



LIBRARIES

UNIVERSITY OF WISCONSIN-MADISON

The bee-keepers' instructor. Vol. III, No. 4 April, 1881

Adelphi, Ohio: Webster Thomas & Sons, April, 1881

<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.

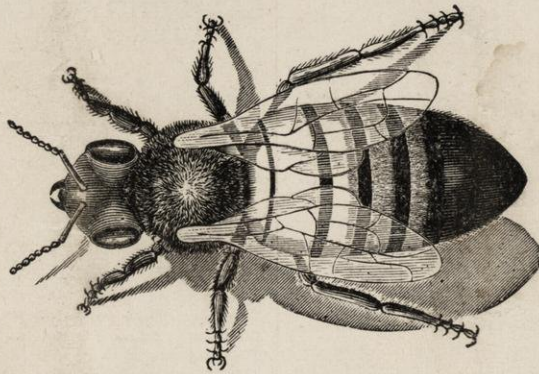
VOL. III.

APRIL, 1881.

NO. 4.

THE BEE-KEEPERS'

INSTRUCTOR.



Webster Thomas, Editor.

CONTENTS.

Review No. 1.....	433	Their Care. No. 3.....	440
What Hive Shall We Use?.....	435	April Management.....	442
Do Bees Freeze to Death?.....	436	Bill Against Adulteration.....	442
Patents.....	437	Spring Work.—Removing Propolis.	
Questions Answered, Etc.....	438	Transfer Wires, Etc.....	443
Melilot as a Honey Plant.....	439	Imported vs. Home-Bred Queens.....	444
Disastrous Results of the Severe		Question Box.....	444
Winter.....	440	Editor's Corner.....	445
Rocky Mountain Honey Bees and		Honey and Beeswax Markets, Etc.....	448

ADVERTISING RATES.

Advertisements of less than 1 inch, 10 cents per line, each insertion. 1 to 3 inches, per inch, each insertion, 75 cents. 9 lines of minion, our advertising type, containing about 8 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 $\frac{1}{4}$ page or over. Send for estimate.

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

ROCKY

MOUNT'N QUEENS.

These have been produced by careful cross breeding of the best Italians from different localities:

Untested Queens (laying)	- - -	\$1.50
Warranted "	- - -	2.00
Tested "	- - -	2.50
Pound of Bees	- - -	1.50

SAFE ARRIVAL GUARANTEED.

Do not Send to Italy. When we Have Better Bees at Home.

Address all orders to

W. M. EGAN,

P. O. B. 543, S. L. CITY, UTAH.

15 ONE-CENT STAMPS

Will pay for our exhaustive pamphlet on raising, handling and marketing extracted honey.

COLONIES WITH

IMPORTED CYPRIAN AND ITALIAN QUEENS,

Of our own Importation, Guaranteed Pure and Genuine. Our **Comb Foundation** was awarded the diploma at the N. E. Bee-Keepers Convention held in February.

SMOKERS, KNIVES, EXTRACTORS, &c.

Price-List, with 3 samples of foundation, free. CHAS. DADANT & SON,
3-8 Hamilton, Hancock Co., Ill.

Grape Sugar —FOR— FEEDING BEES!

Send for our price before you buy.

I L. SCOFIELD,
Chenango Bridge, Broome Co., N. Y.

Queen Breeders' Directory.

Cards of 5 lines or less will be inserted under this head during the remainder of the year for 50c. per line. Over 5 lines, 40c. per line.

L. H. PAMMEL & BRO., La Crosse, Wis., sell Italian queens, comb foundation, Langstroth & Gem hives and Apiarian supplies.

S. D. McLEAN & SON, Culleoka, Tenn. Colonies, Nuclei & Queens. Send for circular.

J. T. WILSON, Mortonsville, Kentucky. Warranted Queens one dollar.

REV. W. BALLANTINE, Sago, Musk. Co. O. Italian and Holy Land Queens.

\$72 A WEEK. \$12 a day at home easily made. Costly Outfit free. Address 3-2 TRUE & Co., Augusta, Me.

SALISBURY & CALDWELL, CAMARGO, DOUGLAS CO., ILL.



Warranted Italian Queens, \$1.00; Tested Italian Queens, \$2.00; Cyprian Queens, \$2.00; Tested Cyprian queens, \$4.00 1 frame Nucleus, Italians, \$4.00; 1 frame Nucleus, Cyprians, \$5.00; Colony of Italians, 8 frames, \$8.00; Colony of Cyprians, 8 frames, \$10.00. Wax worked for 10c. per lb. Pure Comb Foundation, on Dunham Machine, 25 lbs. or

over, 35c. per lb.

Send for Circular.

2-7

\$66 a week in your own town. Terms and \$5 outfit free. Address H. HALLETT & Co., Portland, Me.

