



LIBRARIES

UNIVERSITY OF WISCONSIN-MADISON

The bee-keepers' instructor. Vol. IV, No. 6 June, 1882

Somerset, Kentucky: Webster Thomas & Sons, June, 1882

<https://digital.library.wisc.edu/1711.dl/ITTLN65BORRPV8W>

<http://rightsstatements.org/vocab/NKC/1.0/>

For information on re-use see:

<http://digital.library.wisc.edu/1711.dl/Copyright>

The libraries provide public access to a wide range of material, including online exhibits, digitized collections, archival finding aids, our catalog, online articles, and a growing range of materials in many media.

When possible, we provide rights information in catalog records, finding aids, and other metadata that accompanies collections or items. However, it is always the user's obligation to evaluate copyright and rights issues in light of their own use.

VOL. IV.

JUNE, 1882.

NO. 6.

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.

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 in sections, 10 per cent; 9 insertions, 15 per cent; 12 insertions, 20 per cent.

Special rates given on advertisements of 1/4 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 any of our advertisers fail to fulfill their promises at any time, or show a disposition to resort to any sharp practices, our readers will do us a favor by reporting the same to us, and if investigation proves the charges correct, such advertisers will be promptly exposed, and their advertisements dropped. It is our highest aim to make the INSTRUCTOR thoroughly reliable in every respect, and by the co-operation of our subscribers we will be enabled to do so.

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.

FOR SALE!

Just such goods as we used last season in securing the largest yield of honey on record. We make

THE BEST SMOKER

Offered to the public. Send for our circular which illustrates and describes our goods.

We have a fine supply of Alsike clover seed.

L. C. ROOT & BRO.,

Mohawk, - - - Herkimer Co., - - - N. Y.

IF YOU WANT

Italian queens cheap send for circular to

T. S. HALL,

Kirby's Creek, - - - Alabama.

WANTED—To exchange dollar, warranted or purely mated queens for 1000 lbs. of honey. Will deliver queens at your P. O. in good order. Write the price of honey and what kind you have.

E. A. Thomas & Co.

Importers and Breeders of CHOICE

ITALIAN, HOLY LAND,

CYPRIAN AND ALBINO

BEEES AND QUEENS,

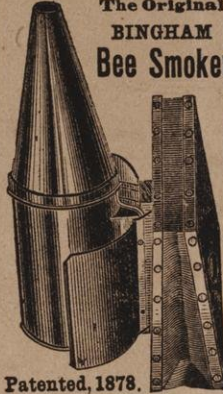
And Dealers in APIARIAN SUPPLIES.

Coleraine, Franklin County, Mass.

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

YES, SIR!

**The Original
BINGHAM
Bee Smoker**



Patented, 1878.

Bingham invented and patented the first practical bellows bee smoker, and it drove all previous makes from the market at once. T. F. Bingham and O. J. Hetherington invented and patented the first improved uncaping knife.

Over 25,000 of our smokers and knives have been sold to the best bee-keepers in Europe and America, and used from one to five years, without a complaint or one being returned. "They are the BEST," so ALL DIS-INTERESTED bee-keepers say. Our patents cover all bellows smokers that will burn

sound stove wood, or do not go out.

If you use, sell or advertise ONLY OUR GOODS, you will be SAFE, and save trouble and money, and complaints from customers.

Judge Andrews, of McKinney, Texas, said to Bingham at the Lexington, Ky., National Convention: "Mr. Bingham, I am glad to meet you. I have been puffing Bingham four years." He meant the smoker, of course, which he has so long and satisfactorily used. He has our knife also.

Having greatly improved our smokers, they will be better and handsomer this season than ever before. Send card for description and testimonials.

"The Conqueror"

The steady and increasing demand for the large smoker, and the frequent requests for a larger one, have induced us to offer to bee-keepers one having a three by seven stove, with a chimney seven inches high and a bellows in proportion.

Large smokers need wide shields to prevent heating the hands and burning the fingers. Only Bingham's have the wide shields, non-rusting springs, spark-proof bellows. All our latest improvements will be in this new size. It will be STRICTLY NUMBER ONE IN ALL RESPECTS.

PRICES.

Conqueror Smoker, wide shield, 3 inch.....	\$2.00
Large " " " 2 1/2 "	1.75
Extra " " " 2 "	1.50
Plain " " " 2 "	1.25
Small " " " 1 3/4 "65

Bingham & Hetherington uncaping knife... 1.25
Sent postpaid on receipt of price. Address

Bingham & Hetherington.

Abronia, Michigan.



D. A. PIKE

Box 19, Smithsburg,

Washington Co., Md.,

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

THE Bee-Keepers' Instructor.

Devoted to Practical Bee-Keeping in All Its Branches.

VOL. IV.

SOMERSET, KY., JUNE, 1882.

NO. 6.

Published the mid-
dle of each month. }

“EXCELSIOR.”

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

Our Contributors.

For the Bee-Keepers' Instructor.

How to Obtain Surplus Comb Honey.

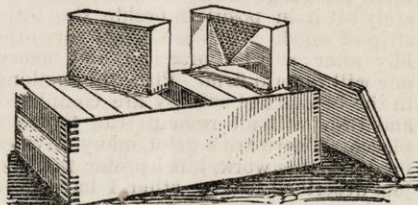
CHAS. H. LAKE.

After an experience of over twenty years with sections and section box honey, or comb honey, I feel that I can give your readers a correct and impartial opinion upon the above subject. During the early days of the Langstroth hive it was then in order to have the surplus honey stored in square boxes holding from five to eight pounds, or six boxes to the hive, each occupying a position over a hole cut through the honey board, through which the bees had to pass to reach the surplus storing room. These boxes would hold three and four combs, and pollen would be stored with the honey, and in consequence would injure its sale.

From this the square, two-comb, four-pound box, with four sides of glass, was tried to remedy the evil, but with like success as a general thing, although many times a fine crop was secured in this form. But the demand for a smaller package led me to adopt the one-comb two-pound glass section, also to be used with honey board, arranged in box—fourteen boxes to the set—which I used for many years with success, and from which the present form I am about to describe emanated. The market called for a lighter and more attractive package without glass, as “consumers had become tired of buying glass and wood for a luxury,” to use the expression of one of our leading grocers, and I accordingly decided to abandon it, and adopt a package to meet the wants of the grocer and consumer. From fourteen sections I doubled to twenty-eight, and used them with the tin and wood separators, brought forward by the late Richard Colvin, of this city, to

whom, I may say, the science of bee-keeping owes more than to any other man, he being the first to import the Italian and Syrian bees, to bring out the sections and separators for both the brood and surplus frames (which are so extensively used by our leading apiarists of the present day), and many more improvements of value of which I might speak.

After abandoning the glass section for two seasons, I had anything but success in getting my surplus honey stored in an attractive form, and fine crops of honey in 1876 and 1877 were nearly ruined by the tin separators, to which nearly every comb had been attached in the clamps, the result being that it had to be cut loose into cans and sold in bulk at less than half price. From my previous management with the glass sections, I hit upon the box and sections here illustrated and described, which is styled by some as the “Baltimore Clamp,” but to which a friend interested in the result of my experiments applied the name of “Perfection Box.” although there are several in the market under that name. From the experience of the last three seasons I can truly say I want nothing better.

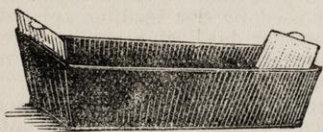


PERFECTION HONEY BOX.

The boxes are made by dove-tailing four rabbetted pieces (which hold the end observing glasses in position) into the sides. A groove is cut along the inside of each side, one-eighth of an inch deep and one-eighth of an inch from the lower edge, into which a strip of tin or

zinc is slipped, and upon this me^gl stands the sections. To the Langstroth hives are used three of the one and one-half pound section clamps, each containing nine sections $6\frac{1}{2} \times 5 \times 1\frac{1}{2}$ inches, or four clamps containing nine each of the $4\frac{1}{2} \times 4\frac{1}{2} \times 1\frac{1}{2}$ one-pound sections. These are placed across the hive from side to side, and the sections are of course lengthwise the hive. Each section I prime with a piece of comb or foundation, from $1\frac{1}{2}$ inch (triangular) to $3\frac{1}{2}$ inch, and fill the center section full, as a ladder for the bees, to run up on, to commence their work.

