articles as anywhere, and it is not a bad thing to have, *some times*.

Wishing you success in the future, I



will close.

South Britain, Conn.

As friends Mitchell and House have each had their "say" an equal number of times on the subject of Mr. Jeffrey's qualifications as an apiarist, we think the subject had better be dropped right here, as it certainly is not proving very instructive or edifying to the other readers of the INSTRUCTOR. For ourselves, personally, we have a high regard for Mr. Jeffrey's opinions and learning as an apiarist, although, like every one else, he can not be expected to have attained perfection on *every* subject connected with bee-keeping.

For the Bee-Keepers' Instructor.

### Bee-Keeping in Portugal During the First of the Present Century.

CHAS. H. LAKE.

"When it is intended to form a colony of bees, a spot of ground is chosen exposed to the south or south-east, well sheltered from the northern blasts, and surrounded with shrubs and flowers. The more of rosemary there is among these, the better. In selecting a situation, the condition of the surrounding country is a point of consideration, as bees are said to forage as far as a league from their hives in quest of food. The situation being chosen, lanes five or six feet in width are cut through the shrubby thickets. The fences of these lanes are about the same height, and are framed into small recesses, or niches, for the reception of the hives.

"The hive is made of the rind of the cork tree, and usually of a cylindrical form, about twenty-seven inches high by fourteen in diameter. This is covered with an inverted earthenware pan, the edge projecting over the cylinder like a cornice. The whole is fastened together with wooden pegs, and the joints are stopped with peat. In the front of the cylinder, at the height of eight inches is a small aperture, through which the bees go in and out. The interior is divided into three square parts, separated by cross bars. On these the bees form their combs and cells and deposit their honey.

"When the bees swarm, which is usually in May, the hives are placed to receive

them when they alight. If they descend on a tree they are shaken off. The person who does this sometimes defends his face with a wire mask and his hands with gloves, but in general this precaution is not considered necessary, as it is known that bees only sting when much irritated. Sometimes the bees are so wild that they fly away when it is attempted to collect them. When this happens they may still be recovered. A sheet is, during the night, spread out upon the ground near the swarm. They alight on this, when a hive with the entrance closed is placed upon them, and the whole is then carried home in the sheet.

"When the time arrives for collecting the honey the business is usually performed during the heat of the day when most of the bees are absent. The operator, whose head and hands are guarded in the manner before mentioned, is attended by a person with a small chafing dish containing a fire of coals, covered with damp peat to make a greater smoke. This smoke is introduced into the hive from the top of the cylinder, when the bees which happen to be there fly away or remain in a stupefied state below. The hive then is taken to pieces by removing the pegs, and the comb is cut from the bars containing the honey, except a small portion, which is left to induce the bees to adopt it as the nucleus of a new comb. After this work has been performed the hive is put together again, and replaced in its former situation. The apiarist often visits the ground to repair any accident that may have happened. He is careful not to destroy any snakes which may frequent the place, as they never molest the bees, but destroy the toads and lizards, which are obnoxious to them. When the hive is decayed it is taken asunder and fumigated, when the bees desert it, and take shelter in an adjoining hive, which has been previously prepared to receive them. This operation is commonly performed in the spring when the flowers begin to open, and there is plenty before them. As the bees in returning from excursions are heavily laden and fatigued, great care is taken that there shall be nothing near the hive to distract their descent, which is not in a perpendicular but an oblique direction."—*Extract from Murphy's Travels.*

It will be seen that what was termed a colony of bees was many hives placed together. It appears that the cork wood was a great *outside* protector, and that double-walled hives were used in those days. The one above described was



modified many years ago by a gentleman at the north, and *always* was made profitable. Instead of being cylindrical he made his *square*, and as his plan was novel, I will give your readers the best description of it I can, from old drawings furnished me:

The hive was a *stationary* affair, and not intended to be transported. A hole three feet square was dug to the depth of three feet. This was filled in with small stone till the surface was reached, when brick and cement was brought into play. A base was raised four to six inches from the ground, of solid masonry, and a plank cover placed over all, with an inclined alighting board in front. The brick work was now carried up to the height of three, four and five feet, and some of the "chimneys," as I term them, were scarce one foot above the base. The "backs" had a "jam" of wood inserted as in a brick house, and a close-fitting door with lock thereon. These piles were covered with a cap of iron, and some of wood.

