The bee-keepers' instructor. Vol. III, No. 11 November, 1881

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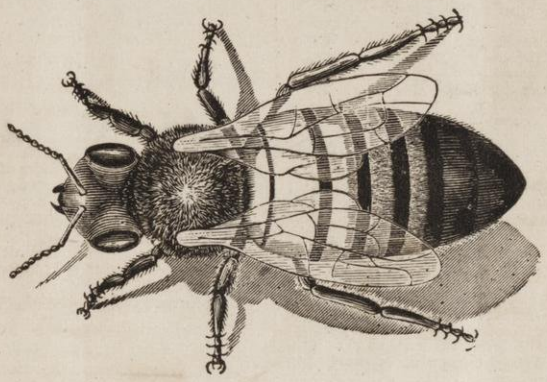
VOL. III. NOVEMBER, 1881. NO. 11.

THE BEE-KEEPERS' INSTRUCTOR.



W. Thomas, Editor.

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ADVERTISING RATES.

Advertisements of less than 1 inch, 8 cents per line, each insertion. 1 to 3 inches, per inch, each insertion, 75 cents. 12 lines of nonpareil, our advertising type, containing about 9 words per line, make one inch. Discounts will be made as follows:

On 1 to 3 inches, 3 insertions, 5 per cent; 6 insertions, 10 per cent; 9 insertions, 15 per cent; 12 insertions, 20 per cent.

Special rates given on advertisements of ¼ page or over. Send for estimate.

Advertisements changed quarterly if desired, and all advertisers will receive the INSTRUCTOR free, provided their advertisements amount to at least five times the amount their subscription would be while their advertisements are running.

If our readers in answering advertisements will mention that they saw them in the INSTRUCTOR they will oblige both advertisers and us.

W. THOMAS & SONS.

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PAUL L. VIALLON, Bayou Goula, La., breeder and shipper of fine Italian Queens and Bees. Send for 16-page circular.

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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 20
"	" Gleanings in Bee Cult'e	1 00	1 30
"	" Bee-Keepers' Magazine	1 00	1 25
"	" Bee-Keepers' Exchange	75	1 10
"	" Bee-Keepers' Guide	50	80
"	" Kansas Bee Keeper	30	70

Imported Italian QUEENS!

Just received: Another invoice of these valuable bees, **selected** under my own instructions and **Fully Guaranteed.** Particulars upon application, and references given when desired.

Queens of every variety carefully bred. Send for circular and price-list.

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259 Greenmount Ave.,
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$66 a week in your own town. Terms and $5 outfit free. Address
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A first-class monthly paper. Each number appropriately illustrated. Devoted to the interests of Farmers, Gardeners, Live-Stock Owners, Fruit Growers,—with Editorial Notes and Articles a well-sustained Literary Department, Attractive Articles for the Children, and many helpful hints for the housekeeper; together with interesting Letters from the Far West, South, and Foreign Lands. Has contributors of marked ability from all parts of the country. While all departments of the

FARM AND GARDEN

Will be ably edited, an earnest effort will be put forth to make it SPECIALLY USEFUL to Gardeners, many of whom have expressed a wish for a paper that would devote considerable space to their work. We have not room for a full description. It is a paper which everybody should read. Send for FREE specimen copy and see it for yourself. Though extremely valuable this paper costs only

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We want Agents everywhere. GREAT INDUCEMENTS to all who obtain Subscribers. SEND AT ONCE for Club Rates. Address

E. S. CHILD, Publisher,
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1881. 1881.
ITALIAN QUEENS

Bred from Imported mothers of our own importation, for the year 1881, Tested, **$3.00** each; also colonies and nuclei from home bred stock.

☞ NO IMPORTED QUEENS FOR SALE. ☜

We also breed the Celebrated Mocking Bird, which is acknowledged to lead the feathered songsters of the world.

Send for price-list. Satisfaction guaranteed.

A. F. MOON,
ROME, GEORGIA.

Bee-Keepers,

Look! An 8-page weekly bee paper for

ONLY 75 CENTS PER YEAR.

Every Bee-Keeper should subscribe for it. The only bee paper published in the New England States, and the cheapest in the world. No subscriptions entered on the list for less than six months. Send 40 cents and try it six months. Specimen copy free. Contains each week essays on bee culture by some of the most talented writers, Letter Box, sketches of interest and instruction to bee-keepers.

Address

HENRY A. POOLE,
Box 187, - - - MECHANIC FALLS, ME.

THE
Bee-Keepers' Instructor.

VOL. III. SOMERSET, KY., NOVEMBER, 1881. No. 11.

Published the middle of each month. | W. THOMAS & SONS, Publishers and Proprietors. | Terms, 50c. per year, or 30c. for 6 months.

North American Bee-Keepers' Convention—Concluded.

AFTERNOON SESSION—CONTINUED.

Balloting for place of next meeting being in order,

D. A. Jones, delegate from the Ontario Bee-Keepers' Association, invited and nominated the next session to be held in Toronto, during the meeting of the Toronto Fair Association.

Wm. Williamson, of Kentucky, seconded the nomination of Mr. Jones.

A. W. Windhorst, of Ferguson, Mo., put in nomination St. Louis, which was seconded.

Dr. J. P. H. Brown, of Georgia, in an eloquent appeal, nominated Cincinnati.

C. F. Muth, of Cincinnati, seconded the motion. and tendered the use of a hall free from rent.

Dr. N. P. Allen, Kentucky, spoke in support of Cincinnati, and also extended an invitation to the members of the Convention to attend the Kentucky State Bee-Keepers' Convention, of which he is President, to be held in Louisville, Oct. 12th and 13th.

Nominations declared closed, and Messrs. Poppleton, of Iowa, and Windhorst, of Missouri, were appointed tellers.

An informal ballot being taken, St. Louis received 8 votes, Toronto received 12 votes, and Cincinnati 18 votes.

On the second ballot, Toronto received 12 votes, and Cincinnati 26.

The time of the meeting was left to the decision of the Executive Committee, and to be announced through the bee-papers in April next.

An elaborate treatise by C. Dadant, of Hamilton, Ill., on "The Influence of Honey on Wintering," was read.

O. O. Poppleton thinks, as a rule, his bees do as well in winter on buckwheat or other fall honey, as on white clover. The main point is to have well ripened honey.

D. A. Jones prefers the basswood honey for wintering.

Dr. N. P. Allen prefers white clover, or well ripened fall honey.

The Secretary read a paper from Dr. W. R. Howard, of McKinney, Texas, on "Wintering Bees in Texas."

G. W. Demaree, Kentucky, thinks the practice of crowding bees in the hive as detrimental to successful wintering; if it crowds his bees to put them on six frames he will give them eight—putting the unoccupied combs at the sides.

C. F. Muth has wintered colonies as well on twenty frames as on ten. Last winter two colonies were left on twenty frames, and they came through all right. He thinks the great loss during winter is caused by insufficient ventilation.

Mrs. L. Harrison, of Illinois, inquired if it was necessary to place an empty comb in the center of the brood chamber for wintering?

The question was answered by several in the negative.

The Secretary read a communication from Dr. C. C. Miller, Marengo, Ill., President of the Northwestern Bee-Keepers' Society, on "Swarms vs. Comb Honey." The paper was followed with considerable desultory debate, which had but little reference to the subject treated upon.

Dr. L. E. Brown, of Kentucky, here announced that a committee of reception had gone to the depot to meet Mr. Thomas G. Newman, editor of the *American Bee Journal*, who was expected on the train then due. Dr. Brown alluded to the eminent services of Mr. Newman to further the cause of apiculture in North America, that to his labors more than those of any other, could the North American Bee-Keepers' Society attribute its success, and that he had done more than any man living to create a market for honey, and to make it a marketable commodity. He moved that when the committee returned they and their guest be received by the Convention standing.

Dr. Allen, of Kentucky, moved to amend by adding that a recess of ten

minutes be also taken to allow members an opportunity to greet Mr. Newman.

Which motions were carried unanimously, amidst much enthusiam.

The reception committee here made their entrance, escorting Mr. Newman, who was received by the Convention standing, whan a recess of ten minutes was taken.

On being called to order, Dr. E. Drane, of Eminence, Ky., addressed the Convention on

How to Make Bee-Keeping Pay.

Some five or six years since I determined to make bee-keeping pay if possible. I had a fondness for bees and especially honey. I had never read any work on apiculture, but concluded that there must be some standard works treating of bee-keeping; began to inquire for such, and learned that there was a paper published at Chicago called the "American Bee Journal." I immediately wrote a postal card to the editor and received a specimen copy in which the standard works on apiculture were advertised; also several other papers devoted to bees and the production of honey and the sale of bee-keepers' supplies.