To attach the bits of white comb, or the triangular foundation starters, to the sections, I use a small tin pan about eight inches long, three inches deep and four inches wide—as here illustrated—containing melted wax and rosin.



DIPPING PAN.

A piece of tin having both edges folded is so arranged that it can be adjusted to any desired depth in the melted wax and rosin, of which I use two parts wax and one of rosin. Upon a small piece of board I fasten a piece of thin wood, three or four inches in length and one in width (three-sixteenths of an inch in thickness is about right); to this piece is nailed another similar piece, which should project over the first one three-quarters of an inch. Under this projection I slip the section, and the center of the top piece—which the foundation is to be attached—will come exact every time.

Dip the edge of the comb or foundation upon the gauge in the wax, and immediately set it in position beside the little strip of wood. They can be set very rapidly after a little practice, and every one will remain firm. Place the sections in the box as fast as they are completed and they will all remain true to their places. There are a great many devices for doing this work, but I prefer the one just described to any other I have ever tried.

The hive must in all cases set perfectly level from side to side, and inclined down from rear to front by placing a two by four inch piece of scantling the four inch way at the rear, and the two inch way in front, which gives it about the right pitch. As the boxes contain no separators whatever, it is of the utmost importance that

these directions should be carried out in order to secure straight and uniform blocks of honey.

After a box has become filled and while the bees are sealing it up, another can be slipped underneath, when all lost time that would occur in leaving it until fully capped will be utilized by having the under box nearly filled. In many cases I have had three full sets on the hives at a time. Another important item respecting the use of this box, and one that should not go by unnoticed, is the fact that the bees will go into them earlier in the season if but one or two are given them at the proper time. I had boxes filled with the most delicious nectar from the fruit blossoms last season. It is a fact that *bees are discouraged by opening over their heads a space large enough to contain twice their numbers*, and many times I have seen them *swarm off* rather than go to work in such a store room; while with the Perfection Box, applied from time to time as their wants demand, ninety-nine out of every hundred will readily go into them and continue to work with uninterrupted energy throughout the honey season, and scarcely a swarm will issue.

This box is made to fit any hive in use, including the old box, or "gum," from which I have seen as good results as are obtained from many of a more modern pattern.

Sunny Side Apiary, Baltimore, Md.

Many thanks, Friend L., for your very practical and timely article, for to many the information it contains will be valuable. The three most important features about your plan in our judgement are, first, its cheapness; second, the bother and expense of separators is avoided; third, room for surplus honey may be given according to the capability of the colony, which is an important consideration. Most arrangements for surplus honey are deficient in this respect, for, if you give the bees any room at all above, you have to give them a case of sections covering the entire top of the hive. In good honey weather with strong colonies, this would be no disadvantage; but with only medium colonies, and honey coming in only moderately fast, we are convinced that there would be a marked difference in the results of the two

plans. But instead of putting in starters only in the sections, we would fill each section *full* of foundation. When properly made foundation is drawn out and filled with honey, it is impossible to tell it from the natural comb, and any one conversant with the subject knows what a saving it is to supply the bees with foundation instead of letting them build comb.

For the Bee-Keepers' Instructor.

Dysentery in Bees.

J. E. POND, JR.

Does such a disease as dysentery exist among our bees? It is true that under certain conditions they are affected with an abnormal discharge, but when we compare this with dysentery as it prevails in the higher order of animals, we find the diseases wholly different in character, and totally unlike. Dysentery in the human being is a disease of the rectum, or lower bowel, characterized by much inflammation, intense pain, and a constant desire to evacuate the bowels, the evacuation being small and generally mixed with blood. In the bee the discharges called dysentery have no such appearance, but are of a dark yellow color, having the appearance of undigested food. This disease, if disease it is, more nearly resembles diarrhea than dysentery, and my view is that the former term is the more applicable of the two. But is it a disease at all? or is it simply the discharging of overloaded bowels, caused by taking too much food at a time when it is impossible for the bees to take a purifying flight? I am inclined to believe that the answer to the latter part of the above question is yes, and shall continue so inclined until better evidence than I have yet seen controverts my opinion.

In the present state of progress in bee culture, we can only reason on these matters by analogy; but analogy amounts to probability, and that which is clearly probable is ordinarily correct. If this discharge is a disease, what causes it? It is of no use looking for remote causes; the immediate cause is what we must find if we expect to work a cure. One cries "bacteria," and assumes that bacteria causes diphtheria, and consequently causes dysentery. Does bacteria cause dysentery? Prove that first and then

the rest will follow more easily. That bacteria exist in an advanced stage of diphtheria is true; but the membrane that clogs the throat in that disease is not *the* disease, but a result of it. So all that is yet proven in regard to the matter is that bacteria exist in advanced diphtheria, but the cause is as much in the dark as ever. Cold may add to the quality of the disease, but when we assume that cold causes it by creating bacteria, we are certainly reasoning from unproved premises. Many diseases exist in mankind caused by malaria, but as yet it is not proven that malaria is bacteria.

But all this settles nothing, and we come back to our starting point, which is—

1. Is there such a disease as dysentery among our bees?

2. Is the disease called such, a disease at all, properly speaking?

In a future article I may follow the matter further, but if closer attention is called by this article to the cause of spring dwindling, my present aim is accomplished.

Foxboro, Mass., May 10, 1882.

For the Bee-Keepers' Instructor.

Developing the Honey Market.

E. A. THOMAS.

A certain eminent writer once said, and said truly, that it required as much skill to properly market a crop as it did to produce it. This is as true of the honey as of other crops, and a careful consideration of the best methods of putting the honey crop on the market should engage the attention of all producers.

It is not my object at the present time to consider what is the best package for comb honey, as the requirements of the market in different places may differ. I will say, however, in passing, that too much stress cannot be placed upon the desirability of the producers always consulting the state of the market before deciding on any package, and endeavor to meet its requirements as far as may be practicable; as the market changes—and that it does change is sufficiently evidenced—so must the package change.

Assuming that the honey crop has been secured in the best marketable shape possible, a succeeding step considers the best method of placing it before the public. I am in favor of placing the crop directly in the hands of the retailers, and I will endeavor to prove the advisability of this course.

A large share of the producers now ship their honey in bulk to the city, which, as they assert, saves them much trouble and expense. This is true as regards the trouble, but, from the view I take of the subject, all added trouble or work will be well repaid. The commission merchant must necessarily make enough on his sales to pay his heavy store rent and clerk hire, and have a surplus left for profit, or he could not afford to carry on the business. Now all this expense of the middlemen, such as clerk hire, store or salesroom rent, and the expenses of salesmen who travel round and wait upon the retailers, must come out of the producer; to this list of expenses should also be added the profits of the business, which is not generally very small. In view of the above facts, why will it not pay the producer, who, at the close of the honey season has but little to occupy his time, to set up a little commission house of his own, and send himself out as salesman among the retailers? Even if he can make only two dollars a day, it will furnish business during a dull time, and he can certainly afford to do it rather than lay idle. I have adopted the above plan, and find it works very satisfactorily, having sold in the neighboring city of Springfield at the rate of a ton a day.

Another point to be considered is the care we are enabled to exercise over our honey, and, by placing it in the hands of the retailer in the best possible condition, and instructing him how to take proper care of it, increase his sales, which proves as much to your advantage as to his. And, many times, by imparting a little information regarding the care of comb honey, you can induce many grocers to handle it who would not listen to the commission merchants' salesmen. Thus it will be seen that, by acting as our own salesman, we may put the profits of the middleman into our own pocket, and be in a better position to develop the honey market; and, coming in direct contact with the market, we are better able to judge what its demands are, and, by producing a package that will meet the wants of the consumer, develop it to a still greater extent.

I am aware that some may urge as an objection to this course, the frequency with which many grocers seek to impose upon the producer who endeavors to deal with them. Such an objection will not apply, however, where the producer is posted in regard to the market prices and the state of the market and amount of the crop. Some years since I had an experi-

ence illustrative of this. After showing my samples of honey to a grocer, and giving him my price, he exclaimed:

"I can buy honey for less than that in New York."