The interior was a series of boxes  $7\frac{1}{2}$  in. square inside measure, by 12 in. deep. Around the tops and bottoms was raised a board 3 in. wide, flush with both edges to keep the corners together firmly. Lath, cut the right length, was laid across the tops, resting on a piece nailed their thickness below the top edge of each section. The bees were placed in this hive first. As the season advanced another, with "slats" or laths nailed in position, with small openings between to allow the passage of the bees, was placed *beneath* the first one. The bees would soon descend into this, and occupy it and fill up the top one with honey. The third and sometimes the fourth would be added in like manner. I was informed that "four full sections, each holding about 30 lbs. of honey, had frequently been taken from the bees," and "without the aid of sulphur," as the gentleman was proud to exclaim. As the sections were piled up, the corresponding door or entrance was opened above, and when they were taken out they were closed. I have reared queens in these little hives—fitted up of wood instead of brick—and with frames with movable sections, with the *very best* results, and shall add several hundred to our breeding department this season.

I will make you a few drawings, that will serve to illustrate the principles, and enclose.

I have always found my nucleus to build up much faster in these hives than any I ever used, and for early spring breeding would not do without them. I make them all interchangeable with my

Langstroth frames. Three frames fill one L., and I use ten to a hive in two compartments of five frames each, with  $\frac{3}{4}$  space between. The hives can be piled up as high as wished, and can be made one of the *best* hives in use for extracted honey, as the combs are so narrow the heat from the bees will speedily ripen the honey. I have known honey sealed in two days after being stored.

You will observe the early date that the bees were "handled" (no sulphur used here), a "wire mask," "bars" for the combs to be built in (wonder if they were "frames?"). Smoke, too, was employed (who invented the bellows smoker?). Really, Friend Thomas, I don't see that we are so far advanced over the "old-time way" of "doing it. There appears to have been a "middle ground" in bee-keeping, and it went "down hill" very rapidly. Guess they had some such winters as last, in connection with the "pit" in those "middle" ages.

Baltimore, Md., Jan. 17, 1882.

Thanks for the drawings, Friend L. They make the description very plain. As far as we can see, your modified form of the "chimney hive" is essentially the same as 5-frame Langstroth nuclei piled up three or four high, is it not?

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## Letter Drawer.

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### Prospect in California.

The prospect for bee-keepers in Los Angeles and Ventura counties looks blue, as we have had no rain to amount to anything up to date. I understand that they have had about seven inches in San Diego county, so it looks quite favorable there. The valley is largely in fruit, especially the thickly settled portions, and the facilities for irrigation are excellent in this portion, so we do not mind the lack of rain so much as they do where there are no facilities for irrigation. Unless we have rain soon many stocks of bees will play out, unless they are moved down from the mountains to the valley, and then they play the mischief with fruit. The large sheep ranches suffer for want of rain, as the feed is all gone now, and no more feed coming on. Sheep are dying by the thousand on some ranches.

There is a little black-eyed, ten months old granddaughter pulling at my sleeve and chattering away, Mr. Editor, which accounts for the misshaped letters.



Bees are gathering more than they consume here in the valley, and are breeding first rate. The pepper trees, Australian gum trees and willows are in bloom; also, lemons and limes. Bees almost cease breeding here in the month of December, even if the weather is ever so favorable. I had young queens fertilized as late as the 10th of November, and by the middle of this month (Feb.) I can begin raising queens again. That would make about nine months in the year that one could raise queens and increase his colonies. Quite a contrast between here and where I was born in Canada—sixty-five miles North of Vermont. There three months in the year was all we could calculate on, and in some seasons one month was all we could increase safely in.

E. GALLUP.

Santa Ana, Los Angeles Co., Cal. Feb. 2.

#### Report from Pennsylvania.

I can not, like the Messrs. Root, report a 200-pound yield per colony, nor do I claim to be a scientific bee-keeper. I commenced bee-keeping in 1879, part of my experience having been given to the readers of the *INSTRUCTOR* heretofore. I placed 12 colonies in winter quarters in the fall of 1880, and came out in the spring with 9. From the nine I secured 13 natural swarms, and a comb honey surplus of but 150 pounds, or a little over 16 pounds per colony; but as I worked for increase, rather than surplus, I have no cause to complain. I purchased two nuclei of Italians in June (with these exceptions my bees are blacks), which are now—or were last fall—very strong colonies. Through pressure of other work I lost two colonies in the fall (loss of queens was the cause), so that left 22 colonies to go into winter quarters with. Not what experienced bee-keepers would call success. But our season was very hot and dry, and the old maxim, "Live, and learn and die a fool at last," will do well for us less experienced to think on. But we should try to do our best and be satisfied with our lot. Perhaps later I may tell you about some things I have learned the past year, but suppose others have learned them before.

GEO. H. COLVIN.

Dalton, Pa., Jan. 23, 1882.

#### Bees Doing Well.

Bees are wintering exceedingly well in this locality. We have ten colonies of Italians, each contracted upon four and five frames, the space behind the division board being filled with dry wheat chaff. The tops of the hives were removed and

a thickness or two of cloth placed upon the frames next the bees, when the hives were set into large dry-goods boxes. Wooden tubes were constructed to extend from the entrances of the hives to the outside of the boxes, to give the bees the necessary amount of air, and a passage to and from the hives during the warm days. The whole space of six inches between the sides and top of each hive and the surrounding box was then packed with chaff, and the bees permitted to remain upon their summer stands. Not a colony have I ever lost when packed in this manner. I consider it the safest and most economical way of preparing our little "pets" for winter.