I knew I had struck a bonanza, for when a man is determined to obtain knowledge upon any subject, just give him access to the standard writings on that subject and he can soon know all that is known or unknown about the business. I subscribed for the "Bee Journal," "Gleanings in Bee Culture"—procured Langstroth's work and Cook's Manual of the Apiary and several other works on bees and honey, read myself full of bee theory—went to see all of my friends or acquaintances who kept bees and who were supposed to understand scientific bee culture. The idea seemed to prevail with them that everything depended upon having the right kind of a hive—they tried every kind—some had moth-traps, and hives with frames were numerous, but never a frame could they move—the combs were crooked and crossed. No one offered to lift out a frame and show me the queen, but I was often invited to take a peep through glass as though it were a great treat to see bees under glass, hence I concluded that if my friends had ever understood scientific bee culture, they had stood still until the wave of progress had gone by and left them twenty years behind. Talk to them about controlling swarming, extracting honey or rearing queens! Oh! that is all a humbug, they would say.

I therefore had to rely on my books and papers—making careful selection of the methods that seemed most approved of and practiced by the great bee kings, who annually made reports of large yields of honey, who had honey to sell by the ton—I studied their ways and endeavored to take lessons of them; I bought an extractor, adopted the Langstroth hive, had comb honey stored in prize sections, packed 12 in a crate and glassed the crate, kept extracted honey in 1 and 2 lb. jars in the stores around, and comb honey in crates, and never offered to undersell the market. I ask and get top prices and have learned to keep honey in prime condition (I never ship any in bad order) and I cultivate a home market by trying to keep honey for sale all the year round. Perhaps I might as well say that I have about twice as much extracted honey as comb, and find an increasing demand for it. I recommend all to buy extracted honey.

1st. Because it is cheaper and is sweet as comb honey.

2d. Because I can obtain larger yields of it than of comb honey, and can make more money producing it, and I use it myself all the time.

For several years I have made careful memoranda of the time of blooming of all the plants, trees and flowers on which bees forage, and the length of time they last and amount of honey and pollen the bees obtain from each, which enables me to know with reasonable certainty what the bees are doing or can do, according to the state of the weather, and the prevailing forage, either present or prospective. In proof of which, I attended to two apiaries away from home this year and had not a single swarm, and only visited them once a week, and occasionally at longer intervals. Had I never studied the subject of bee forage I should have been in continual doubt and uncertainty.

Let no one flatter himself that he can learn bee-keeping in a day. Each season imparts new lessons, and it seems as if I were just beginning to know the cause of many things about bees and honey, and I do not hesitate to say that I firmly believe that I can make more money out of bees and honey with a capital of one thousand dollars than average farmers do on five times that amount, taking the seasons as they come. But I wish to persuade no one to embark in the business, for I know of no calling that is accessible to so many, and at which so few make money.

T. F. Bingham, Michigan, thought the address worthy of the highest encomiums, and that Dr. Drane should have the thanks of the Convention for crowding so much practical advice and correct conclusions in such a small and comprehensive space.

President Cook stated that pollen was in many cases injurious to bees in winter, as it had a tendency to unseasonable breeding, and hence was the cause of much spring dwindling.

Dr. J. P. H. Brown, Georgia, has found pollen very beneficial in the latitude of Georgia, but it might not answer so well in a Northern climate.

C. F. Muth, Ohio, thinks pollen is a great benefit to bees in his latitude, and he always gives them pollen combs if he has them, in March.

D. A. Jones, Ontario, thought Prof. Cook's ill success with pollen was attributable to other causes. Mr. Jones said he never discriminated against pollen-combs in preparing the bees for winter.

C. F. Muth said he wanted brood in his hives by March 1, at the latest.

Adjourned till 7:30 P. M.

EVENING SESSION.

President Cook announced the following as committee on resolutions: C. C. Coffinberry, Illinois; D. A. Jones, Ontario; Dr. J. P. H. Brown, Georgia.

The following report was read from A. J. King, Vice President for New York:

Owing to the fact that at least ⅔ of all the bees in this State perished during our last terrible winter, the aggregate honey crop must necessarily be much less than under ordinary circumstances; yet taking the number of effective colonies alive in April, it is doubtful if their work has ever been exceeded, if indeed equaled, in any preceeding year. With the exception of a few localities, we have

reports of large yields all over the State. The ⅓ of survivors, by taking advantage of the early and abundant honey flow from the locust groves, and afterward, the white clover and basswood, have more than retrieved the loss of the ⅔ which perished. The surplus honey this year is of the finest quality, and owing to the early and long-continued drouth in other parts of our country, it finds a ready market at remunerative prices. These results have been secured mainly from white clover and basswood. The locust and some other early bloom being used mainly to "breed up" with.

Mr. L. C. Root, the well known successful apiarist, and president of the North-Eastern Bee-Keepers' Association, has taken from 160 colonies, an average of 100 lbs. of white clover, and 125 lbs. of basswood honey, making an average in all of 225 lbs. per colony, his best yield from a single colony in one day being 20 lbs. of honey. The larger part of his crop, we believe, was taken with the extractor. This is the best yield we know of, but Mr. G. M. Doolittle has written us that his report will be better at the close of this season than any he has given for several years. Mr. C. J. Quinby, of White Plains, reported an average of 100 lbs., mostly locust honey, as early as July 1st, since which time we have not heard from him.

Our own apiary of 75 colonies, on the roof of the building No. 14 Park Place, New York City, has not been run for honey, but we believe we could have obtained at least 75 lbs. of nice honey per colony, had we desired it. We have tripled our number of colonies and reared several hundred queens, and have now about 60 colonies in fair condition for wintering, which will be done on the roof. We have quite a large number of partial reports from nearly all parts of the State from apiarists of all degrees of advancement in the art, and think we would be safe in assuming that New York will show an average yield of about 50 lbs. of surplus honey to each colony of bees, and this so far as our knowledge goes, will place her in this regard at the head of the list of States for this season's work.

We have taken some pains to find out the causes of the great loss of bees in this and other States during last winter and spring, and feel constrained to charge it up, to a very large extent, either to a lack of knowledge or downright shiftlessness, or perhaps both, on the part of those who suffered loss. This may look like a serious charge, but nothing would have given us more pleasure than to have attended your convention and proven the general truthfulness of the charge by hundreds of practial illustrations, had circumstances over which we had no control permitted.

The reproach, that bee-keeping is at best a very precarious business, has been put upon it mainly by two classes of persons. The first and larger class are ignorant and lazy, and never succeed in anything but to complain about fate, luck and the mysterious ways of Providence. The other class complain from fear of competition, and so parade the failures of the former before the public, as a kind of barrier to prevent others from engaging in the business, or else they keep still, from the same cause. If honey is ever to become a staple article of consumption like other syrups, the price must correspond to quality when compared with them, and the supply must be kept up so that it can always be depended on at some price, and this will be done by having a sufficient number engaged in the business, to gather up and save the millions of pounds which still is allowed to go to waste in all parts of our country.

As a rule, success in our business is the result of knowledge obtained by practice and familiarity with the causes leading to the success of others, and failure is the opposite of this. So to "advertise" the failures of those who are born to fail, because born without the capacity for intelligent thought and action, is like expecting to be nourished by feeding on the wind, but to publish the success of intelligent management, giving all the *modus operandi* leading to the same, is to point men onward in the right direction. Failures to be entitled to publication should be the results of the experiments of "wise" apiarists, and only such are of any real good to the cause of bee-culture.

C. F. Muth, Cincinnati, Ohio, then gave an interesting address on the subject of "Wintering Bees."

O. O. Poppleton. Iowa, makes no provision for upward ventilation. He uses frames 12x12 inches square, with wide top bars, and there is but little chance for air to get through.

T. F. Bingham, Mich., has found a large accumulation of dead bees on the bottom-board each winter. He intends to raise the frames this winter at least two inches from the bottom, so as to have room to scrape out the dead bees frequently.

C. F. Muth will continue to use a second story in wintering, then bore inch holes in the ends of the upper story, so

as to give a free circulation of air above the packing.

J. C. Pedon, Lawrenceburg, Ky., approved of Mr. Muth's suggestions; he gave several interesting illustrations in proof of his views.

A paper from W. Thomas, Adelphi, O., entitled "Dysentery in Bees and Its Causes," was then read.

T. F. Bingham, Mich., asked Mr. Poppleton if his bees did not breed in winter?

Mr. Poppleton answered that they might breed a very little, but not enough to do harm.