S. M. OLDHAM,

Dealer in Apiarian Supplies,

ITALIAN QUEENS and BEES.



Adjustable Hive, Complete.....\$1 25
Bingham Smoker, by mail.....1 00
Alsike clover seed, per lb, by mail.....50
3 " ".....1 25
Sweet clover seed, per lb, by mail.....75
Price-list and hints to beekeepers free on application.

Reynoldsburg, O.

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

THE Bee-Keepers' Instructor.

VOL. III.

ADELPHI, OHIO, APRIL, 1881.

No. 4.

Published the mid-
dle of each month.

W. THOMAS & SON,
Publishers and Proprietors.

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

Our Contributors.

For the INSTRUCTOR.]

Review No. 1.

GEORGE W. HOUSE.

In contributing this series of articles it is my intention to present to the readers of the INSTRUCTOR both sides of the various questions in a just and impartial manner, with none but feelings of the kindest nature, believing that by pursuing such a course it will greatly help us all in getting nearer the *truth* and *real facts*, and thus increase our present knowledge of apiculture. My remarks and conclusions will be based upon an experience of over thirty years, with from 50 to 500 colonies of bees yearly. I am aware that I shall meet with strong opposition on some points, but time and experience will tell who is right, and who wrong. I am not interested in the manufacture or sale of supplies for the apiary in any manner or form, and consequently my opinions are not influenced by any personal considerations.

To commence with I will refer the reader to page 417, where Mr. Jeffrey says: "Another point I wish to touch on is the uncertainty of getting purely mated queens, even if from a good man, unless fully tested." This question of buying queens is an important one, and is at present agitating the minds of many; therefore, let us look into the matter as it really is.

I hold and contend, that it is much the *best* and *cheapest* way to obtain *good* queens by purchasing *warranted dollar queens* from some reliable breeder like Mr. Alley. Now, let us see whether our conclusions are correct or not. The course pursued by our different queen breeders is much the same, therefore we will follow Mr.

Jeffrey through his remarks.

He says that during the summer of 1877 he was rearing queens, and one of his neighbors brought a colony of black bees, full of drones, close to him. That he had 11 queens to mate, that the queens were raised from first class stocks. But with the chances of mismating with the drones of this single colony of black bees he considered them valueless.

Here I wish to ask a few questions: How many colonies of bees did Mr. J. have at the time? Why did he believe that each queen had mated with drones from this one hive? If Mr. J. had an apiary of any account, is it possible that the eleven queens should mate with the drones of this one hive, located outside of his own apiary? If these eleven queens mated with the drones of this one hive, why would not all the queens he raised that summer meet with the drones from the same hive? I think Mr. J.'s remarks based upon suppositions, with the intention of injuring the DOLLAR QUEEN BUSINESS. Perhaps I may think wrong. If so, I am open to conviction.

Again, if Mr. J. considered those queens valueless did he do right in offering them for sale (much less asking 75 cents each). From the tone of Mr. J.'s remarks, the purchaser of those queens seems to have been a novice, and after seeing their progeny, supposed they were pure and all right, because they came from Jeffrey. Considering the queens valueless did Mr. J. sell them without informing the purchaser to that effect? It appears so, and if so, was it square dealing? I fear I should be rather slow in ordering queens from such breeders.

Mr. J. says on page 418: "But I don't believe that any bee-keeper is going to sell his best queens at a very low price, for he cannot afford to." Here the writer hits the nail square on the head.

Again he says: "Raise queens like the old woman did cucumbers: 'Some for the

bugs, some to thin out, and some to keep." In this quotation we have the whole question in a nutshell, and, I believe, the course pursued by the most of our queen breeders. Those queens the breeder *keeps* should be *properly termed* and *sold* as tested queens, and none others. Now the question: How can we procure those queens the breeder wishes to keep? Is it by purchasing so-called tested queens, or warranted dollar queens (those sent out before the breeder has a chance to select out the best)? Tested queens, as the breeder terms it, are those whose progeny proves to be pure Italian. Then of course we must have different grades of *tested queens*, as poor ones, medium or average ones and really good ones, and according to the above quotation it would be, kill the poor ones, sell the medium or average ones, and *keep the best*. I do not believe our queen breeders *even kill* the poor ones, and the question arises: Who gets them? Naturally, the novice or inexperienced.

Then again, if *any* of these best queens ARE sold, who gets *them*? The novice, or inexperienced, or the apiarist that is prominently before the public and a frequent contributor to our journals, thus wielding some influence? The reader can answer for himself. But how are we to get those *queens*; those we would wish to breed from? I will tell you. Purchase a dozen warranted dollar queens from some *good* and *reliable* breeder who makes a specialty of raising queens. *Test them yourself*, and if the breeder understands his business, you will have queens as good as the best. Ninety-nine out of a hundred are well worth the money paid for them, to a practical bee-keeper, during the summer season, while if the novice happens to lose a queen in introducing, his loss is not so great as would be if he paid \$3.00 for her.