E. J. HINSHAW.

Lynn, Ind., Jan. 31, 1882.

A very good plan, Friend H., for a person who only keeps a limited number of colonies, but for the large apiarist it would be too much trouble and expense. Something simpler is demanded for his use.

#### Condition of Bees.

Bees in this section should come out strong this spring, as the weather has been very mild so far this winter, and consequently no dysentery to be found, as bees had a fly nearly every month.

#### CYPRIAN AND HOLY LAND BEES.

So much has been said about Cyprians and their ferocious temper that the novice might get afraid before he saw any of the new races. My experience with them is this: If they are carefully handled, the hives not jarred, and plenty of smoke used, we can get along pretty well. But neglect these precautions and the result is stings. The Holy Land bees have the same disposition as the Cyprians, but are more prolific, better honey gatherers, and a much prettier bee, and work foundation with lightning speed.

PRESTON J. KLINE.

Coopersburg, Lehigh Co., Pa.

#### Compliment from Friend Heddon.

Your journal, in my estimation, is second to the weekly only. It contains matter of worth, properly arranged, and reminds one of the old monthly *American Bee Journal*. It certainly has an able lot of contributors.

JAMES HEDDON.

Dowagiac, Mich., Jan. 25, 1882.

Thanks for your kind words, Friend H. They are fully appreciated.



**Albino Queens.**

I see in the "Question Box" that J. A., of Damon, Pa., asks if you would have any Albino queens for sale the coming season. You answer him no, and then you go on to state that you purchased a tested Albino queen, and that queens reared from her brought bees that no one could tell from light Italians. Now, Friend Thomas, will you please state whom you got this Albino queen from, and also state the markings of her worker bees. I claim she was no Albino queen at all, or her daughters would have produced one-half Albino bees, no matter what kind of drone she mated with. I know there are parties that are selling Albino bees that never saw an Albino bee.

D. A. PIKE.

Smithsburg, Md., Feb. 10, 1882.

The "Question Box" is conducted by Mr. F. L. Wright, of Michigan, Friend P., and the remarks about Albinos that you refer to were written by him. You will find, by referring to F. F. G.'s question in this month's "Box," that your first question is answered as fully as Mr. Wright is able to answer it. Perhaps he can give us some information on your other question in next month's issue.

**Question Box.**

CONDUCTED BY.....F. L. WRIGHT,  
PLAINFIELD, MICHIGAN.

All communications for this department should be sent to the above address not later than the 20th of each month, to insure an answer in the INSTRUCTOR the following month.

**Questions from a Beginner.**

1. What variety or race of bees are the best—Syrians, Holy Land, Hungarian, Cyprian or light or dark Italians?

2. Are not those brought from warm countries tenderer or more liable to winter kill than those bred in cold countries?

3. If light and dark Italians were crossed what would be the result?

4. Where are dark Italians imported from?

5. Same of light yellow Italians; that is, what part of Italy?

6. Do you recommend the L. hive for everybody?

I ask these questions because I want to begin right.

BEGINNER.

Miami Co., Ohio.

1. Depends something on locality, what you wish them for, and the man who handles them. Syrian and Holy Land bees we believe are the same. They are

very prolific, the queen keeping the combs well filled with brood, even when no honey is coming in. They very much resemble pure Italians, in everything but temper. We have had but little experience with them, but if all are like those we have seen we want nothing to do with them. We carried ours out of the cellar to-day (Jan. 27) and thought we would look at them a little and see how they were prospering. We did not swear any, but we used some language that was more forcible than elegant, and wished several times we were where we could get hold of the man that brought them from their native haunts. We sometimes wonder if they were not the evil spirits that entered into the swine many years ago. Cyprians are a second edition of Italians (at least ours are), and do not differ enough to be called by a different name. Both are, we think, of same descent, and it would be just as proper to call bees kept in Canada, "Kanuks," and those reared in Michigan "Wolverines." Hungarian bees we know nothing about, but will try and obtain some next season. You seem to think that light and dark Italians are two distinct races or breeds, but such is not the case. We have no doubt that in some parts of Italy, some breeders rear dark bees while some have light ones comparatively, but not as light as our lightest bees, or those found in Germany. Yet you may take the lightest and the darkest queens that you can get direct from Italy, and ten to one the progeny of your dark queen will, after a few generations, be far the lighter. We remember a few years ago we had in our possession an imported queen whose progeny was very dark. We reared queens from her quite extensively, and sent a dozen to J. H. Nellis. He at once wrote us that he wanted no more such queens. We informed him that they were from imported stock, but he replied that even if they were he could not sell them for anything but hybrids. The great-granddaughters of that queen now produce the lightest queens we ever saw. We pronounce the Italian bee the best bee, all things considered, but if we did not care for stings and wanted lots of honey, we would take hybrids of the Italian and our common black bee.