G. W. Demaree, Kentucky, inquired of Mr. Poppleton if he handled his bees in January.

Mr. Poppleton answered that he did not. He prepares his bees in the fall by packing on the summer stand. Formerly he wintered them in a cellar, but his losses in that way were too heavy, and he adopted the outdoor method, since which time his losses have been very trifling, not exceeding four per cent. When prepared in the fall, they are not disturbed until they can work with safety in the spring.

Dr. N. P. Allen, Kentucky, stated he had but few cases of dysentery among his bees last winter, and these cases he attributed to the fact that the hives containing the affected colonies were shaded all winter; he thought dysentery was the result of cold and dampness, and was now convinced the hives should stand in winter where they would get all the sunshine.

Rev. L. Johnson, Kentucky, thinks bees can usually be revived after several hours apparent death, except where dysentery has been the cause. Mr. Johnson cited several instances where he had resuscitated bees apparently dead from cold and drowning.

C. F. Muth corroborated Mr. Johnson's views.

F. Della Torre, Maryland, claimed that dysentery was directly attributable to excessive moisture in the hive. Sulphureted hydrogen is caused by the dampness, and this is a deadly poison; however, this can be overcome by several chemical agents, among which is quick-lime (unslacked lime).

Miss Mary Nottnogel, Lexington, Ky., a beautiful little girl of 7 years, delivered a short recitation on the honey bee, and was decorated a member of the North American Bee-Keepers' Society, by President Cook, in an eloquent little address.

A paper from W. T. Stewart, Eminence, Ky., on "The Cultivation of Honey Plants," was then read.

On motion, adjourned until 9 A. M.

FRIDAY, OCT. 8.

MORNING SESSION.

Mrs. Harrison, Ill., offered the following resolution, which was adopted:

Resolved, That the President and Secretary be empowered to issue life-membership certificates to all bee-keepers they may approve, upon the reception of a fee of $10 for such membership, without further annual dues.

The following was adopted:

Resolved, That a committee be appointed to prepare a pamphlet containing statistics of the honey crop, and general information about exhibits of bees, honey and apicultural implements at fairs and expositions, and advice about the best way of conducting the same; said pamphlets to be supplied to the Vice Presidents and others, and that the committee have power to draw on the Treasurer of this Society for all necessary expenses.

The President appointed the following gentlemen for said committee: T. G. Newman, Ill.; C. F. Muth, O.; Dr. J. P. H. Brown, Ga.; D. A. Jones, Ontario, and Dr. L. E. Brown, Ky.

Essays were then read from D. A. Pike, Smithsburg, Md.; T. G. Newman, Chicago, Ill., and T. F. Bingham, Abronia, Mich., which we are obliged to omit for the present.

C. F. Muth, Ohio, then read the following letter, which he had just received:

OXFORD, O., Oct. 5, 1881.

Dear Friend:—I am very sorry that I could not be with you at the convention—but I grow worse instead of better.

In this week's *American Bee Journal* there is a strange mistake about a hive sent from Greece to Mr. R. Colvin. It is a regular Berlepsch hive, and contained a Grecian colony, which died on the passage. Mr. Colvin did not keep bees until some years after my patent was issued, and this Berlepsch hive did not reach him until some time after he had imported Italian bees. These facts are sufficient to show how greatly mistaken Mr. Robinson is in this matter.

L. L. LANGSTROTH.

Mrs. L. Harrison, Peoria, Ill, contributed a paper which was much applauded, entitled

Suitable Employment for Women.

Bee-keeping, although a laborous employment, demands no great outlay of strength, at one time. It embraces the performance of many little items, which require skill and gentleness, more than muscle The hand of woman from nature, habit and education, has acquired an ease of motion, which is agreeable to the sensibility of bees, and her breath is seldom obnoxious to their olfactories, by reason of tobacco or beer.

Women have demonstrated, that the making of

hives and surplus boxes is no objection, as they have purchased them in the flat, nailed and painted them. The hiving of swarms is neither more difficult nor dangerous, than the washing of windows or milking. The right time to extract honey, or to put on or take off surplus boxes, requires no more tact or skill to determine, than the proper fermentation of bread, or the right temperature of the oven required for baking. She is in her allotted sphere while raising queens and nursing weak colonies, or caring for the honey when off the hive.

The most powerful argument in view of the suitableness of bee-keeping for women is this: That it is something she can do at home, and not interfere with her domestic duties. Many women of small means have young children depending upon their exertions for support, and remunerative work to be performed at home, brings very little in the market of to-day. For instance, the making of overalls at 5 cents a pair, and shirts at 50 cents per dozen. She is compelled to accept less pay than men, for the same service performed. We had a friend, chosen as principal of a school on account of her efficiency, but was compelled to accept lower wages than her predecessor, who was a man, and dismissed for his incompetency. But we have never found a dealer unscrupulous enough to offer less for a pound of honey, because it was produced by a woman.

T. G. Newman, Ill., expressed himself as fully in accord with the views so concisely and ably expressed by Mrs. Harrison. The paper was a model in this respect.

C. F. Muth, Cincinnati, Ohio, then addressed the Convention on "Foul Brood Among Bees."

Dr. E. Parmly, N. Y., offered the following, which was adopted:

Resolved, That the thanks of the Convention are tendered Mr. D. A. Jones, of Ontario, for the valuable information he has so freely imparted, and the interest he has awakened in the present and former meetings by giving his experience and views on so large a range of topics.

Rev. L. Johnson paid an eloquent tribute to the Convention.

J. C. Peden extended an invitation to the members to visit him at his home in Lawrenceburg, Ky.

Judge Andrews addressed the Convention on fall honey in Texas.

A communication from E. E. Hasty on "The origin of our present races of bees," was read.

A communication was read from C. H. Lake, Baltimore, Md., describing his "old reliable" bee hive, now on exhibition.

Dr. Dillard, of Lexington, Ky., was invited to address the Convention. The Doctor, in response, said he was not now engaged in bee-keeping, but anticipated he would be again, as he did not know how he could get along without bees.

The committee on exhibits made the following report:

C. F. Muth, Cincinnati, Ohio, shows two fine all-metal honey extractors of his own manufacture, which for style and workmanship appear to be very complete.

J. M. Davis, Springhill, Tenn., shows a honey carriage, which is so perfect in all its parts that any bee-keeper who runs for extracted honey cannot afford to do without it.

Charles H. Lake, Baltimore, Md., shows his Old Reliable double-wall hive, accompanied by an explanatory letter.

C. H. Deane, Mortonsville, Ky., shows the Star Chaff hive, so perfectly arranged in all its parts that no one can fail to be struck with its wonderful completeness; also a division board and feeder combined; he also shows a new feature in connection with section-storing, which surpasses anything of the kind in connection with a Langstroth hive, either one or two stories; the case holding the sections has no top bar, and they are so arranged that they can be tiered up either in the top story or in the body of the hive, and combines all the necessary arrangements simple and complete.

Mrs. Frances A. Dunham, Depere, Wis., exhibits one of her celebrated comb foundation machines.

T. F. Bingham shows a fine display of his unrivalled smokers; also some of the Bingham & Hetherington uncapping knives.

J. M. C. Taylor, Lewistown, Md., shows a very fine Italian queen; also a beautiful albino queen with handsome bees.

D. A. Pike, Smithsburg, Md., exhibits some handsome Italian and albino bees, also a Syrian queen mated with an albino drone.

Dr. J. P. H. Brown, Augusta, Ga., shows some beautiful Cyprian and Syrian bees; also some crosses between Cyprians, Syrians and Italians, proving clearly that he exercises great care in breeding.

D. A. Jones, Beeton, Ont., exhibits four fine Syrian and five Cyprian queens; also two Italians crossed with Cyprian and Syrian drones on his bee islands.

T. G. Newman shows the fifth edition of "Cook's Manual of the Apiary," revised and improved, containing valuable information for the bee-keeper, whether novice, amateur or specialist; none can afford to do without it. Also, the "American Bee Journal" in its proposed new form for 1882, which is the only weekly bee paper in the world devoted exclusively to bees and honey. It should be a welcome visitor to every lover of bees. Mr. Newman also exhibits "Bee Culture," of which book he is the author; also "Extracted Honey," by Chas. & C. P. Dadant.

G. W. Demaree, Christiansburg, Ky, shows a very excellent feeder; also an ingenius invention for leading bees out of the honey house.

C. F. Muth, Cincinnati, O., exhibits one of the safest and most valuable shipping queen cages yet brought before the public.

C. H. Lake, Baltimore, Md., has on exhibition a Dzierzon-Berlepsch bee hive, which was presented by King Otto, of Greece, to Mr. R. Colvin.