"As good quality as that?" I asked.

"Yes sir, just as good."

"Delivered at your store?"

"Yes sir, delivered at my store."

"Net weight?"

"N-no, but the crates don't weigh much."

As I knew the New York market prices, and had quoted him the same, he could not deceive me. This grocer endeavored to make me believe that he could get honey of the same quality and afford to sell it for less than I asked for mine. I told him if he could furnish me with a ton put up in as good shape, delivered net weight, I would take it, and he could have his cash on delivery. After he saw that I was well posted in regard to the honey market and the ruling prices, he ceased trying to beat me down, and gave me an order. Since then he has never questioned my prices, or tried to deceive me in regard to the market. I have met with but few cases of this kind, and I can not but believe that they furnish the exception rather than the rule.

I would recommend those who prefer to ship their crop of honey to the commission merchant to put a printed notice on every crate, giving directions for taking proper care of it. This will prevent its being stored in damp cellars, ice houses, and other unsuitable places. Like Mr. Weed, I have seen lots of fine honey utterly ruined from want of the proper care. Such a state of things not only results in poor returns from the commission house, but also has a tendency to depress the market. A grocer having a lot of sweaty, sour, or worm-eaten honey, will seldom accept any more until that is gone, for as one dealer said, "If I should get any nice honey in the store, I could never sell that at any price." As a result of such a state of things, the honey "hangs," the sales are small, and the customers who do buy become disgusted, and perhaps, judging all honey from that, refuse to purchase more. They also complain to the grocer, he becomes disgusted, and generally declines to handle any more. I am satisfied that one such lot of honey will do more damage to the market than half a dozen fine lots can remedy.

In marketing extracted honey I believe it will pay the producer to put his honey in small packages, ready for the retail trade. The principal argument in

favor of shipping in large casks is that it saves freight, and that the consignee can pack it in smaller receptacles as well as the shipper. This is true, as far as it goes; but did you ever stop to consider that the middleman will charge a handsome per centage for his trouble in re-packing? The producer can pack his honey at home much cheaper than it can be done in the city, and can put any profit accruing from the labor into his own pocket, instead of letting the consignee put it into his.

The views advanced in this article apply particularly to those who have but little to do after the honey season has closed, and can attend to the packing and marketing of their honey themselves; but I believe it will pay the producer to pack his honey for the retail trade, even if he has to hire the work done.

Coleraine, Mass., May 15, 1882.

For the Bee-Keepers' Instructor.

Queens Once More.

W. Z. HUTCHINSON.

I fully agree with Mr. L. C. Root in regard to the importance of good queens. I think I can appreciate their value fully as much as friend Root; but to his "poor foot no horse," and "poor queen no colony," I think might be added, "poor driver no races won," and "poor bee-keeper no honey." Does not friend R. know plenty of bee-keepers who, though they had the best bees in the world, would never have yields of honey equaling those of Doolittle, Elwood, Dadant, and several others that might be mentioned? No doubt the excellence of some strains of bees has helped to secure the large yields that have been reported, but that the bee-keeper, the locality, and an *understanding of the locality* have each played an equally important part, I presume friend Root will not dispute.

Does friend R. think that the bee-keepers of America will obtain better stock, more honey, longer-lived bees, and certain profits, any sooner by the rearing and selling of the so-called "tested" queens at \$2.00 or even \$3.00 each, than they will by the rearing and selling of "dollar" queens? Not one word has friend Root, or any other denouncer of cheap queens, ever written or said against the so-called "tested" queens; queens that are tested in regard to the stripes of their progeny, and nothing more; queens that are not superior to dollar queens except in this

one respect; and in nine cases out of ten the dollar queens turn out to be purely mated, and thus are, eventually, tested queens.

I think that the point made by the editor in his editorial on page 75, in regard to the part that dollar queens have played in the dissemination of Italian blood throughout the country, is exceedingly well taken.

Friend Root, let your mind run back a few years, and see how many new things have been puffed and brought before the public. Among all this mass of novelties a few articles have stood the test of *actual use*, and have been adopted by the masses. After an article has been introduced and tried, is it not sold strictly upon its merits? Now, if dollar queens are such worthless articles, why do the sales go on increasing year after year? Upon this point a prominent breeder of dollar queens writes me as follows: "Is it not a little funny that, while these vigilant defenders (?) of the public are talking so loud about 'worthless trash,' we dollar queen men are quietly raking in the dollars, our business steadily and surely increasing every year, and that we now have on our books names of customers, and good ones too, who have bought queens of us every year since we first advertised queens for sale? I have no doubt that the 'future verdict' will be the same as the present one, viz.: that the dollar queen breeders who deal justly will have as much or more than they can do, and that they are real benefactors in supplying fine bees at prices within the reach of all."

When this queen discussion first began, all the comparisons were made between "dollar" queens and "tested" queens; but it has been so clearly shown that, barring the chances for impure mating, there is no difference between these two classes of queens, that the denouncers of "dollar" queens have been compelled to take up a new line of argument—that of comparing "dollar" queens with choice breeding queens that have been obtained by selection and great care in breeding. Now, that the breeder of "dollar" queens, or the breeder of "tested" queens at \$2.00 or even \$3.00, can "sift" the queens that they send out, I think that no one will dispute any quicker than myself. I do not wish to boast, but I think I *know* something upon this point. The best that the breeders of these classes of queens can do is to stock their own and their neighbor's apiaries with pure Italians, rear their queens and drones from the best stock that can be procured, sending

out all queens that show no imperfections, their *customers* doing the "sifting." If a bee-keeper wishes choice stock to breed from, he must either buy dollar or tested queens and sift them, or buy them of some reliable breeder who has "sifted" them, and, in the latter case, he must pay the breeder for the time and trouble of "sifting."

Let us suppose that a bee-keeper wishes to Italianize his apiary, and, in order to do this, he obtains a choice queen, paying, perhaps, \$10.00 for her. From this queen he rears queens and introduces them to his colonies. Now then, is not his apiary stocked, virtually, with the dollar queens of commerce? Are they any better than he could have bought of a reliable and experienced breeder, who bred from equally as good stock? In both cases the queens would probably need "sifting."

Friend Root, you have had much experience, and, if it is possible for you to do so, I wish you would give us an article upon the best methods of queen rearing. You would be assured of at least *one* interested reader.

Rogersville, Mich., May 28, 1882.

For the Bee-keepers' Instructor.

Review No. 8.

GEORGE W. HOUSE.

Owing to a press of business and promised engagements, I have been unable to continue my "Reviews," but if not too late will answer Mr. Jeffrey's questions on page 4 in the INSTRUCTOR for January in relation to "foul brood."

His first question is, "Do you believe it possible for brood that dies and rots in the cells to leave any contaminating virus to cause trouble?"

Nothing that will cause "foul brood." If such *were* the case, the disease would be raging all over the country from the severe losses of the winter and spring of 1881, when thousands of colonies perished with those very men that keep bees in a reckless way, allowing the hives to remain on the very spot to this day. This reply will also answer the next two questions of Mr. J.'s. He must confine his fourth "question" to the point he has in view if he expects a definite answer.

Following the questions Mr. Jeffrey says: "If I am right, the real foul brood disease is developed when the brood, after capping, dies and rots (and in most cases retains its shape), having a slimy or glutinous appearance when disturbed, being of a yellowish gray, or in some cases

of a brown or greenish color, and giving off a strong odor of decaying animal matter." No doubt Mr. J. is honest in his convictions in calling the above real foul brood, when he *really* does not know what the disease is. I have carefully read the articles in the *A. B. J.* from Mr. Jeffrey on this question, and if his articles express his actual sentiments and experience, I can positively assert that he has never seen or had any experience with the *genuine, malignant* foul brood. Still, Mr. J. claims to be authority on this question because he has been keeping bees twelve years. Well, I think friend J. will change his views in relation to this disease if he continues in the business twelve years longer. After reading Mr. Jeffrey's article, can the reader corroborate his statements, after calling up their past experiences. Why, if such was the case, American apiarists would be in a sad dilemma indeed, and we would have our entire apiaries wiped out of existence by this most dreaded disease.