The above is our experience in purchasing queens. Reader, does not *your* experience corroborate these statements.

Mr. A. B. Mason, on page 420, says: "There are *good reasons* for believing that a queen does *not* deposit eggs in queen cells, and if I have the inclination in the future I will ask some of our experienced bee keepers, in 'convention assembled,' some questions," etc. Again, near the commencement of his article, he says: "It seems to me that some of our 'big guns' give us more theory than the results of real, practical work." Friend M. is about right in this last remark; but, after

reading his article through, it seems to me as though Mr. M. is finding his way into that class of *theorizers*. If there are *good reasons* for believing that queens do *not* deposit eggs in queen cells, why not present those reasons, and give your actual experience? I trust he will feel inclined to ask those questions through the INSTRUCTOR, where many more bee-keepers may take part in the discussion. Facts are what we want, together with proof of the assertion. If Mr. M. is a practical bee-keeper and a close observer, he *knows* that eggs are deposited in queen cells by the queen. I will accept the suggestion of Mr. M., and will give him \$50.00 if he can prove that the queen *never* lays an egg in a queen cell. I fear Mr. M. is forming hasty conclusions; certainly his remarks are contrary to nature and experience.

On page 421 Mr. J. Klinger thinks if we can devote our whole attention to apiculture, we should produce extracted honey; but if our time must be divided with some other business, to produce comb honey, as the losses will not be so great if full boxes should remain on the hives a few days. Is it not just the reverse of this? Let us see: If we produce comb honey, under the said circumstances, the queen and bees are liable to become blocked in their progress, and from this cause compelled to swarm out. This is likely to occur when our time is devoted to some other business, the swarm thus taking "French leave," which is a loss, while if extracted honey is produced we can supply the bees with room enough to last some time, at least for the length of time he names, without danger of their swarming out, or crowding the colony in their duties. No one should make apiculture a side issue, for he will certainly meet with losses.

On page 423 Mr. B. S. Underhill says: "But to those who would make this national industry a success, there is yet a wide field for study. We refer directly to those diseases which sweep off whole apiaries, the accumulation of years of labor and toil, in a single month."

I am not aware that any such disease ever existed. This statement is highly exaggerated, misleading to the novice or beginner, and detrimental to the experienced apiarist who is in a condition for selling bees. Facts are what we are seeking for. Will Mr. U. explain?

Mr. L. H. Pammel, Jr., on page 424, says: "Until this winter I advocated

wintering on summer stands, but this winter has brought me to the firm conclusion that when we winter on summer stands we run considerable risk, while if wintered in a bee house we are positive of what we have got, and run no risks." The date of his article is March 1st, and he says the bees have had no chance to fly since November. Therefore under the circumstances Mr. P. is incompetent to form *any* conclusions in regard to his success in wintering in a bee house. We would ask Mr. P. to report again May 10th, when he will be better able to learn the actual condition of his bees. During the month of April comes the trying ordeal for bees wintered in a cellar or bee house, unless they have enjoyed purifying flights in January and February. We have given our method of wintering in the form of an essay, which will appear in the INSTRUCTOR in due time, therefore we will not repeat it here.

Again, on page 425, Mr. P. says: "Many bee-keepers claim that it costs them less to winter on summer stands than in the cellar. This I claim is not so;" etc. He then goes on to prove it by giving figures; but we must remember that "paper holds still," and computations can be made that can not be substantiated. The inexperienced or novice should remember this when reading the successes and reports of some of our prominent bee-keepers; they only give the one side. Let us look into the matter as it is: The hives, whether wintered in the cellar or outdoors, should be the same; and cost the same. One man can prepare and pack in chaff, in good shape, for outdoor wintering; as many colonies as he can carry into the cellar and out again; one time. Thus far we have an equal thing. But to winter bees in the cellar they must have purifying flights as often as the weather permits; and the bees will have to be carried out and in the cellar several times. The cost and labor of doing this is all in favor of outdoor wintering. How would the figures appear if Mr. P. had 500 colonies to carry in and out of the cellar, and the most of them away from home? For 25 years I strongly advocated cellar wintering, but my experience in wintering 400 stocks each winter for the past four winters, and prepared in the ways known, has fully convinced me that with proper protection, outdoor wintering is much the cheapest, safest and most reliable way to winter our bees, besides being attended with much less labor and care. I be-

lieve that in the near future our largest apiarists will adopt outdoor wintering altogether.

Mr. P. says, "Let us not be hasty in coming to conclusions," etc. We should be pleased to read an article on this subject two or three years hence.