A. C. Cunningham, Salvisa, Ky., shows a number of packages of honey in glass, which are very attractive. No one can fail to be struck with the superiority of his honey, it being so thick and delicious that Kentucky honey in the future must take a front rank in the market, both as to quality and price.

Dr. N. P. Allen presents a number of samples of comb foundation of various thicknesses, adapted to different uses in the hive, all superior of its kind both as to color and purity of material, mostly made on the machine invented by Mrs. F. A. Dunham, Depere, Wis., and forwarded to the Convention by Chas. & C. P. Dadant, of Hamilton, Ill.

The BEE-KEEPERS' INSTRUCTOR, the "New England Bee Journal and Home Gazette," and the "Bee-Keepers' Magazine," all of which are valuable aids to bee-keepers, are on exhibition.

On motion, the report was adopted and the committee discharged.

An article was read from Rev. A. Salisbury, entitled,

Cyprian Bees.

After an experience of one year, I must say I am pleased with the Cyprian bee. The attachment springs from no selfish motive, but from a strong conviction that the merits of the race will warrant the estimate. Their beauty is equal to, and will probably excel that of our most beautiful Italians, and the beauty of the latter is never marred by a blood relationship with the former, but rather augmented.

They are good workers, active and industrious, and I am laboring under the conviction that they carry more honey in their sacks than the Italians. My opinion is based on the admitted fact that they are less in size than the Italians when not gathering honey, but when their sacs are filled they compare in size with their rivals.

As a race the queens are evidently possessed of more fecundity than Italian queens. In all great enterprises to be accomplished in a given time, the work is done by the multitude, and not the discouraged few. While white clover continues to bloom so early in some localities, commencing the latter part of May, very few colonies of Italians are up with the times for storing in the boxes at the opening of the harvest, so a loss occurs in getting the first clover honey in boxes, for the want of bees to fill them from bottom to top. Cyprians, with anything of a chance, will be up with the season, and by the thousands will sip the sweet nectar from the snowy fields, and rushing homeward pell-mell, their nervous muscles instinctively move them up-stairs to unburden the heavy load.

It is true, the pure Cyprians are more nervous and easily irritated than the pure Italians, but are not disposed to provoke an attack, but to resent an insult. Most colonies can be manipulated without trouble. They are like all other families of the animal kingdom, they vary in disposition, even as do our own children nursed by the same mother. Yet it is sometimes true, the most irritable member of the family is possessed of more good qualities than all the balance of the household. Little difficulty need occur with the skillful apiarist in running for box honey, but more difficulty is experienced where all the honey is to be extracted.

The bees from a Cyprian mother mated with a pure Italian drone, are large, beautiful, active and quiet, and if bred up to a pure race, I am not positive we might not christian them "Apis Americana." But we will refrain until we get the length of the tongue. Whether the mixing of the races will produce like results remains to be determined, but if not, all the drone combs should be congregated in the hives occupied by Italian queens, and the victory is surely gained. I prophesy ten years will not have passed before those now ready to discard the new races will change their opinions, and not hastily exclude all foreign blood.

D. A. Jones, Ontario, thinks a profitable business can be transacted by Southern breeders and others, in breeding choice drones and selling to queen breeders, especially by shipping North.

Dr. J. P. H Brown inquired of Mr. Jones what experience he had in shipping drones.

Mr. Jones answered he practiced the method in interchanging drones between his apiaries and bee islands. By the use of his perforated metal entrance, drones not desired to mate with queens could be restrained in the hive.

Rev. L. Johnson then read a paper on "Progressive Bee Culture—Past, Present and Prospective," and produced quite an extensive collection of late blooming honey plants growing spontaneously in Kentucky, giving the name of each, and its value for honey-producing.

The Secretary read an essay from C. J. Robinson, Richford, N. Y., on "Wintering Bees in Clamps."

D. A. Jones, Ontario, thinks that some of the points taken by Mr. Robinson in his essay are untenable. Mr. Jones thinks every pound of pollen contained in the combs worth $1.00 in the spring, and he never discriminates against it in preparing for winter. He also thinks a good bee house the best and safest receptacle for winter, and the cellar as next best.

O. O. Poppleton, Iowa, thinks the excellence of no one condition alone will insure safety in wintering bees; but that many favorable conditions are necessary to secure success. He thinks it a preventive of spring dwindling to leave hives packed till the first of May, or later if the weather is unfavorable.

Mr. Jones thinks a great error is committed, by deferring preparations for winter till too late in the season.

C. H. Deane, Mortonsville, Ky., packed his bees carefully, and had no difficulty in wintering, but a neighbor left bees standing with the second story on the hive as the season for honey closed, and they came through as safely and in as good condition as his own.

The committee on resolutions, by their chairman, C. C. Coffinberry, reported as follows:

1. RESOLVED, That this Convention feels deeply grateful to Messrs. Wm. and J. M. Williamson, and their ladies, for their great sacrifice of time, comfort and money to contribute to our pleasure and success.

2. That we cordially thank our co-laborers in Kentucky, and their ladies, for their liberal attendance and assistance in our deliberations.

3. That Mons. E. Bertrand, of Nyon, Switzerland, is tendered our thanks for recognition in his valuable paper, "Bulletin D'Apiculture."

4. That our co-laborer, Herr H. Herbert, Meklenburg, Germany, has our congratulations on his very practical Memorandum Book for the Apiary.

5. That the various exhibits in the honey, bee, queen and implement departments of this Convention have been meritorious, and have added to its interest.

6. That the hotels of Lexington, and the railroads of Kentucky, have our thanks for reduced rates.

7. That, recognizing the power of the press, the papers of Kentucky and Cincinnati, and our cherished bee periodicals, are gratefully recognized for their many courtesies.

8. That the harmony of our present session will form pleasant recollections in the long future.

9. That the officers of this Society for the past year are entitled to our fullest thanks for their successful labors in contributing to our effectiveness as an organization, and which have culminated in this enjoyable session.

Which resolutions were adopted, and the committee discharged.

By paying $10 each, D. A. Jones and T. G. Newman became life members.

On motion, the Convention adjourned *sine die*. A. J. Cook, President.

Ehrich Parmly, Secretary.

Our Contributors.

For the Bee-Keepers' Instructor.

Review No. 6.

GEORGE W. HOUSE.

On account of sickness and death in the family, together with our crop of honey to market, I was unable to send "Review No. 6" in time for the October Instructor.

I shall have to call our editor to account for misquoting me. On page 523 he says: "Friend House says that Doolittle has said enough about bees freezing to death," etc. What I did say you will find on page 514, as follows: "Friend D. has surely said *enough*, that everyone should know his views on wintering, etc." Friend Thomas, re-read and correct.

In regard to my method of introducing queens as referred to by Mr. E. T. Flanigan, would say, I should not want to introduce a queen by that method, into a colony that was queenless. The points gained by the method in question is, the saving in time and labor, and the certainty of success; as the new queen is safely introduced before the colony is aware of their loss of the old queen; furthermore, there is no loss of time in brood rearing. Some time in the future I may send you an article on the subject.

The article on page 517, by Mr. H. L. Jeffrey, as a whole, has my endorsement. From long experience I can most heartily recommend it as worthy of adoption by all interested.

On page 527 the editor in speaking of foul brood recommends Muth's receipt as given in "Cook's Manual" as a cure for this dreaded disease. For good reasons I cannot endorse said treatment, and would advise the inexperienced against the use of *any* treatment, but to destroy by fire the entire contents of the hive affected—bees, honey, hive, bottom board, surplus arrangement, and all that is connected with the apiary.

I do not suppose I should criticise the proceedings of our National Convention, as the various topics were publicly discussed. However, I should like to speak on one or two points in my next. By permission of the editor I will do so.

I have carefully read the article by Friend Doolittle in October Instructor, and would like to ask Friend D. to define what he considers a "normal condition" for a colony of bees in winter. This may settle the whole question, and *perhaps* cause me to disagree with him in some respects. Friend D. on page 540 says: "From this fact that our losses universally occur in the latter part of winter and during spring, in cellars, where it never freezes, as well as elsewhere, and from the above instances given as well as from all my experience, I am led to still believe that bees *do not* come to an untimely end by freezing, but by an exhausted vitality resulting from too long confinement." I must disagree with Friend D. in the above, under certain circumstances. One of the causes attributable to the mortality of bees the past winter in this locality was this: During the early part of November we had warm and pleasant weather, and the bees were scattered all through the hives. Within a very few hours the mercury went down to zero and below, and remained there for some time.—The result was that many bees were caught on the outside combs, and were chilled or frozen before they could gain access to the cluster. This greatly reduced the colonies in numbers, and was a severe blow against successful wintering. Of course many of the colonies lingered till spring, when they succumbed, or died. Now the question arises: Did those colonies come to an untimely end by exhausted vitality resulting from too long confinement, or was the great blow they received by losing a good per centage of bees in early winter by being chilled or frozen to death, the cause of the colonies' death? And were such colonies in a *normal* or *abnormal* condition at the time of the very sudden change in temperature?