I can say without fear of successful contradiction that much—yes, *very much*—that we read on this subject is written by those who have never seen a single case of *genuine* foul brood.

For my views on this disease, I would refer Mr. Jeffrey to the article on page 401 of the February number of the INSTRUCTOR for 1881. It is the result of a long and large experience, and can be relied upon every time. Furthermore, it is substantiated by America's most able apiarists.

DOOLITTLE'S CO-OPERATION.

In April INSTRUCTOR, page 52, Mr. Doolittle says: "This last lot was sent to one of the large houses in N. Y., together with a large lot belonging to my neighbors, on the co-operative plan, and as a result account sales have only just come to hand, with prices ranging from 20 cents all the way down to 12, showing that co-operation as regards shipping honey is not *always* the best plan."

I have read this same story in more than one of our journals, and it is quite evident that he is endeavoring to misinform and mislead the ignorant, for reasons best known to himself. Although Mr. D. withholds facts, nevertheless he cannot conceal his real motives in trying to impress upon our minds that co-operation is a failure. Perhaps he sees that this principle, or project, is sure to kill the business of these numerous supply vendors in the near future, and thus despoil the path already paved by himself and others, to reap a golden harvest from

the pockets of the bee-keeping fraternity; or perhaps it is contrary to his principles to submit to anything not originating within himself, or the "ring." From his frequent puffing of himself and business, and judging from his writings, it is an unperverted fact that the real motives of Mr. D. are summed up in two words—self aggrandizement.

Only think of it, a man of his pretensions undertaking to force upon the public ideas that he himself knows to be false. Talk about sending *his* honey on the co-operative plan. Is it possible for a man to be so devoid of understanding as to even *think* that co-operation (as applied) lies within himself, and him alone? Oh, that a kind Providence may yet give unto him light and knowledge, that he may the better understand the benefits and the good to be derived by *united action!*

With the present fictitious competition against our products, it is well that we keep before us that good old adage, "United we stand, divided we fall."

Fayetteville, N. Y., May 6, 1882.

For the Bee-Keepers' Instructor.

Notes from "Golden Crest Apiary."

GEO. COLVIN.

As was reported in the INSTRUCTOR for February I placed 22 colonies in winter quarters—2 Italians, 1 hybrid (black queen mated with Italian drone), and 19 blacks. They were all wintered on summer stands in 9-frame Langstroth hives, with chaff over the frames, except two in box hives which I shall transfer this week. Now for results:

The combs of two late swarms (1st of July) broke down and the bees perished, having no place to cluster. Another, also a late swarm, eat all the honey they had, and one warm day this spring came out, and away they went. Two more, that lost their queens last fall, also perished. Now I had 24 strong colonies at the end of the swarming season last year, and through lack of care lost 5, leaving me 19 this spring to commence the season with. Well, I may learn some time.

This year I have made 25 new hives, bought 1,000 5x5 section boxes, a honey extractor, and a rubber-plate foundation machine. I have 18 strong colonies, covering from 8 to 9 frames each, and 1 small one in which I have raised a queen. The way I came to do this is as follows: Noticing a knot of bees at the entrance of a hive one day, I looked to see the cause,

and found that they had just carried out their dead queen. I at once gave them a frame of Italian brood, and in 14 days they had raised a queen. She is now 7 days old and has not commenced to lay yet, so I have given them another frame of brood and am going to try and make a strong colony of them by the time bass-wood blooms. As to whether I succeed or not I will tell you later.

The season is backward here. Cherry trees are just in bloom, and the spring has been very cold, with frost the 25th and plenty of rain later.

Mr. Balcomb will please accept my thanks for his interesting and useful article on foundation molds.

Dalton, Pa., May 29, 1882.

Now let's see how good a report you can make at the end of the season, Friend C. You have a sufficient number of colonies at present for any one to attend to whose experience in bee-keeping has been limited, and your efforts should be put forth in trying to get some returns from them. No better plan can be adopted than to make the bees pay expenses as you go, if possible. You have done very well so far, and with a little care at the proper time could have done better; but experience is a good school, although some times a dear one, and you can profit in the future by past experience. Run your bees for honey now, and the increase will come as fast as the knowledge requisite to properly take care of them. And by all means, if you are able, buy good dollar queens of some reliable breeder, and Italianize those black colonies. The increased ease and comfort in handling them will alone more than offset the expense of requeening, saying nothing of their superior industry, beauty, etc.

For the Bee-Keepers' Instructor.

Artificial Swarming, and Stings.

J. KLINGER.

This morning about 10 o'clock one of my Italian colonies took a notion to swarm, but after coming out went back again. Perhaps they were afraid of get-

ting frost-bitten, as there was quite a frost this morning. After dinner however I started up my smoker and thought I would do the swarming. Being alone I could not keep the smoker going, and pretty soon they showed a disposition to sting. A small portion of the sleeve of my undershirt cropping out on my right arm, one cross little rascal gave me a prod there, and quicker than you could say Jack Robinson another one punctured me at about the same place, and a dozen more alighted on my arm. I grabbed my smoker, but the fire had gone out, and I had to go and start it up again, after three had stung me; but after lighting it up I smoked them pretty thoroughly, and proceeded to work again. The infuriated bees attacked the same place the second time, and later the third time, but I stuck to the job until I finished it. After I got away I found several of their weapons in my arm. A tingling sensation began to creep up my neck and head, and pretty soon my face began to swell and get red, my eyes began to get red, my pulse ran quite high, and I began to think I had better apply cold water to my head. I did so, and succeeded in this way in stopping the throbbing of my head, and in fifteen or twenty minutes I felt that the storm was over, but not without swelling my face some. Even while I am writing an itching sensation is felt in my head and the upper part of my body.

I do not know how to account for the propensity of the bees to sting only my right wrist, except that the end of a woolen shirt sleeve cropped out a little from under my white shirt. I am more puzzled, however, to account for the effect upon my system. But I try to account for it as follows: About the wrist the veins and arteries lie almost on the surface, and it is likely that one or more stings struck a vein or artery, the poison was infused directly into the circulation, and from the length of time intervening between the stinging and the time the tingling sensation commenced in my head and neck, I am of the opinion that a vein was struck and the blood carried the poison to the heart, and from thence it was carried to the head. It is true I do not remember of ever before getting so many stings at one time, and it may have come from the large quantity of poison infused into the system at once. Be this as it may, it was evidently the application of cold water to my head that arrested the inflammatory symptoms.

Bees seem to be doing very well here, considering the cold weather all along up

to this time. They got a good lot of honey from the fruit blossoms, and but for several rainy cold days they would have filled up pretty well from this source.

I forgot to say at the proper place that I could not find the queen on account of the large number of bees in the hive; but I found queen cells on two combs, and gave the new swarm three combs, containing one queen cell, with the adhering bees, and put the new hive in the old one's place. I prefer putting the old queen in the new swarm, but could not do so this time, not being able to find her.

Upper Sandusky, O., May 17, 1882.

You seem to have met with quite a little experience, Friend K., and all perhaps for the want of having your smoker properly charged. It may have been an accident getting your first sting just where you did, but after that it was natural that the cross little "varmints" should aim for the same place. In stinging, especially when enraged, a strong odor is given off, which seems to excite and attract other bees to the same spot. If after getting your first sting your smoker had been fit for duty, and you had stopped operations for a minute and smoked the stung spot by holding the nozzle of the smoker close to it, you would probably have had no further trouble. It would have destroyed the odor and at the same time done as good a thing as could be done to kill the poison. The nozzle of the smoker should be held as closely as can be borne without burning the skin. Allowing the stings to remain in the arm for some little while was no doubt one of the prime causes of your suffering in this way. It gave full time for the poisonous sacs of the stings to empty themselves in your arm, and in this way an unusual amount of poison was infused into the blood and circulated thro' the system. Stingers should be immediately scraped out with a knife, or removed in some way without taking hold of them with the fingers, as in this way they are *made* to discharge their poison into the wound.

Letter Drawer.

Bees in Tennessee.

Bees here have laid up but little honey so far. Brood rearing is satisfactory and no excessive swarming. Sour wood will bloom in 10 days or two weeks, when I hope we will be able to report more favorably as to surplus honey.