In regard to the question on page 431, asked at our North-Eastern Convention, and answered by the committee on "Question Drawer;" I would say we concur with the editor in his comments. But it was not the convention that answered the question; as there was no opportunity for discussion. Friend Doolittle was chairman of that committee; therefore I will leave the matter with him to answer. Friend D., explain.

I notice some minor points I should like to speak about, but as this article is already lengthy I will say no more this time.

Fayetteville, N. Y., March 25, '81.

For the INSTRUCTOR.]

What Hive Shall We Use?

JESSE MILLER.

The winter months are gone, and with them many of the bees in this; as well as other localities. Some have starved, others froze, and still others have dwindled away with dysentery, until in some sections of the country only a small per cent. are left. May we not learn lessons of profit from this winter's experience, and will it not help us to decide what hive is the best adapted to protect our bees? Let us see: D. R. lost 8 colonies out of 10; all in box hives; no stores left. E. H. had 3 colonies; all died; one in the "Canada Patent Hive," and two in Langstroth hives; stores left. Dr. T., 8 colonies Italians; all in the "Canada hive," but little honey left. Of a half dozen bee-keepers having the Canada hive but one has any bees left; and he has but one stand. Bees were transferred into most of the hives late in the season, and were not well supplied with honey. Such carelessness and the failure to put on the outer box, so as to reap the benefit of the dead air space between the walls, is no doubt one cause of such dire disaster with these hives. J. B. had 24 colonies; lost 3; one, a *very strong* colony of large Italians, bought of Mrs. Cotton, and kept in one of her "Controllable Hives," which she claims is especially adapted to the success-

ful and safe wintering of bees. This "Controllable hive" has proved to be entirely unfit to winter in, and is a real "clap-trap" for bees. A second very small colony that was in a chaff hive froze, with stores left. Three in Langstroth hives all froze, leaving stores.

Such are the facts so far as we have been able to gather them. Chaff hives have been used with us with the best results. Dysentery has shown itself more with those wintered in bee houses, than with any others. Our motto is "live and learn."

Alliance, Ohio, March, 1881.

Such reports as this, after the dangers of wintering are fully past, are just what we want. This has been a terrible winter on bees, following, as it did, a very poor honey season, and we think that many lessons of profit ought to be learned by comparing the relative merits of hives, methods of wintering, etc. This must be done, however, with great caution, else we may in some instances condemn that which is really good, and approve that which is comparatively worthless. In sending in your reports, notice everything that would have any bearing on the subject, whether favorable or unfavorable, in order that rational conclusions may be arrived at.

For the INSTRUCTOR.]

Do Bees Freeze to Death?

G. M. DOOLITTLE.

As we see much in print at the present time about bees freezing to death, perhaps a little investigation of the matter would not be amiss. Do bees ever (properly speaking) freeze to death? If a person was nearly starving and should start out in search of food, finding none before he became so faint that he could go no farther, and from this lack of food should be obliged to stay where he was exposed to the intense cold of a winter day, until he died, being afterward found dead, and frozen, what would have been the cause of his death, properly speaking? Of course all would answer, lack of food. Now, while it is possible to freeze a per-

son to death who is in good health and has plenty to eat, we nevertheless believe that with these same conditions present *with the bees*, it is impossible, although bees may starve with plenty of honey in the hive, and the person finding them in that condition thinks they have frozen to death. Bees can no more pass from one part of the hive to another with the mercury at 20° below zero, than a person in a nude state could ride in the open air twenty miles, with the same degree of cold. Hence, if there is not plenty of honey within the cluster they must starve, and after starving freezing will be the consequence. Again, bees may get what is called the dysentery, and from soiling the combs and themselves, be unable to withstand a low, freezing temperature in their damp condition, and death is the result, after which they are found frozen. One person asserts, upon examination of a death of this kind in regard to his bees, that they ate or drank so much water that it froze up inside of them and killed them. We are of the opinion that almost anything would succumb if placed in such a situation. However, the truth was that the bees, from some cause or other, were in no shape to withstand the cold. That bees when healthy and having plenty of honey inside the cluster can not be frozen, we proved to our satisfaction a few years ago. We took a swarm one evening when the mercury was below zero, and suspended them from the bottom board about a foot; then we took off the cover and the quilt, leaving the hive entirely open both at the top and bottom. The colony was about a medium one, occupying five ranges of comb. If we recollect aright the mercury marked 12° below zero the next morning and we rather expected to find our bees dead; but upon going to them we found them as good as ever. Since then we have tried a similar experiment, continuing it three days, with the same results. So we came to the conclusion that bees in a normal condition never freeze to death, and believe such to be the case.