It often happens in this locality that we have a somewhat high temperature, or warm spell of short duration, during the winter months. It also frequently occurs that the weather changes quite suddenly during such spells, the mercury running from 40° to 50° above, to 10° below, zero, in a very short time. Under such circumstances, I am of the opinion that the bees thus caught away from the cluster perish by freezing; and when we have two or more such spells, you may invariably count on heavy losses.

Perhaps an explanation of what is called the normal condition of a colony of bees in winter, will settle this question without further debate.

Fayetteville, N. Y., Nov. 14, 1881.

We acknowledge, Friend House, that we did not get your quotation just right, to convey your meaning fully, and yet the word "enough" being italicised was perhaps the cause of our making the quotation as we did. We hasten to make the *amende* honorable, and are glad that you have called our attention to it.

As to criticising the proceedings of our National Convention we cannot see why it would not be perfectly legitimate to do so. If you see, Friend House, where error may be combatted, the truth made more clear or light thrown on any matter of deep interest to bee-keepers, let us have it by all means. We have been so crowded with work that we have had but little time to even read the proceedings, much less to study and digest much that was presented to the Convention. We may, if we can possibly get time, say something in this number of the INSTRUCTOR in regard to some matters connected with the Convention.

We are much pleased with what you have to say in regard to Mr. Doolittle's article. We think your position in regard to bees perishing with cold, dwindling, etc., is perfectly in accordance with the facts and the experience of all bee-keepers in cold latitudes.

For the Bee-Keepers' Instructor.]

How to Extend our Pasturage.

J. H. MARTIN.

There is probably no sweet substance in nature that is secreted so rapidly and extensively as honey, when the plant and the atmosphere are in accord for its production.

At the close of the clover or the basswood yield the apiarist in the midst of his filled barrels and cans, wishes for a continuation of such a flow a little longer and thinks if his yield would only continue as many months as it had weeks he could have a ship load for market. When we consider that our tons of honey are obtained in such a short time, we are lost in wonder, as to where it will come from, and admiration for that insect that rests not until the harvest is over.

It is said that when the requirements of an age demands a new invention that such invention will be brought forth to aid mankind in his onward march. Witness the development of the steam engine, the electric telegraph, and recently the electric light, and soon to be the electric railway.

If the world demands honey and it becomes an article as staple as butter and cheese, then our seasons will be lengthened by the sowing of improved honey-producing plants.

Every apiarist who owns a farm of one hundred acres or more, can extend his pasturage by fitting his farm for the feeding ground for his bees. It is found that plants under cultivation yield much more abundantly of honey than when allowed to grow naturally. If sweet clover will yield honey growing upon the hard roadside what is it possible for it to do if grown on good land? The bee farmer should sow this clover not only by the acre, but upon every highway for miles around.

Alsike clover should also be sown, and here the enterprising apiarist can call to his aid his neighbors. Let him keep on hand a quantity of seed, and induce every farmer within reach of his bees to sow it in place of red clover. By so doing his acreage of blossoms would be increased a hundred fold.

Linden and locust trees should be planted along the highway, and upon the non-productive rocky hill-side that ought never to have been bared to the scorching sun. Your neighbor, if you will help him, will also plant trees for your benefit along his highway.

Buckwheat is another plant of general cultivation, but in many localities it does not produce equal to some root crops or oth er kinds of grain, and but little of it is sown. What we want is an improved buckwheat even better than the silverhull variety, that will pay so well in seed that a greater acreage will be sown.

It is claimed by some that Figwort is the coming plant. There is no doubt of its value under cultivation, but will anything short of many acres of it have the effect of filling our hives ?

We have thus thrown out a few hints for the extension of our bee pasturage, hoping we can soon have a continuous yield of honey from early spring to the time when Jack Frost claims all growing things.

Hartford, N. Y., Sept. 16, 1881.

For the Bee-Keepers' Instructor.]

Fertile Workers.

E. T. ELANAGAN.

I have had this season two cases of colonies with fertile workers. The first one I treated as recommended by Friend House on page 482 July No. of INSTRUCTOR, and with perfect success. In the second case the bees finished the cells, capped them over and destroyed each queen as hatched. I tried again and with the same result. I then determined to try a remedy I found in some one of the bee journals (I can not now recall which), that is to remove the colony having fertile workers and exchange places with a strong colony. I did so, and after waiting one day to give the colony time to kill off the fertile workers I gave them a frame of eggs from my imported queen to raise a queen for themselves instead of giving them a fertile or laying queen. And now comes in the strange (to me) part of the affair. At the proper time for cells to be sealed over I examined the hive, but not a cell was started. On looking further I discovered eggs laid in a systematic manner and brood in several frames of comb, and after a little search I found the queen. Now, the hive removed or exchanged with that containing the fertile workers was occupied by a strong young colony built up from a nucleus, and had a young Cyprian queen, and it was the young queen that was at home with the fertile worker colony, *on her old stand*. It may be asked, how do I know it was the same? and am I sure there was no mistake? I will tell you the facts in the case, and you can judge. When I introduced the virgin Cyprian queen I noticed one wing seemed to be deformed, but as she was just hatched I concluded that I might be mistaken, and would give her a trial, instead of pinching her as I usually do imperfect virgin queens. I examined her twice before she began to lay, by throwing her in the air to see if she could fly, and although one wing was deformed she became fertile and is a most excellent queen. So I am positive she is the queen removed from the stand with the strong colony. But to make "assurance doubly sure" I examined the colony removed (some thirty yards from its former stand) and found queen cells capped, showing conclusively that the queen had left. The strange part to me is not that she went back to the old stand, but that she should have been so readily received by the colony that had the fertile workers. Have any of your readers had a similar experience? If so, please let us hear from them.

I hope Friend House will answer your question in the September No. in regard to introducing queens by his method after they have been some time queenless.

Belleville, Ill., Sept. 26. 1881.

For the Bee-Keepers' Instructor.]

Can Foul Brood be Transmitted in Foundation Made From Infected Combs?

CHAS. DADANT.

Our friend Daniel Kepler, of Napoleon, Ohio, asks this question in the June No. of the INSTRUCTOR, and Mr. S. S. Butler, of Los Gatos, Cal., answers it in the affirmative. He promises to send to the INSTRUCTOR the history of the case of a friend of his, who has *proved conclusively* that the disease is carried in the wax used to make comb foundation.

It is now unquestionable that foul brood is caused by a fungus, a kind of microscopic plant, whose spores, or small seeds, are carried by the bees from one hive to the other. Now, it is equally certain that no plant can endure, without being killed, heat of 212° or the temperature of boiling water. As a proof of this a hive containing foul brood can be made salubrious, and used again without danger, if it is thoroughly washed in boiling water. Such being the case I cannot see how foundation, made with combs having contained foul brood, could contain living spores able to communicate the disease.

The process of melting the combs needs a heat which, at least, is equal to 212°, especially when they are melted with steam. Sometimes the combs are warmed so much that the wax is partly burned.

Every manufacturer of comb foundation, if he wants to make a good and pure article, melts the wax again to purify it, and to give it a clear and bright yellow color, this color being the best test of purity. Then the wax is melted again to make the sheets, before passing through the rollers of the machine. Two of these three meltings reach the temperature of boiling water. The third reaches it sometimes also, although it is not necessary. The spores of foul brood, if existing in the wax, would be unable to stand these meltings, and I would use comb foundation made from foul broody combs, without the least fear of giving the disease to my bees.

We receive wax from every part of the country. We have used the foundation in our apiaries, according to our need of it—one pound to-day, another to-morrow, and so on, taken at random from whatever wax it was made, and will continue to do so, fearless of bad results; for we deem it impossible for the fungi to stand the melting. We have sent foundation to hundreds of bee-keepers, and have not heard of a single case of foul brood produced by our foundation.

I would be glad to see the *conclustve proof* that the friend of Mr. Butler can give of his assertion that it was the foundation which gave the disease to his bees.

Hamilton, Ill., Oct. 5, 1881.

For the Bee-Keepers' Instructor.

How Goes It?