2. If we were to judge by other things—animals, fruits, etc.—we would say they were, but we have never noticed much difference in wintering qualities that we now remember.

4. Italy.

5. Formerly there were some very highly-colored bees imported from Germany.



6. No, we do not. We recommend the L. hive only because supplies—frames, sections, etc.—for that hive are kept in stock by nearly all supply dealers, and can be obtained at a moment's notice, while you often have to wait until odd-sized goods are manufactured. The L. hive is A No. 1 for honey, but poor for queen rearing and building up weak stocks in the spring.

#### Albino Bees.

Please tell us where you got those Albinos you speak so disparagingly of in last INSTRUCTOR. I think they were no Albinos at all. F. F. G.

They were brought us by J. O. Lyon, of Mason, this State. He bought them somewhere South. Mr. L. understands bees much better than many who are better known, and he informed me they were pure Albinos. We have no reason to doubt his word.

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### *Editor's Corner.*

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#### **Bee-Keeping in Kentucky.**

It seems to us that Kentucky is rather backward in improving her opportunities in this branch of rural industry. We have no certain data to base our conclusions on, and if we are mistaken we hope some one will kindly correct us, but we think that Kentucky, taking into consideration her natural advantages, should lead many states that are now ahead of her in the production of this most healthful of all sweets. Ever since Boone and his companions stood entranced upon an eminence commanding a view of the "dark and bloody ground," gazing upon the beautiful forests and flower-carpeted prairies that spread out before their vision, Kentucky has been noted for its fine climate, the fertility of its soil, its fine horses and its pretty women. And we think we can safely add that it contains some of the finest locations for apiarists to be found anywhere. Along the Cumberland river, and in many other portions of the State, are locations, better ones than which it would be hard to find, which have hitherto been unproductive merely for the lack of the means of gathering their wasted sweetness. It is true

that many persons keep bees, but they are mainly in box hives, receive but little attention, and therefore gather but a small portion of the nectar secreted.

We are glad to know that Kentucky has many progressive and intelligent bee-keepers, including such names as Dr. N. P. Allen, Wm. Williamson, G. W. Demaree, W. T. Stewart, and many others we might mention, who keep pace with the progress of the science, but the larger portion of Kentucky bee-keepers—the rank and file, so to speak—are too much behind the times. This we would like to see changed. We would like to see the movable-frame hive, the honey extractor, comb foundation, and the many different articles and implements that make modern bee-keeping the profitable and pleasant business that it is, substituted for the old log "gums" and box hives, and the antiquated methods of the past. The INSTRUCTOR is now in a measure a Kentucky institution. We desire to do all in our power for the advancement of the science in this State, and for the development of its resources in this respect, and hope to receive the hearty co-operation of all Kentucky bee-keepers in our efforts. We need your help, and you need ours, and it will be to our mutual advantage to work for each other.

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**Sweet Clover.**—In this issue will be found quite an interesting and instructive article on "Sweet Clover," from the pen of Daniel Kepler, Napoleon, O. This is destined, we think, to become the great honey plant of the future, its great adaptability to soil and climate, the ease with which it can be raised, the great length of time it continues in bloom, and the fact that it can be grown on waste places and barren land, all being points in its favor that will recommend it to every bee-keeper. We hope Friend K.'s article will be the means of interesting many in the matter of planting for honey; it is a subject that is every year becoming of more and more importance, and one on which too much can hardly be said and written.



### Some Facts Worth Pondering Over.

Each volume of the INSTRUCTOR if bound would make a book of 192 large double-column pages (this is exclusive of the covers, including only the reading matter), equal to at least 300 pages of an ordinary 12-mo book, and consists principally of original articles, on almost every subject of interest to bee-keepers, all of which is furnished for the small sum of 50c. Many single numbers are alone worth the subscription price a dozen times over, as numbers of our readers have assured us. And yet there are bee-keepers who say they "can't afford to take a bee journal." *Apropos* of this, some advice that W. Z. Hutchinson, in the *Exchange* for January, purports to have given his "Uncle Med," is so illustrative of the point that we can not forbear quoting it. "Uncle Med" had been objecting to taking bee papers and following their teachings, because it was "too much like book farming," and because they contained "too much 'theory,'" to which Mr. Hutchinson replied as follows:

"It strikes me, Uncle Med, that as you seldom read them, you are not exactly the one to judge. Now, I read a good share of all that is written upon the subject of bee culture, and I can truthfully say that not one-half is theory. The bee papers are mostly filled with carefully written accounts of actual experiences. Of course they are not all valuable, but time and again has the information, contained in some little item, been worth dollars to me. It is impossible for a man to have too much knowledge concerning the business in which he is engaged. Who is it that is the victim of the patent right bee hive swindler? The man who doesn't take a bee paper. Who is it that doesn't put his honey up in the best shape for market, or sells it for less than it is worth? The man who doesn't take a bee paper. There are hundreds of little inventions, improvements, and better methods of 'doing things,' that are all the time being discovered, and it is only through the medium of a paper that we can learn of them. I tell you the man that doesn't take a bee paper can never compete with one who does. You admit by your own actions, Uncle Med, that the bee papers are valuable, for you come here and ask

for second hand information, when by taking a bee paper you could have it new and fresh."

"Yes, but I had rather take it second-handed, especially after it has been run through your 'mill' and had the chaff all blown away."

"Now, Uncle Med, that sounds very much like flattery, but even if it isn't, don't you think that it is about time that you began to run your 'mill,' if you ever expect it to be of any use? Your 'mill' does good work upon other subjects, and why should it not upon bee-keeping?"

"Well, perhaps it might in time, but sometimes I hardly know what to think of you; one day you are talking economy—getting up cheap hives and cutting down expenses in every way possible—and then again you go in for the improvements, buying comb foundation, books, bee papers, and all such nick-nacks."

"I fear, Uncle Med, that you don't exactly understand my ideas of economy. Some people's ideas of economy make them 'penny wise and pound foolish.' It isn't economy to save a dollar by not subscribing for a bee paper, and then lose \$25.00 for the lack of the knowledge the paper might contain. It isn't economy to save \$15.00 by not using foundation, and then lose \$30.00 or \$40.00 in the time and honey that the bees consume in comb building. It isn't economy to save money by not buying an extractor, or to wait until it is needed, and then save express charges by having it sent as freight, and lose ten times the amount of the charges by not getting it in time. But it is economy to have cheap hives and implements, provided they are durable and well adapted to the purpose for which they are intended. And it is economy to save all good pieces of comb in transferring, and fasten them into frames, instead of melting them up and buying foundation."

Now if the above advice was only followed by the class for which it is intended, what a benefit it would be to them. But writers may give all the good advice possible—may talk and write till they get tired of it—and we suppose there would still be some persons too "penny wise and pound foolish," as Friend H. puts it, to take a bee journal, or keep pace with the times in any other way.

Those who subscribe soon can be supplied with the January and February numbers.



**Monthly Management.**—Before another issue of the INSTRUCTOR, bees in some portions of the country will be making a start for the coming season. Much may be done in the way of helping them along by judiciously feeding them thin syrup, to give them a start in breeding. The latitude should determine the time for this, which should not be done until the season is favorable for the bees to fly a portion of the time at least. If bees are scant of pollen, rye flour can be fed to good advantage, as soon as the bees are flying freely in the spring. Place the flour out in shallow boxes or dishes, and to start them to work put a little thin honey on the flour. Feed the syrup at night, especially if the weather is a little cool or if the bees are inclined to rob. As soon as the bees begin to breed the brood chamber should be contracted so that the bees can cover all the combs and properly care for the brood, watching carefully so as to introduce an additional frame every eight or ten days as the weather gets warmer and the queen requires more room. Bees can be aided materially by early judicious feeding, say a quart of thin syrup made of equal parts of fine sugar and water once or twice a week. In this way stocks may be built up strong for the early honey flow. If feeding is necessary in northern latitudes before the bees are flying, bee candy should be fed instead of syrup.

We had quite a pleasant visit on the afternoon of the 10th from Mr. Daniel Kepler, of Napoleon, O., who was on his way from that place to Coulterville, Tenn., where his bees are wintering. After a long chat with Mr. Kepler, whom we found to be thoroughly posted on bee matters, we adjourned to the supper table, after which we again talked "bees" until his departure on the night train. Should any other of our "bee friends" be passing up or down the Southern road at any time, we would be very glad to have them stop and see us. We will promise to entertain them to the best of our ability.

## Circulars, Price-Lists, etc.

The following circulars, price-lists, and publications of various kinds, have been received by us during the past few weeks:

### APICULTURAL.

Alfred H. Newman, Chicago, Ill., 32-page catalogue of apianian supplies.

D. A. Pike, Smithsburg, Md., postal card price-list of bees and queens.

Henry Drum, Adelphi, O., 8-page catalogue of bee-keepers' supplies.

U. E. Dodge, Fredonia, N. Y., a very neat circular and price-list of apianian supplies, small fruit plants, etc.

Bingham & Hetherington, Abonia, Mich., 4-page circular of their smoker and honey knife.

Dr. J. P. H. Brown, Augusta, Ga., 24-page catalogue of apianian supplies, containing also directions for introducing queens, and some sensible observations on the new races of bees.