We see on page 408 of the INSTRUCTOR for February that Mrs. L. Harrison has trouble with smokers. If she will try one of the Quinby double blast smokers she will have no more trouble. After trying several kinds we have come to the conclusion that the Quinby double blast is the best of all, and have laid all others aside and adopted this one. In those just made there is a screen to prevent sparks

from blowing out, thus removing all cause of anxiety as regards fire, which is quite an item in favor of the Quinby smoker. We use rotten wood for fuel, and never have any trouble about the smoke going out as long as there is fuel in the smoker, and the past season we used a Quinby smoker from morning till night. For a good smoke get wood that has so decayed as to be hard and brittle. The soft light decayed wood does not last any length of time, although it gives a good smoke while it does last. We are in no way interested in the sale of any supplies, so speak our candid opinion. We know many do not agree with our views, and they have as good a right to their opinions as we have to ours. We have simply expressed our opinion, arrived at after a careful trial of several, and do not wish to tread on any person's toes.

Borodino, N. Y., March, 1881.

For the INSTRUCTOR.]

Patents.

JAMES HEDDON.

What is a Patent Right?

This question is not so easy to answer as it may seem at first thought, and although I am not a patent lawyer I will venture to give my understanding of the matter. Our Government has seen proper to grant letters patent for new discoveries, and for mechanical combinations and devices of a new and novel character, and in doing so enters into an agreement to protect the patentee in the exclusive right of his discovery or invention.

One object of this fostering care of the Government no doubt is, to encourage discovery and invention, and this has doubtless had much to do in giving us the railroad in the place of the ox cart of primitive days. The Government, in granting this exclusive right to *Smith*, charges him \$35 for it, and should feel in duty bound to protect him in all his granted rights and privileges.

But to come closer to the question: What is a Patent Right? It is the exclusive right to manufacture, use and sell the patented discovery, and is granted by the Commissioner of Patents, based on the opinion of an examiner of the Patent Office. If, however, it afterward comes to light that *Jones* invented the same device previous to *Smith's* date of invention, then *Smith's* patent is

of no value. If *Jones* makes application, even after *Smith's* patent is granted and the business all closed, dating his invention back of *Smith's*, even to the extent of two years, and proves that poverty prevented him from making application sooner, *Smith* is likely to be the sufferer. In such cases the Patent Office notifies *Smith* that an interference suit is declared against him, which he has got to meet or allow his patent to be taken by default. The patent office virtually says that although *Smith* honestly swore that he believed himself to be the first inventor, and the examiner came to the same decision, yet both were mistaken according to the claims of *Jones*, and now it is *Smith* and *Jones* for it, to see who is the original inventor. This of necessity, because the law declares that an inventor may have two years to privately perfect his invention, to the end that he may not lose his labor by being prevented through poverty from making his application at an earlier day. This is republican.

If the above is correct it is seen that the right of the patentee hangs by a slender thread, and is only based on the opinion of a man, and the ability of said patentee to sustain his claims to his patent. It should be remembered that patents are not allowed upon wood, iron, rubber, or any other material (unless an original compound), nor upon a Wagon, Bee Hive or Locomotive, but upon the device or principle of a novel character, entering into their construction. When John Cheatum comes along with his Patent Swarm-Catching Palace Bee Hive, he will tell you the whole thing is patented. Ask him to read his claims, and he will be almost sure to have forgotten his papers, telling you he left them at home, or else at his hotel where he sold a county right for a couple of good farms. If he should happen to have his papers (with the real blue ribbon attached), and thinks you are not posted, he will likely read the specifications, which are but little more than a description of the model, which may embrace a dozen principles of expired or unexpired patents, any one of which may be worth ten times the value of Mr. Cheatum's. Of course the office at Washington produced a cut of the model, but they presume that Cheatum buys the patented features of Messrs. Genius and Honor before he dares to sell his own, which is only of value when taken in connection with theirs. Whenever any one advertises or in person calls

your attention to a patent, *demand the claims*, for these show it up in its true light. In many cases you will see that you can make the same improvement by using a button in the place of the patented thumb screw, and have an equally good piece of mechanism. Among our peculiar class of implements the Langstroth Hive embraced the most valuable patented principles of any I can call to mind. Please note that every Patent Deed for no more than even an individual right, had printed upon its outside all the claims.

Now, Mr. Editor, I ask it of all the Editors of our apicultural papers that they publish free of charge (upon application) the *claims* of any inventor who advertises in their columns. I also call upon inventors who expect bee-keepers to respect their claims to furnish the editors of our bee literature with the full text of their claims, that the bee fraternity may deal understandingly with patent right men. By making such a call you will see those who *believe* they have valuable claims come to the front at once. The other class will remain in the dark. Let us get the chaff separated from the wheat.

I have no patent or interest in any, though I believe in respecting the rights of those who have, to the full extent of their claims, but no farther.

Dowagiac, Mich., March, 1881.

For the INSTRUCTOR.]