C. W. MITCHELL.

The season of 1881 opened fairly. Bees bred up strong, early, and when they were kept from swarming were ready for the honey harvest. Only about one quarter of the bees in this section of country lived through last winter. Fruit bloom yielded fairly, but not one-half as much as last year. White clover opened early in the season, and held on quite late. Bees stored more clover honey this year than before in eight or nine years. I think basswood was nearly a failure, bees working on only about one tree in ten. At present buckwheat is furnishing plenty of honey. There is an abundance of wild honey plants, such as catnip, mother-wort, golden-rod, etc., so that I think the honey report for this section will be up to the average.

In answer to Mr. House's question, "How do I know," etc., I would ask him how does he know to the contrary? and can he substantiate all of his assertions in the INSTRUCTOR? One at least I will ask him to. I refer to the first page of the July INSTRUCTOR. He says: "If bad food is the cause why did not our bees suffer from dysentery fifteen years ago?" This leads us to the supposition that dysentery was unheard of prior to that time. In his next paragraph he says: "We can trace this cause to the shade of trees." I will put his own question to him here: Why did not our bees suffer from dysentery fifteen years ago, if shade produces it? Was there no shade then? He asks the contributors to "come forward and explain" the "whys and wherefores" of their articles. Why doesn't he set the example by proving that every theory he writes is so? I suppose for the same reason that others do not—there is not room for it in the bee papers, and the readers (generally) do not wish it. I do not, for one. But in no case would I have the "Review" discontinued. I would only say that we are all apt to write so as to convey a wrong impression, and Mr. H. is no exception.

South Britain, Conn., Sept. 1, 1881.

For the Bee-Keepers' Instructor.]

The Apiary.

A. F. MOON.

Since the fall rains commenced bees have been doing remarkably well, and breeding almost as rapidly as in early spring. On the 15th we had a cold wave, lasting two or three days, during which time some swarms commenced to destroy their drones. Breeding had been so rapid that every preparation had been made, with heavy stocks, for swarming.

RAISING QUEENS.

Last spring we made an effort quite early to get out our queens before those from the hybrids did theirs. In this we failed. The season was such that there was sufficient honey to cause bees to breed quite rapidly, and a few swarms came off the last of March. Drones were so numerons that to get purely-mated queens was impossible. In nearly thirty we had only two purely mated. Then we stopped. When the dry season set in and the drones were destroyed we commenced to stimulate for rearing drones from such colonies as we desired to breed from, but by the time we had fairly got them started we found other hives with drones started also. Here again our efforts were almost futile. Had all the hives within the bees' flight been where we could examine them and destroy the drones, we could have been more successful in queen rearing. It is an easy thing to breed queens when honey is abundant, but not an easy job to control fertilization with bees, and the only sure way we know of is to get where no impurely-mated stock exists, or breed by stimulating out of the regular season for drones. If fertilization in confinement had proved a success, what a benefit to man. Mrs. Tupper stated in the National Convention that when the season and conditions were favorable she succeeded more than nine-tenths of the time in securing fertilization

in confinement. But strange as it may appear not another apiarist in the whole country could get them fertilized at all. Others have thought they had discovered a method by which they were going to succeed, but all of them have "like the wind" died away. In all probability they had discovered their mistake. Had this fertilization in confinement been a success with any one, or even to what they claimed it did, it would now be practiced by every intelligent bee-man in America. We are now forced to the conclusion that it never was a success, for we certainly would call it a success if we succeeded half of the time, for then we would be satisfied with the cross we had.

"A LITTLE FAST."

Friend House thinks we are a little fast—perhaps we are. Let us see. In the August number of the INSTRUCTOR we made this remark (it being a reply to Friend House's former article), "that the practical apiarist has nothing to fear 'unless' he made such a fearful blunder as did Friend House's 'world-renowned' queen breeder." But now and then we get a "rubber," which we take easy, and as Cuffee said, "grin and bear it." And as Friend House urges us on to explain, we will endeavor to do so with the kindest of feelings to all:

First, what gave rise to our referring to this matter was, that we were overhauled in another journal for making the statement that we did not breed queens that duplicated themselves every time in color. To this Friend Alley made the sweeeping assertion: "Friend Moon says he does not breed queens that duplicate themselves every time, but *I* do, and hundreds of my customers can testify to it." It will be remembered that we made Mr. Alley an offer of twenty-five dollars each for twelve queens produced from one of his princesses. He was to send her to some reliable breeder for test, but he could not afford to spare one of them, although hundreds of his customers could testify to it, and he bred from no others. Now, Friend House, we are going to be plain, and will put a few questions to you to digest. First, do you believe that there is an Italian queen in existence that will duplicate herself every time in color, any nearer than the "Anglo Saxon" race? Second, do you believe that Friend Alley has such a queen? and Third, do you believe that he would say to the world that he had, and could not prove it? If he is the scientific and qualified apiarist you credit him to be, he certainly knows whether he has such queens or not, and if he has no such queens and thinks he has, he certainly is not a scientific breeder.

Again, if he knows he has none that fills his unqualified statement, and throws these things before the public for effect, can you wonder that honest breeders condemn this conduct? and cry humbuggery! Now, Friend House, which horn of the dilemma will you take? We have had too much mincing of matters set forth as wholesome reading for the novice, and if they expect good light give them good oil. You know how it is done, Friend House.

Again, please don't class us as a rival breeder with the one you please to call the best in the world. He probably raises fifty to our one, if not one hundred, and advertises accordingly. We have sold only two queens this season, yet we are classed as a rival queen breeder with the "best" in the world. We thought to ourselves, well, we are surely getting up the ladder rapidly to be classed with the "best" in the world. Why we cry humbuggery is simply because such sweeping statements, made by an old breeder, have the tendency to lead many astray. Yes, sir! when men lug such things into their articles it has its effect, and when called upon, and six times the price of his queen is offered, not a lisp is heard from him. What will you call it? We call it big humbuggery, and further, don't propose to let such things pass unnoticed, especially when we are assailed. We are determined that we shall clear ourselves in our statements, and the only trouble now existing is that no such queens are to be found, and every practical apiarist knows it. It is much better to come out plainly and own it, than dodge the corners any longer, and we shall follow you until this one humbuggery, at least, is wiped out.

Rome, Ga., Sept 25, 1881.

Question Box.

I will have a quantity of foundation left over from last year. Now, I and others are interested in knowing whether or not bees will accept this old foundation and work it out same as new. If not will it pay to save it for them?

Barton, Md. JOHN MAJOR.

Bees will work out your foundation, but not quite as readily as they will that made from freshly rendered wax. We always have more or less left over, and if used when the weather is hot we fail to see but what it is worked out as thin as any. Do not melt it up, as that will not soften it any. If in sheets pack away

closely in a dark place, and keep from the air as much as possible. If very hard it may be advisable to use it in the brood department.

I see you answer questions in the BEE-KEEPERS' INSTRUCTOR.

1. Will you answer a few for me?
2. Is your whole capital invested in bees, and can you make anything?
3. Have you tried any other business, and does it pay any better?
4. Would you advise me to go into the business on a large scale?
5. How many hives can one person care for properly and do nothing else?
6. Are dollar queens good for anything? A neighbor says they are not.
7. How are they raised? HOOSIER.

1. Certainly.

2. No sir. Not 2 per cent. of our capital is invested in bees. We keep only a small apiary of 30 to 40 colonies.

3. We do not think any other business we ever had anything to do with pays any larger per cent. on capital invested, or even as large when we have a good season, but such a winter as last winter makes the per cent. dwindle down to a pretty fine point.

4. No, not unless you are well posted in the management of bees, and have a good location and a love for the business.

5. A good, smart man ought to care for 100 to 150 colonies, make all the hives, boxes, cases, etc., needed.

6. Yes. Your neighbor probably don't know. For our opinion in regard to dollar queens see INSTRUCTOR, June, 1880.

7. See back Nos. of INSTRUCTOR and other bee journals. Also the several books treating on that subject. Too long for the question box. We send you by mail a paper giving our method.

What controls the sex of the eggs laid by the queen in drone and worker cells? H.
Adelphi, O.

A normal queen, or one that is young, vigorous, and has been properly fecundated, lays drone or worker eggs at will. "The ovaries of the queen are not impregnated in copulation, but a small sac which is situated near the termination of the oviduct, and communicating therewith, becomes charged with the semen of the drone." All eggs germinating in the ovaries of the queen are male and develop into drones, unless in passing the sac before mentioned they come in contact with a spermatozoa contained therein. This the queen (in a healthy condition) is supposed to permit at pleasure. For a full elucidation of the subject, see the "Dzierzon Theory," by the Baron of Berlepsch. Price 15c.