Houck & Peet, Canajoharie, N. Y., 20-page catalogue of the usual supplies.

W. S. Cauthen, Pleasant Hill, S. C., 1-page price-list of bees, queens and supplies.

The "Apiary Register," published by T. G. Newman, Chicago, is a book that fills a long-felt want, and one that every apiarist should have. Two pages, ruled and printed, are devoted to each colony, it being so arranged that a single glance will give its complete history. It is published in three sizes—for 50, 100 and 200 colonies—containing respectively 120, 220 and 420 pages, and sells for \$1.00, \$1.50 and \$2.00 each. It may be ordered direct from the publisher, or when more convenient the money may be sent to us, and we will have it forwarded. It is strongly bound in leather, and of a very convenient size, being small enough to carry handily in the pocket.

The first number of the "Kansas Bee-Keeper" in its new form has been received by us. It is quite an improvement on the former style.

### MISCELLANEOUS.

American Agricultural Association, New York, the July and October number of the "Journal of the American Agricultural Association." We could recommend this very highly to our agricultural friends, were it not that the great railroad corporations seem to be getting control of it, and making it an organ for the advancement of their private interests.

E. P. Roe, Cornwall-on-the-Hudson, New York, spring catalogue of small fruits and grape-vines.

Trumbull, Reynolds & Allen, Kansas City, Mo., seed catalogue for 1882.

Joseph Harris, Rochester, New York, catalogue of field, garden and flower seeds.

Hiram Sibley, Rochester, New York, seed catalogue for 1882.

Musical Herald Co., Boston, January No. of the "Musical Herald," an elegantly printed and well edited 32-page musical journal. \$1.50 per year.

Jas. F. Harrison & Co., Atlanta, Ga., January number of the "Southern Cultivator and Dixie Farmer," one of the oldest and best agricultural journals published in the South. It is ably edited and our Southern readers will find it worthy of their support. \$1.50 per year.

Every month we send out more or less specimen copies. Those receiving such are invited to give them a careful examination, and if after inspection they like the INSTRUCTOR's appearance, we would be pleased to receive their subscriptions.



**Erratta.**—In the first paragraph of Mr. Jeffrey's article, on page 4 of last month's journal, 6th line from the top, it should read "to his answering Mr. Mitchell as he did." Also, in the report of the North-Eastern Convention on page 22, 6th and 7th paragraphs, there were certainly some mistakes made in reporting, although we publish the report just as it was in the Utica papers, sent us by the Secretary. In the sixth paragraph we have some doubts of the truth of Mr. Dickenson's statement that "75 per cent of honey is moisture." If it is, however, 75 per cent. of 25 pounds would equal  $18\frac{3}{4}$  pounds of water, which would make over  $2\frac{1}{4}$  gallons, instead of three quarts, as a gallon of water at the temperature of maximum density,  $39^{\circ}.82$  Fahrenheit, weighs  $8\frac{1}{2}$  pounds. In the paragraph following, where Mr. Betsinger is quoted as saying that this amount of water would "pass off through a hole as large as a knitting needle in 35 months," he certainly said minutes, or meant to, at least. The way the paragraph now reads there is no point to it.

**New Advertisers.**—Quite a number of new advertisers, all of whom we can recommend as being reliable and trustworthy, present their business before our readers this month. C. H. Lake is a well-known and successful apiarist, as well as an extensive dealer in supplies. R. L. Shoemaker is proprietor of the Champion Bee Hive Manufactory, and is engaged very extensively in the manufacture of apiarian supplies, occupying a large brick building (similar to A. I. Root's, at Medina, O.)  $40 \times 100$  feet, and 2 stories in height. E. A. Thomas & Co. and W. S. Cauthen are established dealers in bees, queens and apiarian supplies. D. A. Pike is a well-known breeder of queens and bees. A. H. Newman is largely engaged in the bee, queen and supply business. Given's Foundation Press needs no recommendation from us, while the *Semi-Tropic California* will be found one of the handsomest publications issued west of the Rocky Mountains.

Bees need care and attention the same as any other stock, and if any one has gone into the business with the expectation that their bees are going to take care of themselves, and yield a handsome profit besides on the money invested, we advise them to sell out at once—and the sooner the better—for nothing but disappointment will result from such expectations. Work is necessary in every kind of business to secure favorable results, and in no branch of industry will well-directed, systematic work pay better than in bee-keeping.

From the 20th to the 30th of Jan., while the thermometer was from  $20^{\circ}$  to  $36^{\circ}$  below zero in New York and Pennsylvania, and other Northern States, bees with us were flying nicely almost every day. The winter here has so far been very mild, in consequence of which the bees have consumed but very little honey, and are in excellent condition.