Questions Answered, Etc.

REV. A. HENRY.

Some time since I gave you a section of "My last year's experience with bees" for publication in the INSTRUCTOR, and following it I find a number of questions which you desire me to answer. You ask "what I consider the great cause of the difference in my colonies in favor of the *weak ones*?" I attribute it to the feeding. It was not because those queens were more prolific or their bees better workers than the others, for *no* queen can have a home with me long, unless she is prolific, or her bees good workers. I have taken the heads off of some very fine Italian queens, because their progeny were not good workers. My queens are all of good size and quality, and their bees are also of good size, save those of one queen, which are rather small. The only excuse that I have for

not killing this queen is that her bees are very active; yet I have "frosted my heart" against her, and will supplant her this season. Now if I had fed the strong swarms as I did the weak ones, I do not see why they would not have done equally as well as those I did feed.

To your last question I will only say that if it had been cold—so cold through the month of February that I could not have fed them—I could not have saved them at all. And now I believe I have answered all your questions, briefly, yet fully.

I was pleased this morning to receive the March No. of the INSTRUCTOR. I very greedily devoured Mr. Jeffrey's article, and shall make use of his experience, in part, hereafter.

Winters must have "sat down" on you fearfully hard up there, Bro. Klinger. I fed my bees "allee samee" in February, and they are in a large part doing well. I have made arrangements for gathering honey from the "peach blossoms," too.

Bro. K's. article calls out another point I wish to note, which is the manner of wintering bees. I made me a straw shed for five stands, facing the south, closed at east; west and north, and covered over, thus forming quite a protection for them. Three I left on their summer stands. All eight were about equal in strength when prepared for winter in October, but when I examined them all about three weeks ago, I found the *three* on summer stands still had plenty of stores, but very few bees and *no brood*; and they will require nursing to make them a success this year. I drew two frames of bees and brood from one of the hives in the straw shed yesterday, and gave to one of them as the best remedy at hand.

While my hives standing out got very damp inside; those under the shed kept quite dry, and are nearly or quite as strong as in the fall, and full of brood in all stages of development. After looking through the *three* and then through the *five*, and seeing such different results in the two modes of wintering, I have come to the conclusion to always put all my bees in such a "winter home" hereafter. To satisfy my mind more fully on this subject, I would like to find a swarm in a tree, and cut it *next March*, if Col. Hale would let it alone that long. I would like to inspect a *tree bee* at that season of the year for several reasons. Perhaps the Col. will find one for me.

Yesterday I saw some of my "little busy bees" carrying in their sacks full of something—pollen, I suppose. Where did they get it? If it was not pollen, what was it?

Hallsville, O., March 17, 1881.

We are pleased to have such a satisfactory report from you, Friend Henry, and while so many have lost so heavily are glad that you have been so successful. From what we have seen and heard we presume it was pollen that your bees were carrying in, either from the maple bloom in some favored locality, or from a species of willow that buds out very early. Judging from your report your bees will surely be ready to take the honey harvest at its flood, and secure a rich and sweet reward for their attentive and observing keeper.

For the INSTRUCTOR.]

Melilot as a Honey Plant.

NOAH GILMAN, M. D.

In the Question Box for Jan., A. R. C., of Columbus, O., remarks that much is said about melilot as a honey plant, and that he would like to have a description of it. The conductor of the Question Box replies that he has a little of it, but not enough to test it satisfactorily. In his description of it, among other things he says that it is a perennial plant. In this I think he is mistaken. The plant seems to be but very little known, and among those who do profess any knowledge of it, there is quite a variety of opinions as to its value as a honey plant. In *Gleanings* for Oct., 1877, Alexander Fiddes, of Centralia, Ill., says: "I have raised it for 8 years, and find it the best honey plant raised here. It blooms from May to November, and is black with bees all day long. It grows three feet high. Cultivate same as common clover." In the same journal for Sept. of the same year, J. B. Olmstead, of Bloomington, Ill., says: "Will you inform me as to the value of sweet clover as a honey plant? I find that the bees will leave everything else to work on it, and it blooms here for a month." In answer the editor says: "Friend Townley, when he was here, stated that he once tried $\frac{1}{2}$ an acre of it,

and with cultivation it grew to a great height. It kept the bees roaring for months, choosing it in preference to everything else." With us bees only work on it at times. Should like further reports."

I say that when bees "leave everything else for one particular plant, keep it black all day, and are roaring on it for months, to the neglect of everything else," they find just what they are in search of in the greatest abundance and perfection. The bee is a shrewd insect and means business. He don't go fooling around worthless flowers because they look pretty or smell good. One wink of the eye shows him the best honey plant. His stand-point is different from ours.