Editor's Corner.

Our subscribers should recollect that all subscriptions are stopped when the time paid for expires, and that if they do not wish to risk losing any numbers they should remit promptly, as we can not guarantee to furnish back numbers.

The November number of the *Bee-Keepers' Guide* comes to us in an enlarged form, and much improved in typographical appearance, although the price remains as before. The *Guide* is a live paper in every respect, and its enterprising editor and publisher, A. G. Hill, is deserving of much success.

Special attenfion is called to the annual meeting of the North-Eastern Bee-Keepers' Association, which takes place at Utica, New York, January 25th, 1882. This Convention, although seemingly designed for a particular section, has generally been of National importance, and should, as far as possible, be attended by bee-keepers from all sections of the country.

We continued a few subscriptions over from last year, giving notice in the Jauuary number that all who did not want the INSTRUCTOR continued should notify us. These subscriptions commenced at various times from January to August, 1881. A few are still running (as no notice of discontinuance has been sent us), and are unpaid for the past year. We hope to hear from all such parties immediately, that there may be a perfect understanding between us. In the future, unless specially asked for, we shall only continue the INSTRUCTOR to the end of the time paid for.

We hereby take occasion to return our thanks to the Ontario Bee-Keepers' Association for the honorary membership ticket so kindly sent us. If at any time we can return the favor, or be of any assistance to the Association in any way,

we are at their service. The ticket, and printed rules and regulations of the Society which accompanied it, are models of neatness and typography, and show that the Association does nothing by halves. Among its members it includes such practical and scientific bee-keepers as D. A. Jones and Rev. W. F. Clarke, and it need hardly be added, is doing a good work in Canada in spreading apicultural knowledge. Long may it live and prosper.

We notice that Mr. J. Smith Head, of Benton, Mo., thinks he has got "fertilization in a nut shell," but is not positively certain, as he says he "will test it thoroughly this coming season." We wish, Bro. Head, that your fondest hopes in this direction may be fully realized, but we fear that it may turn out something like the sure thing so many men have had on starting "perpetual motion," not but what the chances may be better for solving the fertilization question than for the perpetual motion impossibility, yet we fear that it is a matter that will be extremely difficult to be controlled by man. We would say, however, that if you have a hope of success, by all means prosecute your experiments.

We hope our friends everywhere will do all they can for us in getting new subscribers for us to start off the new year with. It shall be our highest aim to make the INSTRUCTOR interesting, reliable and instructive, and thoroughly practical in every way, and we think its record in the past will be a sufficient guarantee of its course in the future. The publishers design to enlarge it, as soon as they will be justified in so doing, to about double its present size, and put the price in proportion. They had hoped to begin it in its enlarged form in January, but present circumstances will not admit of so doing. We would like to hear from our subscribers on this point, as to whether they favor the proposed change or not. We have already had encouragement from several leading apiarists, who are anxious that we should enlarge the INSTRUCTOR, but would like to hear from the rest of our subscribers.

The annual meeting of the Michigan Bee-Keepers' Association will be held at Battle Creek, on the Michigan Central R. R., Dec. 8th and 9th, 1881. Many of the leading apiarists of the country have promised to be present, if possible, among whom are D. A. Jones, C. F. Muth, O. O. Poppleton, T. G. Newman, A. I. Root, J. Heddon, J. H. Townley and W. Z. Hutchison. The President, A. J. Cook, will address the Convention, taking for his subject "Crumbs from the Table of the National Convention." Mr. A. I. Root is also expected to deliver an address, and some twelve or fifteen essays are expected on various bee topics. The Convention promises to be large and interesting. Everybody, and especially all bee-keepers, are cordially invited to be present.

"Extracted honey, 8@8½c. in round lots, to 12½c. in small packages." That is the way the St. Louis market report reads this month, and to the observant bee-keeper it speaks volumes. A difference of fully one-half in price for probably exactly the same quality of honey, and all owing simply to the manner of putting up. It is very plain that the day has gone by (if it ever existed), when honey in barrels, or large packages, will command anything like the price it will if put up in smaller, more attractive packages, and those apiarists who appreciate this fact, and cater to the popular demand, are not slow in reaping their reward. In this world appearances go a great way, and he who puts up his honey in the best manner,—in small tin pails, glass fruit jars or kegs, if extracted, or small sections, packed in medium-sized crates, if comb—neatly labeled and scrupulously clean, is sure to realize top prices.

BEE CANDY.

Should any of our bee-keeping friends have occasion to feed their bees between

this and spring, they will find the following an excellent recipe:

Take 4 parts, by measure, of granulated sugar, and 1 part water. Don't make more than 10 lbs. at a time. Put the ingredients into a large tin milk pan, and set it over a quick fire. Let it boil about 5 minutes, then set the pan into a larger vessel of cold water, or into the snow, and stir briskly till it begins to grow white and creamy. Now have some boxes made the size of the top of the brood nest in your hive, of thin boards, 1 inch deep. Pour the candy into these as quickly as you can, before it gets too hard to spoon. This candy is moist and soft, yet it will not run, and is magnificent food for bees at any time. Turn one of these boxes upside down over the top of the frames of any hive short of honey, and put a thick chaff cushion or several thicknesses of woolen cloth snugly over it, and that hive is safe till the box needs replenishing. Examine all hives about which you have any doubt the middle of the first nice day, when the thermometer is 40° or 45°, and if their honey is getting low give them such a box of candy, and never let a colony starve.

The above is Prof. J. Hasbrouck's recipe as given in the *Bee-Keepers' Magazine* last winter, which we published in the January number for 1881, and now reproduce for the benefit of our subscribers. Be careful to follow the directions closely, and you will be sure to get an excellent bee candy, which is the only safe food to feed bees with during winter, aside from well capped stores of honey, or good sugar syrup.

WHEN WILL THE LIMITS OF THE POSSIBILITIES OF BEE-KEEPING BE ATTAINED?

This is a question that we suppose almost every inquiring, thinking apiarist has often asked himself, and it is one that is difficult to answer—an enigma, in fact. When we look back upon the progress made in Apiculture during the past score of years, and see what giant strides have been made in this science during that time, it seems more like a dream than a realization. The movable frame, extractor and comb foundation have opened an almost illimitable field to the progressive bee-keeper, and it only remains now for him to go on and on toward perfection. To one who has read the reports of our most prominent bee-keepers during the past few years, and noted the large yields of honey secured by them, it would seem that further progress would be almost impossible. And yet nearly every year sees advancement in this direction, and it is hard to tell when the limits of production will be reached. L. C. Root & Bro., of Mohawk, N. Y., have taken from 160 colonies of bees this season, an *average* of 225 pounds of extracted honey per colony, and yet in a letter to us of a recent date they say that "Our latest experience warrants us in saying that the possibilities of bee-keeping are far from being realized." Think of that ye bee-keepers who consider 75 or 100 pounds per colony a good yield. 225 pounds per colony, from 160 colonies, and yet the "possibilities of bee-keeping are far from being realized." Well may we exclaim, "when will the end be reached," for surely, at the present rate of progress, no one can tell.

PLANTING AND SOWING FOR BEE PASTURAGE.

A great deal has been written of late years, on this subject, and much good advice given, and yet so far as our knowledge goes we do not believe that one in fifty of our honey producers has profited by it. That much can be done, by planting and sowing, to increase our yields of honey, we have not the least doubt, and this too in some directions with but little expenditure of time and money. In planting for shade, why not plant honey-producing trees, such as locust, linden, elm, poplar, etc., as they all are nice for shade, and each in its season furnishes fine pasturage for bees. Almost every farm has waste land on which locust may be grown to good advantage, for the sake of the timber alone; and when its value is taken into consideration for its honey producing qualities, it seems strange to us that it is not more largely grown. We know of no more beautiful sight then to pass through a locust grove

in full bloom, with its sweet rich perfume, and tens of thousands of bees humming their sweet music among the beautiful clusters of bloom. Then again there are hundreds of honey-producing plants, many of which can be grown by the road side and waste places, with but slight trouble or cost, that will yield abundantly in their season, which if attended to would prove of great advantage to the apiarist in almost any locality. The time is coming when we must give this mattter careful study, and plant for honey as systematically as we now do for our farm crops. A wide field is here opened up for the careful study and investigation of the apiarist that all honey-producing trees and plants may be properly classed according to their season and their honey-yielding qualities. Whoever may be able to do this the most fully and perfectly will be entitled to the everlasting gratitude of the bee-keeping fraternity.

MOVING BEES SOUTH DURING THE WINTER.