The INSTRUCTOR ought to have at least five hundred or a thousand subscribers in Kentucky. And if those interested in the development of the science will work for it as they should, it *will* have them before the end of 1882.

In Mr. Heddon's advertisement the words "New Honey Scale" should have been placed below the cut, but were inadvertently left out.

### Honey and Beeswax Markets.

REPORTED FOR THE INSTRUCTOR.

Chicago, Feb. 7.

Honey—Demand for choice white comb is active, with small offerings. I have sold white comb in one and two pound frames at 24c; dark comb low sale. Extracted, 10 to 12c.

Beeswax—18 to 22c.

R. A. BURNETT.

St. Louis, Feb. 6.

Honey—In better demand. We quote: Choice bright comb, 18 to 23c. Strained and extracted, 10 to 11c., to 12 $\frac{1}{2}$ c. Last figures only for choice in small cans.

Beeswax—Scarce. In good demand at 21 to 22c. for bright yellow. Dark and mixed, 18 to 19c.

R. C. GREER & Co.

Cincinnati, Feb. 7.

Honey—No change in the market. Prices are the same as last quoted, and demand is fair, keeping about pace with the arrivals. We quote as



follows; Comb, 18c.; extracted, 8 to 11c.

Beeswax—Brings 18 to 22c. on arrival.  
C. F. MUTH.

Cleveland, O., Feb. 6.

Honey—Our market is again very active, especially for white sections, which sell as fast as they arrive at 21 to 22c. for 1-lb. and same for 2-lb. Buckwheat we find difficult to sell at 17 to 18c. Extracted in very fair demand at 12c. for small and 11c. for barrels and  $\frac{1}{2}$  barrels.

Beeswax—25c. A. C. KENDEL.

Baltimore, Feb. 8.

Honey—Prime in demand in small sections at 20c. But little demand for extracted, and very little on the market, at 10c.

Beeswax—Prime yellow, 20c. on arrival.

C. H. LAKE.

San Francisco, Jan. 28.

Honey—No transactions worthy of note are reported. There is not enough offering to admit of much being done in a wholesale way. We quote: White comb, 16 to 20c.; dark to good, 10 to 14c.; extracted, choice to extra white,  $\frac{8}{4}$  to 10c.; dark and candied, 7 to 8c.

Beeswax—23 to 25c.

ROOT & HATCH.

New York, Feb. 7.

Honey—Best white in 2-lb. sections, 18 to 20c.; fair white in 2-lb. sections, 15 to 17c.; dark and mixed in 2-lb. sections, 12 to 13c. Extracted, white, 10 to 11c.; extracted, buckwheat, 7 to 8c.

Beeswax—Guaranteed pure, 25 to 26c.

H. K. & F. B. THURBER & Co.

Boston, Feb. 8.

Honey—In fair demand at 20c. for one pound and 18c. for two pound white.

Beeswax—Prime 25c. CROCKER & BLAKE.

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The Union Bee-Keepers Association will meet at Eminence, Ky., on the 27th day of April, 1882.

G. W. DEMAREE, Sec'y.

## Clubbing List.

The INSTRUCTOR and any of the following bee journals will be sent to one address, one year, at rates given in right hand column below. The figures on the left give the regular subscription price of each:

Instructor with American Bee Journal.....	\$2 00	\$2 30
" " Gleanings in Bee Cult'g.....	1 00	1 40
" " Bee-Keepers' Magazine.....	1 00	1 25
" " Bee-Keepers' Exchange.....	1 00	1 30
" " Bee-Keepers' Guide.....	50	80
" " Kansas Bee Keeper.....	60	90

## ATTENTION, BEE-KEEPERS!

We are now booking orders for our Queens. We intend that they shall be second to none in the world. No better guarantee could be given than the fact that

## A. I. ROOT

Has bought of us for several years, and we now have orders from him booked for next season.

### Prices for 1882:

1 Tested Queen, after June, \$2.00; 6 for \$11.00
1 Untested " " May 20, 1.00; 6 for 5.50

There are no black bees in our vicinity.

Orders booked now if 10 per cent. is sent with order, balance to be paid when queen is ready.

We also offer a fine stock of Northern-Grown

## GRAPE-VINES,

Including the WHITE ANN ARBOR, now offered for the first time, PRENTISS DUCHESS, POCKLINGTON, and, in fact, all the choice new and the best old sorts; also berry plants of all kinds—all at extremely low prices, post-paid. It will pay you to send for our descriptive price-list.

F. L. WRIGHT,

Plainfield, Michigan.

## Southern California.

For reliable information regarding climate, resources and general industries, subscribe for the

## SEMI-TROPIC CALIFORNIA,

An Illustrated monthly devoted to Agriculture, Horticulture, Viticulture, the Home and Fireside. The acknowledged representative Journal of Southern California. Subscription east of the Rocky Mountains, \$1 per year. Sample copy, three 3-cent stamps. Address,

COLEMAN & DICKEY,

Los Angeles, Cal.