In *Gleanings* for Dec., 1877, C. W. Lear, of Utah, says: "You ask for further reports concerning sweet clover. I think if California had as much as Utah, your side of the hills would not have the monopoly of the market this year. Our chief dependence for honey is sweet clover. Let it once get a start in your land and it requires no cultivation, for it will take care of itself. It comes into bloom the last week in June. We pasture our cows on it in summer, and cut it for winter feed. We cut it twice and it gives us two crops of honey, besides two crops of winter feed."

In *Gleanings* for March, 1878, Jerome Wiltse, of Rulo, Neb., writes: "My impression is that sweet clover is a very valuable honey plant. That, with English smart-weed, will furnish a supply in grasshopper years, for they do not touch it the first year of its growth."

Other reports from the West tell the same story about sweet clover. Some time ago I saw an article in the *Bee Keepers' Guide* taken from the *Western Rural*. It was written by a bee-keeper who had cultivated it for many years. He gave the most hearty commendation of it that I have ever seen. He said that he had no seed to sell, but would give a small package to every one that applied as long as it lasted. My own knowledge so fully corroborated his statements that I replied to it through the *Guide*, giving my own experience. Soon after, I had a letter from Missouri, ordering seed to sow an acre. I did not advertise it, but he sent to me because he knew of no other place where it could be obtained. I mention this for reasons which will be made apparent before I close.

Eldora, Iowa, March, 1881.

(To be Continued.)

For the INSTRUCTOR.]

Disastrous Results of the Severe Winter.

J. KLINGER.

From the 12th of November to the present time (Feb 12th), nearly one hundred days, our pets have been bound in fetters of ice without a fly, and thousands upon thousands will never fly again. Fully one-half of the bees in North-Western Ohio are dead, and the remainder greatly weakened. In some cases the stores were short, but very many perished that had plenty of honey. Out of 17 stands I have lost 12. Some of them were short of honey; while others left an abundance. But while my loss is discouraging, I have learned a lesson, though a rather dear one. My disaster began with moving my bees so far, as in their efforts to get out of the hive many got behind the division boards and perished. Two of the hives were not securely closed, and some got out, and of course never found their way back; hence I learned that to ship bees any distance, safely, every point needs to be safely guarded. In the second place I observe that there is some difference in the kind and size of hive they are in. Last summer I took all my honey from seven hives, that were three ft. long, fifteen inches wide, and twelve inches deep. The balance of my hives were a foot shorter, but the same width and depth. From these I took no honey, but from the large ones over two hundred pounds; yet those in the small hives are all dead, while those in the large ones, after giving the surplus spoken of, had honey enough left to winter them over, and all did winter over, except three. I had one colony in an American hive, with old, heavy combs, that came through all right; hence I have learned that to be successful in a severe winter it is best to have large hives. I still think, however, that most of my bees would have wintered all right, if I had given them proper care and attention in the fall. I put no additional covering on them, and did not close up the division boards. Some hives had become so full of comb that I had to take out the division boards, and failed to put them in again. They were also poorly protected on top, and after moving I had hastily set some of them down too near the ground, and the consequence was that

they got too damp to winter safely. But I intend to do the best I can with the five I have left, if they do not perish for me yet. Having been shut up so long they were compelled to void their feces in the hives, and the consequent filthiness may engender disease, that may yet cause me to lose them. I have removed all the dead bees from the hives, however, and given them all the air I could, so as to dry the damp hives, and if the weather should be favorable I think they will come out all right. They shall not want for honey, as I have plenty of well filled combs, so filthy that the honey is of no use except to feed back to the bees.

Now to make the best of this disaster I propose to assort my combs and save all the straight combs, to put into hives that have no bees, giving them a good fumigation with sulphur to keep the moth from them; and, by the way, I will say right here that the smoking with sulphur is the best thing I know of to keep the frames from molding, and in no way hinders the bees from working on them. Save all your fine, well-built combs, as it is better than to buy comb foundation; but reject the drone comb, and save the trouble of having too many drones.

Upper Sandusky, O., Feb. 19, '81.

For the INSTRUCTOR.]

Rocky Mountain Honey Bees and Their Care. No. 3.

W. M. EGAN.

The desire to know when a frame of brood will hatch, is often expressed during the swarming period. If we could but know that a nice, full frame of capped brood would nearly all hatch to-morrow, how handy it would be to build a nucleus or to introduce a queen; in fact, it is very useful to know just when each frame of brood, in each hive, will hatch. This very important and useful result may be accomplished very easily, by a little system through the spring. Of course each one will devise his own system or method; but I will give my method as a guide to the novice:

In a common memorandum book I page off as many pages as colonies, each page corresponding with the number of the colony. I have it understood that all frames shall be numbered from the right hand side of each hive, and that the

lines of each page commencing at the top correspond to the frames of the hive. I then rule seven lines from top to bottom, making eight columns, heading them as follows: Date, honey, pollen, bees, eggs, larva, brood, cells. Then, as I examine each colony in the spring (which I aim to do very early), I note the condition of each frame on its appropriate page and line, under the caption appropriate, using the words, "full," "covered," with the fractions, and "empty," "none," etc.