D. KEPLER.

Coulterville, Tenn., June 8, 1882.

The Prospect in New York.

Bees are doing well as could be expected. The season is fully two weeks later than usual. Fruit trees are just in full bloom, but the weather continues cool with high winds and frequent rains. We look forward, however, for a fair crop of surplus honey,

GEO. W. HOUSE.

Fayetteville, N. Y., June 3, 1882.

Condition in Ohio.

Bees wintered excellently, both those packed in chaff and those left as in summer, with top box down and protected on the west and north. Those packed in chaff, and left so yet are swarming, while the remainder are not. Think that the past cold snap did not cause them to cut open the queen cells.

O. A. CORY.

Frankfort, Ohio, May 16, 1882.

Poor Season.

This is the poorest season for bees I ever saw. It has been too cold and wet. I had to feed my bees all through May, and am feeding them yet. But the weather is getting nice now, and I think I can stop feeding to-morrow. You can have some idea of what a time I have raising queens such weather.

D. A. PIKE.

Smithsburg, Md., June 3, 1882.

Rainy and Wet Weather.

It is very cold and wet in this section of country. Bees are not doing anything. I am now feeding four stands to prevent starving. Enclosed you will find subscription to the INSTRUCTOR.

C. H. ELDRIDGE.

Galena, Ohio, May 31, 1882.

A Kentucky Opinion.

The sample copy of the INSTRUCTOR duly received, with which I am glad to say I am well pleased. One thing I especially like is the editorial department.

Your editorial on dollar queens is good and to the point. Your journal is gotten up in the highest style of typography, and is full of original matter, which renders it very valuable. Judging from the number before me you are doing your part well to edit a good journal. Such a one *ought* to be patronized, and you may enter my name upon your books as a subscriber, and send it to me until forbid.

It has at last turned warmer, and bees are doing well, gathering honey from white clover.

J. P. MOORE.

Morgan, Ky., May 31, 1882.

As our readers well know, it is not often that we publish the complimentary things that are said about the INSTRUCTOR, believing that the space they would occupy can be better utilized in some other way. Occasionally, however, we think it well to do so, and therefore give Mr. M.'s very kind letter in a condensed form. If all the bee-keepers of Kentucky would think and *act* as Mr. M. does, we could afford to make the INSTRUCTOR still better than it is now.

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.

Foul Brood, Dysentery, etc.

What is your opinion of the theory that foul brood, dysentery, spring dwindling, etc., are caused by bacteria?
ENQUIRER.

We think it *theory* and nothing more. It may certainly be possible, but we think that those who advocate it do not know any too much about bacteria. This is a subject on which there has been much speculation lately, some learned men supposing bacteria to be the first cause of all diseases in animals, insects, etc. Others combat this theory, and claim that the atmosphere in winter contains but few bacteria, and that dead bodies are almost entirely free from them, while the atmosphere in summer contains millions upon millions, and every dead body is swarming with them. One thing is certain, viz: peach yellows, pear blight, etc., etc., which are supposed to

be caused by bacteria, occur only in the latter part of summer, during very hot weather, when bacteria are in the air in the greatest numbers, and never in winter or early spring, when but few are found in the air and when our bees are dying. From this we would infer that spring dwindling, dysentery, etc., are not caused in the manner you suggest. That bacteria can be found in large numbers in foul brood we have no doubt, but that they are the *cause* producing the disease we, with our very limited knowledge of bacteria, their habits, etc., are not prepared to say. However, we will bring the subject before some of our learned friends at the first opportunity, and will report their opinions for the benefit of the readers of the INSTRUCTOR.

Comb Foundation for Sections.

1. How light should foundation be to be used in sections? That is, how light will it have to be so it cannot be detected from natural comb, after the bees have filled it with honey?

2. Can it be made on the Given press?

3. Did you not make a mistake in his address? I can find no Hoopetown in the list of post-offices.

1. Ten square feet to the lb. is light enough. We have used it as heavy as seven, and not had any fish-bone in the honey. But foundation is so much more perfect than natural comb that an expert can tell at a glance which is natural comb and which is not.

2. Yes.

3. Look again, and you will find we said Hoopetown, not Hoopetown.

You are both a little wrong. The right name is Hoopetown.

Editor's Corner.

Marketing Honey.

The manner and style of packing and the size of package used, both for comb and extracted honey, are matters of much importance to every bee-keeper who desires to realize the largest possible returns from the sale of his product. When the production was limited and honey looked upon merely as a luxury, the manner of marketing it and the style of package used were of comparatively little importance. But the production has increased many fold during the last score of years, and honey is fast becoming a staple article of food in-

stead of a luxury. With this increased supply and demand has come a demand for smaller and neater packages than those formerly used; in fact, the large boxes used almost exclusively a few years ago are scarcely salable now at all.

The size of package used and manner and style of packing having so much influence on the prompt sale of honey at the most remunerative prices, it is self-evident that it will pay every bee-keeper to give special attention to these points. Realizing the advantages to be gained by securing and marketing the honey crop in the most salable shape, we a couple of weeks since sent a number of questions to commission merchants and dealers in honey in New York, Chicago, Boston, St. Louis, Cleveland, Cincinnati and Baltimore, which were designed to draw out the most pertinent information obtainable on the subject. Up to date we have received answers from all except the two last named places. We give them in full below, and hope that the information they contain will be of interest and value to our readers. It has cost us some time and trouble, but we will feel well repaid if it throws any more light on such an important subject:

ST. LOUIS, May 26, 1882.

Your favor of the 26th inst. received and carefully noted. We render you with great pleasure, as nearly as possible, the desired information:

There is really no difference in the value per lb. of honey in packages of 300 to 500 lbs. and packages holding 50, 100 and 175 lbs., when there is a good demand. When the article moves slowly dealers prefer it in the lesser packages, and frequently pay $\frac{1}{2}$ to $\frac{3}{4}$ c. per lb. premium for them.

In 10 and 5 lb. wooden packages and $2\frac{1}{2}$ and $1\frac{1}{2}$ lb. tin packages and 1 and 2 lb. glass jars, the honey is generally held and sold at a higher price (from $\frac{1}{2}$ to 1c. more per lb.), but it sells slowly, dealers preferring to buy the larger packages and put it up in such lesser packages as suits their trade best. We would not advise sending packages containing less than 2 gallons of extracted honey (20 lbs.), and to send small quantities in tin cans, the 2 gallon can preferred.

Comb honey sells best in 1 and 2 lb.

packages. 1½ lb. packages are not wanted, and generally sell at from 1 to 1¼c. less per lb. than the 1 and 2 lb. packages.

All barrels and kegs should be thoroughly cleansed, hoops tightened, and weighed before filling, and the "tare" distinctly marked or branded on the head. Unclean packages, with no tare marked on them are not easily placed. Frequently sale of such is only effected subject to emptying packages and thereby determining the tare, while the tare marked on nice clean packages, from reputable shippers, is hardly ever questioned. The tare should also be distinctly marked on the outside of comb honey.

Extracted honey sells most readily in cold weather, though the sale does not often suffer in warmer weather. We have sold some new extracted honey in barrels, from Arkansas, at 9¼c. per lb. New comb, 1 box, from same State, at 2¼c. per lb. Beeswax scarce at 24 to 25c. per lb.

R. C. GREER & Co.,
Per SCHIEFERDECKER.

CHICAGO, June 2, 1882.

The difference in the price of honey put up in barrels, and that in kegs of 50 to 175 lbs., is little, if any for the general market. That put up in tin pails of from 10 to 1½ lbs. weight, and in 1 to 2 lb. glass jars, sells at from ½ to 1 cent more per lb. than the barrels and kegs—not more than enough to cover the difference in cost of packages.

There is a difference of from 1 to 2 cents per lb. between 1, 1½ and 2 lb. packages of comb honey.

There are demands for all sizes of packages containing extracted honey, while for comb honey there is a profitable demand only for that which is put up in single comb sections holding from 1 to 2 lbs. each.

The apiarists of the North report excellent prospects for the honey gathering.

R. A. BURNETT.

NEW YORK, June 2, 1882.