A HAPPY NEW YEAR TO ALL

29th Year. 1882. 29th Year.

CHARLES H. LAKE, Manager.

SECTIONS! Perfection Boxes! HIVES!

ITALIAN CHOICE QUEENS.

BEES.

SEND STAMP FOR CIRCULAR AND PRICE LIST.

SUNNY SIDE APIARY,

259 Greenmount Avenue, Baltimore, Md.

GIVEN'S  
**Foundation Press**  
—AND—  
**WIRING MACHINE.**

The latest improvement for making thin and heavy foundation. The only invention to make foundation in the wired frame. All Presses warranted. Send for catalogue, and sample of fdn.

25 D. S. GIVEN & C., Hoopeston, Ill.

**A BARGAIN!**

If you wish to purchase **Italian Bees and Queens** early, and wish a bargain, you should send your name on a postal card for my new price-list. Address

W. S. CAUTHEN,

23 Pleasant Hill, Lancaster Co., S. C.

Send your address, written plainly, for my new  
Illustrated Catalogue of

**BEE-KEEPERS' SUPPLIES**

A full and complete Price List.—32 pages.

ALFRED H. NEWMAN, CHICAGO, ILL.

**WARRANTED**

1882



1882.

**PURE ITALIANS,**

—AND—

**Apiarian Supplies.**

—O—

My queens are bred from best imported stock. I did not have a single report of a hybrid queen last season, and therefore will warrant them pure this season. When not pure I will send another one. I am also wintering several

**Extra Tested Queens,**

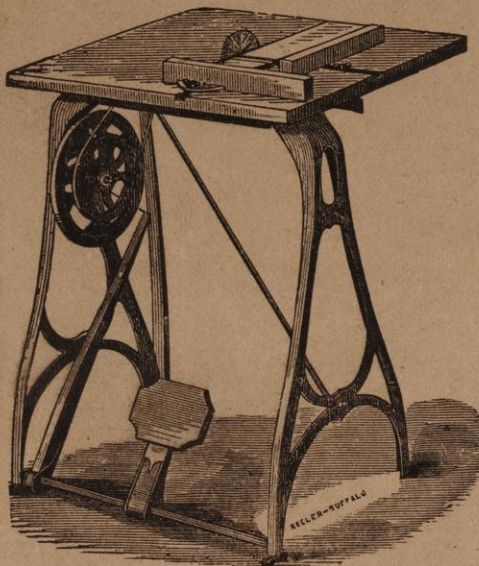
For breeding purposes, which I will sell in spring. I warrant safe delivery and satisfaction. Send for FREE CIRCULAR AND PRICE LIST. Address

L. C. McFATRIDGE, M. D.,

CARROLL, CARROLL CO., IND.



# BARNES' PATENT FOOT POWER MACHINERY.



CIRCULAR AND SCROLL SAWS. HAND CIRCULAR RIP SAWS, for heavy and light ripping. LATHES, &c., &c. These machines are especially adapted to **HIVE MAKING**. It will pay every bee-keeper to send for our 64-page catalogue.

**MACHINES SENT ON TRIAL IF DESIRED.**

Write for complete Illustrated and Descriptive Catalogue (stating "where you saw this advertisement") to

**W. F. & Jno. Barnes,**  
Rockford, Winnebago Co., Ill.

## Heddon's Circular

FOR 1882

## NOW READY.

Send full address—Post-Office, County and State.



Be **sure** to state whether or not you **now** have my 1881 circular.

**Wanted:**—Beeswax; also a student apprentice.  
Address

**JAMES HEDDON.**  
DOWAGIAC, MICH.

## Bees For Sale!

I will sell and deliver on board cars in Cincinnati, Ohio, during April and May, 1882,

## 200 Colonies of Pure Italian Bees,

Warranted in good condition in every respect. 50 colonies are in 2-story Simplicity hives, and 150 colonies in 2-story Everett Langstroth hives.

### PRICES:

In lots of from 1 to 25 colonies, each.....	\$10.00
" " 25 to 50 " " .....	9.50
" " 50 to 100 " " .....	8.75

Or I will deliver in 100 colony lots in Chicago, Toledo or Cleveland, at 25 cents per colony additional to above prices.

### DANIEL KEPLER.

Address me at Napoleon, Ohio, until February 15th, after which time I will be at Coulterville, Hamilton county, Tennessee. 13

**\$5; \$20** per day at home. Samples worth \$5 free. Address  
STINSON & Co., Portland, Me.

**\$72** A WEEK. \$12 a day at home easily made. Costly outfit free. Address  
TRUE & CO., Augusta, Mo.

In answering advertisements don't forget to say you saw them in the INSTRUCTOR.