This subject has been agitated more or less of late years, and especially since the severe losses of bees in the Northern States last winter. If by moving bees South during the winter the heavy losses they would otherwise be apt to suffer in the Northern States can be avoided, and the colonies built up populous in early spring, in time to be brought North and commence in force on the early forage, such as fruit blossoms, etc., it is very evident that it would pay the apiarist to do so, providing the transportation charges would be anything within the bounds of reason. No one that we are aware of, however, has taken any active steps in the matter, until recently Friend Kepler, of Napoleon, Ohio, chartered a freight car and shipped his bees all South. He writes us as follows about them.

"We moved 198 colonies of bees from Napoleon, Ohio, to Coulterville, Tennessee, 80 miles up the Cincinnati Southern Railway, from Chattanooga. We started Monday, Oct. 5, and unloaded morning of the 10th. We chartered a freight car, and transferred at Cincinnati. It was very warm at Cincinnati, and we were delayed at several places, but with ample ventilation, and having the hives packed or fastened so they would not slide when jarred by the coupling of cars in making up trains, we were enabled to get them through without the loss of a single colony, or any broken combs. The car cost us $75—nearly 41 cents per colony."

Now, Friend K., we would like for you to keep us fully posted about the result of your experiment. Let us know in the spring what success you had in wintering your bees, in what condition they came through, whether you succeed as well bringing them North as you did taking them South, and all about the financial success of the venture—whether or not it pays. Many bee-keepers will doubtless take a deep interest in the result of your experiment, and we heartily wish that you may have the best of success.

NOVEMBER AND DECEMBER MANAGEMENT.

Owing to moving to our new home and being so late last month in getting out the INSTRUCTOR, we are unavoidably late again this month. It will not therefore be necessary to give any instructions for November. It is reasonable to suppose that bees are generally prepared for winter, and the main thing now is to keep them as quiet as possible. It is not, however, too late yet to protect bees where they have been neglected, if it is done on days when it is warm enough for the bees to be flying nicely. We think, however, that they should not be disturbed at all this late in the season unless there is great necessity for it, as they have waxed their hives to suit them for winter, and should be left as they are, *unless* the necessity is great for disturbing them. No brood scarcely, as a rule, will be reared from now until toward the latter part of January, and in severely cold latitudes much later. This will be the time of repose for bees, if they are comfortable, but if not comfortable they will worry and dwindle, and perhaps cease to be, long before spring opens. During this season of repose, the bee-keeper should be study

ing the business, preparing hives, crates, boxes, etc., for next season's operations. Steps can also be taken in regard to setting out shade trees for their honey qualities, and selections of honey plants made for cultivation for the ensuing year. Remember that everything should be done according to the climate you are in. It is important that all our operations be performed at the proper time. If the climate is very cold be sure that you protect your hives from the cold winds, and occasionally very quietly clean out the dead bees that fall on the bottom boards. This can be done very nicely with a small wire bent at right angles three or four inches from the end. Don't disturb your bees through the winter, but rather than let them starve, feed them bee candy, giving it to them on days that they can fly, if it is possible to do so.

Convention Directory.

1881.

Dec. 8—Michigan State, at Battle Creek, Mich. T. F. Bingham, Sec., Abronia, Mich.

1882.

Jan. 10—Cortland Union, at Cortland, N. Y. C. M. Bean, Sec., McGrawville, N. Y.

25—North-Eastern, at Utica, N. Y. Geo. W. House, Sec., Fayetteville, N. Y.

April 11—Eastern Michigan, at Detroit, Mich. A. B. Weed, Sec., Detroit, Mich.

25—Texas State, at McKinney, Texas. Wm. R. Howard, Sec.

[Secretaries of bee associations are specially requested to send us notices of meetings and full reports, so far as they may be able to do so, as we desire to publish the proceedings of these meetings whenever our space will admit of it.—ED.]

Honey and Beeswax Markets.

REPORTED FOR THE INSTRUCTOR.

New York, Nov. 21.

Honey—Best white in 1 lb. sections, 20 to 22c.; best white in 2-lb. sections, 18 to 20c. Fair white in 1-lb. sections, 15 to 17c. Best dark in 1 to 2-lb. secitons, 12 to 14c.

Large boxes 2c. per lb. less than above prices.

Best white clover extracted, 10 to 12c.; dark extracted, 7 to 8c.

Beeswax—Prime yellow, 23 to 24c.

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

Boston, Nov. 25.

Honey—Comb, 18 to 22c.

Beeswax—25c. CROCKER & BLAKE.

Chicago, Nov. 20.

Honey—Market for this mouth has been active. Values have changed but little. White comb in 1 to 2-lb. sections, 20 to 22c. Dark, 16 to 18c. Extracted, 9 to 10c.

Beeswax—18 to 22c. R. A. BURNETT.

St. Louis, Nov. 21.

Honey—Rules strong with advances throughout entire line. Comb steady at 18 to 22c. Strained and extracted has shown less strength than comb. We quote 8 to 8½c. in round lots, to 12½c. in small packages.

Beeswax—In steady demand at 19 to 20c.

R. C. GREER & Co.

Cincinnati, Nov. 23.

Honey—Demand and supply of comb is limited. It brings 18c. on arrival for choice in small frames. There is a good demand for extracted, which brings 8 to 11c. on arrival, with a good supply on the market.

Beeswax—18 to 22c. C. F. MUTH.

Cleveland, O., Nov. 21.

Honey—Market is still quite active, and all consignments are sold readily, particularly in 1-lb. sections, which bring 22c. 2-lb. sections also sell well at 20 to 21c. Extracted not quite so ready sale at 12c. for 30 to 40-lb cans, and 11c. for ½ barrels.

Beeswax—20 to 22c. We do not buy at these prices, but sell on commission.

A. C. KENDAL.

Books for Bee-Keepers!

COOK'S MANUAL OF THE APIARY is one of the latest additions to bee literature, though by no means least. It is particularly valuable to the scientific bee-keeper (although in part II, under the head of "The Apiary, Its Care and Management," instructions are given that the most inexperienced can understand), as in it Prof. Cook has opened up a hitherto comparatively unexplored field, by giving a full description, illustrated by numerous engravings, of the physical structure of the honey bee. It is fully illustrated, and handsomely printed and bound. Price, in cloth, $1.25; paper, $1.00.

QUINBY'S NEW BEE-KEEPING, by L. C. Root, is a handsomely illustrated book of plain, practical information for bee-keepers, very neatly and substantially bound. Its author follows apiculture as a business—being one of America's most successful honey producers—and is therefore thoroughly qualified from personal experience to impart that information to bee-keepers that is essential to their success. Cloth, $1.50.

The A B C OF BEE CULTURE, by A. I. Root, embraces "everything pertaining to the care of the apiary," arranged in the handy cyclopædia form, and contains much useful information to both the novice in bee-keeping and the experienced. Cloth, $1.25; paper, 75c.

THE BEE-KEEPERS' TEXT BOOK is one of the older works on bee culture. It has lately been re-written and revised by A. J. King, and is now fully up with the times. Cloth, $1.00; paper, 75c.

BEE CULTURE; OR SUCCESSFUL MANAGEMENT OF THE APIARY, by T. G. Newman, presents in a condensed form instructions for the apiary's successful management. Published in English and German. Price for either edition, in paper, 40c. each; per dozen, $3.00.

THE DZIERZON THEORY, by the Baron of Berlepsch, presents the fundamental principles of bee culture, and furnishes a condensed statement of the facts and arguments by which they are demonstrated. Paper, 15c.

HARVESTING, HANDLING AND MARKETING EXTRACTED HONEY is the title of a very neat, thorough and exhaustive pamphlet on that subject, by Charles and C. P. Dadant. Price, 15c.

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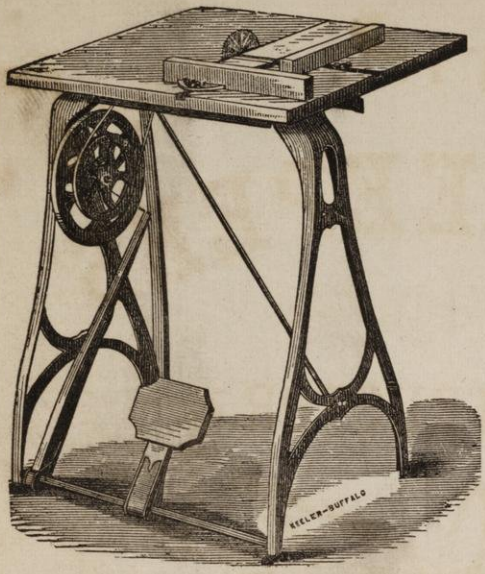

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