We are often asked, what is the difference in price per lb. between extracted honey put up in barrels of about 300 to 500 lbs., and that in spruce kegs of 50, 100, and 175 lbs.; also, what is the difference in price per lb. between 1, 1½ and 2 lb. sections. To these questions we reply as follows:

1. Our wholesale trade will pay no difference in the price, owing to the fact that the bulk of extracted honey is used for manufacturing purposes, although we often find dealers who will take 50, 100 and 175 lb. packages in preference to larger ones, at the same price, as they

find them more convenient to handle. Honey put up in 1½, 2½, 5 and 10 lb. tin pails rarely finds ready purchasers, because extracted honey will granulate, and in this condition finds very slow sale. We therefore advise bee-keepers to pack their extracted honey for this market either in firkins holding from 150 to 175 lbs., or in small barrels of about 300 lbs. net. In these packages they are most salable for the general trade, and will bring fair prices. Our experience is that general dealers in honey always prefer to put up small packages themselves, and thus suit their own trade. By this method regular dealers can always place their goods before the public looking fresh, clear and transparent.

2. Comb honey put up in 1 lb. sections, no glass, finds readier sale than 2 lb. sections, besides bringing 2c. per lb. higher price, as long as they remain on the market. As soon as gone, however, the 2 lb. packages sell fully as well as the 1 lb. sections did. By 2 lb. sections we mean that the section should be well filled and glassed, and should not weigh over 2 lbs. gross. Sections weighing 1½ lbs. gross will not sell any better than the 2 lb. sections. We think, as a general rule, that a section measuring 5x5¼ inches, makes a very desirable package and would find very ready sale.

We would advise all bee-keepers to pay more attention to the grading of comb honey, and the gluing of the glass to the sections, as often when showing up the honey to customers the glass drops off completely. This is very often the cause of losing the sale entirely or of having to make an allowance in price on account of the defect. Fault is some times found with prices obtained for honey because some lots have sold for one or two cents per pound more than others. This difference is mostly due to the mistake the bee-keeper makes in grading, and fastening glass to sections.

We could mention several bee-keepers who pay special attention to grading comb honey for market, always making two separate grades of white honey, the result of which is the highest market price for each grade. We notice that parties who complain of prices put up two grades of white honey in one crate, and the result is that their honey sells at the price of the inferior grade only. In a great many cases they also pack mixed grades in the same crate with the best white honey. Mixed honey does not as a rule sell for any better price than a good article of buckwheat, although it has the preference at the same figure.

Mixed honey should therefore always be packed by itself and graded as such.

In addition to care in grading, in order to obtain full market prices, it is necessary to have a neat and attractive crate for shipping purposes. Such a crate should contain 24 1 lb. sections, and weigh from 22 to 24 lbs., or 12 2 lb. sections, weighing the same.

H. K. & F. B. THURBER & Co.,
Per J. M. McCAUL.

BOSTON, May 27, 1882.

Honey in kegs and half barrels sells from $\frac{1}{2}$ to 1 cent higher per lb. than in barrels, and in cans of from 5 to 10 lbs. weight, and lighter, from $\frac{1}{2}$ to 1 cent higher than that in kegs and half barrels. Tins and glass jars (10 lb. tins) sell best.

One pound packages of comb honey sell at from 2 to 4 cents higher than 1 $\frac{1}{2}$ and 2 lb. packages. More 1 lb. packages should be produced. Half lb. packages are also wanted at 2 to 4 cents per lb. more than 1 lb. and 4 to 8 cents more than 2 lb. Glassed sections are not wanted.

The first new white comb honey in 1 and 2 lb. sections will bring a good price here.
CROCKER & BLAKE.

CLEVELAND, Ohio, May 26, 1882.

Your favor of the 25th is at hand. We take much pleasure in answering your several questions, and also add a few thoughts which bear on the subject.

The price of honey put up in barrels of 300 lbs. is about one cent less than that put up in 50 lb. kegs, or about ten cents per lb. The price of 50 lb. kegs is about the same as 50 to 60 lb. tin cans, say ten cents. The 30, 25, 10, 5 and 2 $\frac{1}{2}$ lb. tin cans and pails bring about one cent more, say 12 cents. We give these prices merely as a basis, in order to show about the difference.

The demand for honey in full barrels is very uncertain. It is only bought by manufacturers and large dealers, and such are few and far between. The 50 lb. packages are usually bought by small druggists, and are therefore in better demand. The 30, 25 and 10 lb. packages generally go in the same direction. The packages of 5 lbs. and less are taken by the grocery dealers, and are sold direct to families for table use. This trade of course takes the largest quantity, and can be better depended upon for constant demand. In our opinion it will not be many years before this latter trade will be more fully developed, although it has taken years to wear off the prejudice against strained and extracted honey, especially where candied. The press,

the great moulder of public opinion, is one medium through which this prejudice can be overcome; but the chief means lays in the hands of bee-keepers and dealers themselves, by being honest, putting up only the best qualities and strictly pure honey, with a warrant of purity over the producer's name.

In comb honey there is usually a difference of 1 to 2 cents per lb. in favor of the one pound sections, quality, appearance and condition being equal; besides the 1 lb. sections find a more ready sale. When honey is scarce these differences are often set aside, and thus it transpires that 1 $\frac{1}{2}$ and 2 lb. sections bring the same price as 1 lb.; for it is the duty of the commission merchant to take advantage of such a state of the market for the benefit of his consignee.

Comb honey must be graded all throughout the crate of uniform color, and the sections well filled. Showing the best only on the outside, and filling the interior with a lower grade, works disastrously to the shipper and is not even policy. The more attractive in appearance the honey is, the quicker the sale, and the better the price. Honest grading tells very quickly, purchasers usually leaving orders for the whole of the next consignment of the brand which has pleased them in this respect. Thus it will be seen that while the market may be filled with a fair quality, these special brands find ready sale on arrival, whilst others drag, causing returns to come in slowly.

Another cause of slow returns, for which commission merchants are often unjustly blamed, is the failure on the part of shippers to have the tare of the cases marked on each package. In such instances, when sales are made the tare of the cases must remain unsettled until they are returned for settlement, which often takes weeks and months.

Glass jars we would recommend only for the home market, not for shipping.

Nice new crates, made to hold a single tier of sections, and cheap enough to give away, will be the most desirable package for all concerned.
A. C. KENDEL.

As will be seen from the above, the requirements of the different markets vary considerably, and shippers in packing will have to consult the taste of the market they propose to sell in. We might go on to considerable length and point out these differences, but it would make this already long article much longer, and

it is not necessary, as every intelligent reader can easily see them for himself.

We return thanks to the above commission merchants, for the prompt and courteous manner in which they so fully answered our inquiries.

Late Publications.—*The Century Magazine* for June is one of the most superb numbers of that monthly ever issued, the biographical department being especially rich. It contains a long sketch, illustrated by an elegant frontispiece, of the life of Cardinal Newman, while the concluding article of the series that have been appearing under the title of "Opera in New York" is profusely illustrated by the portraits of over a dozen musical celebrities, accompanied by short biographical sketches of each. All in all, the number is one of rare interest and beauty. *St. Nicholas* is also, as usual, full of good things to interest, amuse and instruct the young. The articles on Longfellow, and the frontispiece representing him as receiving some young visitors, are very appropriate and timely. The Century Co., Publishers, Union Square, New York.

The *Boys' and Girls' Bee Journal* is the title of a new monthly issued by A. I. Root as a supplement or extra of *Gleanings*. The first number, containing 8 pages, was issued in April, and the second, double the size of the first one, in May. We had intended to notice it last month, but forgot it until too late. We hope friend Root's new enterprise may be successful, for the object is a laudable one; but we must confess we haven't an abiding faith in children as bee-keepers. It is a business requiring too much skill, care and watchfulness for many children to succeed at, though there may be a few who will make a success of it.

When you find a cross opposite your name on the wrapper, it is a reminder that your subscription has expired. If the INSTRUCTOR is desired continued a prompt renewal is necessary.

The Queen Question.

We call special attention to the excellent article of Mr. W. Z. Hutchinson in this number of the INSTRUCTOR on the much vexed question of queens. The subject is at present attracting more than usual attention from some of the leading apiarists of the country. All agree as to the importance of having good queens, but all do not agree as to the best method to obtain them. And after the dollar queen men have had their say, and the tested queen men theirs, we must still fall back on the honesty of the queen breeders, or else be cheated in either case. It is just as easy for the queen breeder, if unscrupulous, to send out poor tested queens as poor dollar queens. Formerly a tested queen simply meant one that showed the three bands, and even at the present day this is the only test made by nineteen-twentieths of our queen breeders. As friend Hutchinson says, these queens that are simply tested as to their stripes are of precisely the same class as the dollar queens, are reared in the same way, and are in no respect better except that they may be a little more uniformly of pure blood. But even if more uniformly pure, can we look upon them as any better as honey gatherers, when we know that many of our leading apiarists consider a good hybrid the best bee *for business*?

This question is becoming narrowed down until the public must either accept queens of the dollar queen character, or else they must demand that *all* queens before being sold have at least one year's test, that their qualities may be fully known. It is generally conceded that the best time to rear good queens, except in southern latitudes, is in June or July, or everywhere during the main honey flow. This being the case, the queen could not be fully tested as to all her good and bad qualities until the next season, so that to say the least she would have to be one year old before she could be sent out as a fully tested queen. And

if this year's test (if the breeder was not a man of strict integrity) did not show the queen to possess desirable qualities, she would be as likely to be sent out as though she was an A No. 1 queen. And even if she possessed the desirable qualities, the man purchasing her would have lost one year, or about one-third of the most valuable part of her service. Besides all this, what might prove to be a satisfactory queen to the breeder who knew how to "drive her" might prove to be a very unsatisfactory one to the purchaser, who might be a man with a large amount of egotism and yet who knew nothing about handling bees.

As has already been said, we all want good queens, but we will never get them by simply depending on either the dollar or tested queens, without paying strict attention to the manner in which they are reared, and to the law of selection in both the queens and drones.

We all know, even those with a limited experience, that queens are reared from ten to sixteen days from the time the queen is removed from the hive. There are from five to six days difference frequently in the capping of the queen cells, and a corresponding difference in the cutting out of the queens. Now, the question arises, which are the best—the first or the last, or is there any difference? We know the last hatched are said by some to be the best, but who has tested this matter so fully as to be able to speak out decidedly in regard to it? If a queen cuts out even on the sixteenth day how are we to know, unless by close observation, that the larva was not six days from the egg before the bees commenced to manipulate it?

These and many other kindred questions should enlist the closer attention of the queen breeder. Dollar queens improperly reared by the ignorant or unscrupulous breeder are certainly a great nuisance, and so are the so-called tested queens reared under the same conditions. What the fraternity needs is queens reared by honest men of scientific attainments

and practical knowledge. Friend H.'s article is right to the point, and although the question is one on which much may be said on both sides, we do not see how the tested queen advocates can get around some of his arguments. They are certainly sound and sensible.

To any one wishing to engage in the apiarian supply business, the advertisement of Mr. R. L. Shoemaker in this issue is worthy of special attention. Mr. Shoemaker informs us that his trade this year will amount to about \$20,000, and that he can transfer all his trade and the good will of the business to whoever purchases the building and machinery, or to those who only purchase the machinery, no matter where they move it. He could make use of the building for some other business. The loss of an eye is Mr. S.'s reason for going out of the business, as he does not wish to risk losing the remaining one. Full particulars furnished on application to him. Those writing will please state that they saw the advertisement in the INSTRUCTOR.

For fear that those unacquainted with the subject may misconstrue our advice in the editorial following Mr. Lake's article, in relation to filling the sections with foundation, we will say that the word "full" is only used as a comparative expression, in contradistinction to putting in starters only. Of course the foundation should not quite touch the ends of the section, and should not reach to the bottom by about a quarter of an inch.

In a postscript to Crocker & Blake's letter they say: "How soon could we expect some new honey, and who will send us some?" As they state in their letter that new comb honey will bring a good price there now, it will probably pay those of our subscribers who live within reasonable shipping distance of Boston to send the first of the crop there. Should any of them do so, we would like to hear as to the price realized, etc.

Brood Capacity of Hives, etc.

The size and shape of frames and brood-capacity of hives we believe of much greater importance than is generally imagined. The honey-producing qualities of a hive should be the principal test of its good or bad qualities. It is true that the subject of wintering should not be lost sight of, but this should be of secondary consideration, for what good will it do us to simply winter our bees safely, if we do not get the best results in the way of surplus honey? We have become satisfied of late years, from close observation and experience, that the brood chambers of our hives are too large to secure the best results in surplus honey. We are of the opinion that 1,200 square inches of comb to the hive will give all the space necessary for the brood combs, for if we go much beyond this it frequently requires too much of the best part of the honey season to fill up the brood frames, so that what we might harvest as surplus is lost.

In regard to frames, we believe that one not deeper than the Langstroth is better than one of greater depth, especially in mild latitudes. An extensive bee-keeper here on the Cumberland river tells us that his best results in the way of surplus comb honey have been obtained with a frame only seven inches deep. He has tried all kinds of frames and experimented in this direction to his entire satisfaction.

For ourself, we like a modification of the L. hive, as simple as it can be made, without any honey board, and so constructed that it can be tiered up two or more stories high. We would, however, be in favor of lessening the brood chamber one or two frames. It is a good plan if it is desirable to get them to work early to have a division board, and if the L. hive or any other of equal capacity is used, to leave out a couple of frames to begin with, and insert them when the bees begin to "lay out" for the want of room. This may answer a double pur-

pose, by stimulating them to renewed activity and at the same time prevent swarming. They should be watched however and this done before they take the "swarming fever."

We, as well as Mr. Hutchinson, would be glad if friend L. C. Root could give us an article on the best method of rearing queens. We think it would be appreciated by our readers. We would also like to have his opinion of the relative merits of light and dark Italians. Speak right out, friend R.

If men *will* keep bees without ever paying any attention to them, they make a big mistake by putting them in movable-frame hives. They had far better keep them in the old box hive if they don't intend to handle them any, for they will do far better there than they will in frame hives.

As considerable space is taken up with reports from honey dealers this month, we omit the honey markets. Full report next month, when quotations are of more importance.

From J. P. Moore, Morgan, Ky., comes a neat 4-page queen circular.

Table of Contents.

Our Contributors:

How to Obtain Surplus Comb Honey.....	81
Dysentery in Bees.....	83
Developing the Honey Market.....	83
Queens Once More.....	85
Review No. 8.....	86
Doolittle's Co-operation.....	86
Notes From "Golden Crest Apiary".....	87
Artificial Swarming, and Stings.....	87

Letter Drawer:

Bees in Tennessee.....	89
The Prospect in New York.....	89
Condition in Ohio.....	89
Poor Season.....	89
Rainy and Wet Weather.....	89
A Kentucky Opinion.....	89

Question Box:

Foul Brood, Dysentery, etc.....	89
Comb Foundation for Sections.....	90

Editor's Corner:

Marketing Honey.....	90
Late Publications.....	93
Items.....	93 to 95
The Queen Question.....	93
Brood Capacity of Hives, etc.....	95

W. Z. Hutchinson

Rogersville, Genesee Co., Mich.,

Makes a SPECIALTY of rearing fine Italian queens. All queens bred from imported queens, and from the purest and best home-bred queens, and the cells built in full colonies. No black bees in the vicinity. During June queens will be \$1.00 each; tested queens, \$2.50 each. Single queen after July 1st, \$1.00; six for \$5.00; 12 or more, 75 cents each. Make money orders payable at Flint, Michigan. 6

A Rare Chance!

FOR SALE—One of the largest manufactories of Apiarian Supplies in the world. 35 hands now employed. I want to sell out on account of disability. Here is a rare opportunity for one or two bee-keepers who wish to engage in the supply business. For full information write to

R. L. SHOEMAKER,
Newcomerstown, Ohio.

THE PATRONS' GUIDE

—IS—

PURELY A FAMILY PAPER,

—AND OFFICIAL—

Organ of the National Detective Union.

PUBLISHED WEEKLY AT \$1 A YEAR.

The Guide gives a condensed statement of the progress of agriculture, medicine, education, law, grange, with such other matter as is fit and proper to be read by every mother and child; in every respect it compares favorably with the best journals of the day, while in price it is actually the cheapest.

The Guide is printed on good book paper, neither labor nor expense being spared to adapt it to the daily wants

OF EVERY MAN'S FAMILY.

Sample copies sent free to any address on application. Address

THE PATRONS' GUIDE,
Boyd, Kentucky.

NOW READY!

After this date I can fill all orders for queens immediately. Our queen cells are all

Built in Full Colonies,

And are from the best strains money can buy. There are positively

NO BLACK BEES

in our vicinity, and those purchasing of us will get their money's worth. 3 queens, \$1.00 each; 6 for \$5.00. Tested, \$2.00; 6 for \$11.00. No supplies for sale. Bees by the lb., nucleus and colony for sale cheap.

Local agents wanted to sell grape vines, fruit trees, etc.

F. L. WRIGHT,
Plainfield, Michigan.

WARRANTED Italian Queens,

\$1.00 each; per half dozen, \$5.50; per dozen, \$10.00. Safe arrival by mail guaranteed. My queens are all bred from choice imported and improved stock. 4-page circular sent free to all applicants. Send for it. Address

J. P. MOORE,
Box 27, Morgan, Pendleton Co., Ky.

Money order office, Falmouth, Ky. 6

CALIFORNIA BEE-KEEPING!

The great State of California has but one journal devoted to the bee-keeping industry, and that is the

California Apiculturist,

A nicely gotten up 12-page, 3-column journal, filled to overflowing with truthful facts and information about bees and honey on the Pacific coast, and interesting to bee-keepers everywhere. Subscription price, \$1.00 a year; 3 months, 25c. Before you forget, send for a sample copy to the
67 APICULTURAL PUB. CO., Oakland, Cal.

S. D. McLEAN, Columbia, Tenn., has colonies, queens and nuclei for sale. Send for circular.

REV. W. BALLANTINE, Sago, Muskingum Co., Ohio, breeder and shipper of Italian and Holy Land queens. Send for circular.

MORE NEW IDEAS.

Foundation all ready for business. Every sheet wired and bound around with a light, 1/2 oz. wooden rim, ready to adjust instantly into your frame. No advance in price. 3x5 samples for 6c. Choice Italian and Syrian queens—a new stimulative process practiced.

I also have a new bees' tongue register, measuring to 1-100 inch. Write for particulars and prices.
J. H. MARTIN, Hartford, N. Y.

Bees AND Queens!

I am prepared to fill all orders promptly for

Bees by the lb.,

In Nucleus Hives,

Full Colonies.

I make a specialty of the above. Can also furnish in proper season

Albino, Cyprian,

—AND—

Italian Queens.

Full colonies of bees from \$5.00 to \$12.00, according to quality and condition. Address for prices

E. T. Flanagan,
BELLEVILLE,

"Rose Hill Apiary." St. Clair Co., Ill.

Foundation, Smokers, etc., furnished in quantities to suit, promptly. 112

LOOK! LOOK!

If you want anything in the line of bee-keepers' supplies, such as

HIVES, ONE-PIECE SECTIONS,

FOUNDATION, SMOKERS,

ITALIAN AND HOLY LAND

BEEES AND QUEENS.

Or anything used in the apiary, it will pay you to send for my illustrated price-list. I have the EXCLUSIVE MANUFACTURE of the Combination and

ROYAL BEE HIVES

Which have become deservedly popular.

My prices on queens are greatly reduced from last year.

HENRY DRUM, Adelphi, O.

100 COLONIES

—OF—

BEES FOR SALE!

—ALSO,—

Tested and \$ Queens

—AND—

BEES BY THE POUND.

Send address for prices to

JAMES HEDDON,
Dowagiac, - - Mich.

WARRANTED ITALIAN QUEENS
\$1.00; 6 for \$5.00. Tested Italian queens, after June, \$1.50. Send for circular.

J. T. WILSON,
Mortonsville, Ky.

48

GUNS

OF EVERY KIND CHEAPER THAN EVER.

Rifles, Shot Guns, Revolvers, Ammunition, Fishing Tackle, Seines, Nets, Knives, Razors, Skates, Hammocks, etc.

Large Illustrated Catalogue FREE.

GREAT WESTERN GUN WORKS,
PITTSBURGH, PA.

AGENTS

WANTED! Ladies and Gentlemen, to engage with us to sell several **Useful Household Articles. Profits large. Labor is light. Exclusive territory given.** No competition. Terms liberal. Circulars FREE. Address, **Hewitt Manufact'g Co., Box 868, Pittsburgh, Pa.**

A NEW CURE FOR

POTATO BUGS

AND ALL TROUBLESOME VERMIN.

Safe, sure, cleanly and cheap. Sample Package, Post-Paid, 30 cts. **AGENTS WANTED.** Address, **J. H. Johnston, Pittsburgh, Pa.**

MUSICAL INSTRUMENTS
of all kinds for sale very cheap.
Catalogues free. Address, **RICHARD HULL & CO., Box 868, Pittsburgh, Pa.**

FOUNDATION

WHOLESALE AND RETAIL. Dealers in bee supplies will do well to send for our wholesale prices of foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the U. S. We make **All Standard Styles**, and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes. Samples free on request.

38 **Chas. Dadant & Son**, Hamilton, Ill.

Warranted Italian Queens a Specialty

My queens are bred from choice Imported Mothers. Warranted Italian queens, in May, \$1.25; in June, \$1.10; July and after, \$1.00. Holy Land and Cyprian queens, mated with Italian drones, at the same price. **Be sure** to send for circular giving price of tested queens, and queens by 1/2 dozen and dozen. Safe arrival and satisfaction guaranteed. My queens gave perfect satisfaction last year as far as I have heard.

CHAS. D. DUVAL, Spencerville, Mont. Co., Md.

Head-Quarters

FOR THE

Golden Italians & Original Albinos,

Bees and Queens. Send for Circular.

J. M. C. TAYLOR,

Lewistown, Frederick Co., Md.

WARRANTED

1882.



1882.

PURE ITALIANS,

AND

Apiarian Supplies.

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.

1

BEE-KEEPERS,

IF YOU NEED CHOICE, EARLY, TESTED ITALIAN QUEENS, FOR BREEDING PURPOSES.

IMPORTED QUEENS,

FULL COLONIES,

NUCLEUS COLONIES,

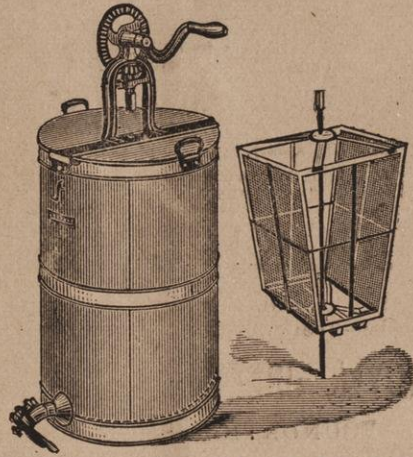
SMOKERS, VEILS,

A hive adapted to the southern climate, the best made Dunham Comb Foundation, in large or small quantity, or anything needed in the apiary, send for my catalogue and price list for 1882, giving directions for introducing queens, and containing remarks on the New Races of Bees. Address

3 **J. P. H. BROWN**, Augusta, Ga.

MUTH'S

Honey Extractor,



Square Glass Honey Jars, Tin Buckets, Langstroth Hives, Sections, etc.

The following from Dr. J. P. H. Brown, well known as one of the best informed and most intelligent apiarists in the U. S., shows what is thought of our extractor by those COMPETENT to judge:

"We believe those who buy this machine will have no cause to lodge complaints of bad workmanship and bad material. When you buy one of those cheap extractors that are only stuck together to last till sold, you are only throwing your money away. Muth's extractor is as cheap as is consistent with good work and good material. It has a large capacity for surplus honey below the revolving basket, which is a great convenience."

Illustrated descriptive circular sent free on application, or enclose 10c, and get in addition my pamphlet entitled "Practical Hints to Beekeepers." Address **CHAS. F. MUTH,** 976 & 978 Central Ave., Cincinnati, O.

Just Received:—A lot of Bokhara clover seed from Europe, which I will sell at the lowest possible prices.

3 12