By following up this note-making every week we can tell almost the exact condition of a colony without looking at it, and if we want a frame of brood or anything else from a hive, we know just exactly where to get it, and the desired result is accomplished.

Now, to make it all plain, I append the following, which will be about the condition of a colony in early spring, if the 10 frames have been left in, just as they were built:

HIVE No. 1.							
Feb. 19 Honey							
No.	Pollen	Bees	Eggs	Larva	Brood	Cells	
1	full	some	none	none	none	drone	
2	alittle	few	"	"	"	mixed	
3	none	none	few	"	"	worker	
4	much	cover'd	$\frac{1}{2}$ full	some	$\frac{1}{2}$ full	"	
5	little	"	out edges	much	"	"	
6	"	"	"	"	"	"	
7	full	"	$\frac{1}{2}$ full	some	some	"	
8	alittle	"	few	none	none	"	
9	"	few	none	"	"	mixed	
10	some	none	"	"	"	drone	

Perhaps some of our editors will be kind enough to make us a little book all ruled and printed, so that we only need to write a word or two to tell the exact condition of a colony. It should be done neat and cheap.

After the first examination the changes can be recorded on the lines below, placing the frame number to the left, or make

the changes in the table by erasing and rewriting. The pencil-erasing memoranda is the handiest for this purpose.

The same result may be obtained by painting the back of the hive with plastic slate, and recording the condition of each frame in the same order as before, opposite to the frame, using the words, Honey, Bees, Eggs, etc., and the quantity, though perhaps the best plan is to rule, and write the headings, with a steel point in the common slate tablet, to be hung on the hive, making the record at each examination, and rubbing out the old record. We then have the condition of the colony at the last examination, which date is also recorded, and we can tell the probable condition almost any time without examining them. One of these same tablets will make a good honey report if hung on the upper story and properly marked.

I must say I decidedly prefer the book form notwithstanding it takes more room, for then you have a complete history of your bees as long as you keep the book, on the same principle as the merchant and other business men, and it seems to me we need it for future reference more than any of them. A column might be left for a queen register, wherein we can record the date she was hatched, and her pedigree; also, her breeding capacity, etc. Such data would enable us to make wise selections in breeding, and be of untold advantage in many respects.

Our bees have been taking feed for two or three weeks, and are now beginning to work on the maples, Apricots, Box-elder, and willow. I shall now be busy preparing for queen rearing. My weakest colony commenced breeding Feb. 19, and has quite a spread of brood and a number of young bees hatched. They could hardly cover two frames, but wintered well, owing to the mildness of the winter. Those in the tenement hive seem to be in the best condition, as they are boiling over with bees, and will no doubt swarm in April.

I am quite taken up with the INSTRUCTOR. Although it is small it certainly has the true grit, as I would judge by the bold and outspoken stand taken, and its expressed desire to be "judged according to merit." I truly believe it is the only journal in which we can speak our honest sentiments, without "fear, favor or affection," and express our preferences for apiarian goods, irrespective of popular or advertised styles. For smokers our pref-

erence may be the Quinby, and for hives the six section box frame hive, or "short L." We may prefer the Shuck "boss feeder" and Dunham foundation, or perhaps we may prefer the moulded foundation, that will not sag, because the grain of the wax has not been broken, and which can be made at home.

These different opinions do not always find expression without criticism in many of the bee journals of the day.

Before closing let me say: Have your combs built on foundation during fruit bloom, and reserve a sufficient quantity for the upper story if you are going to produce extracted honey. I have not space to go into details on this subject, as I have already trespassed my bounds.

S. L. City, Utah, March 25, 1881.

For the INSTRUCTOR.]

April Management.

S. M. OLDFHAM.

This is the month in which bees need the most care. There are few sections in which honey is gathered, except in the far south, though bees are active in bringing in pollen and raising young bees in abundance. In any locality it is important that the queen should be laying rapidly six weeks before the fruit trees blossom, or before the first expected yield of honey. During this month bees consume large quantities of honey in rearing brood. If stores are scant but few bees will be raised, and perhaps the abundant brood in the cells will be destroyed. Bees often starve at this season of the year, because the honey is consumed more rapidly than supposed. It is well to continue the operation of spreading the combs and inserting an empty one, or comb foundation, every eight or ten days when the bees are doing well, being careful not to spread more rapidly than the increasing bees demand. If combs on hand are filled with sealed honey clip the caps and place it in the center. The bees will rapidly use and remove the honey, and the comb be appropriated to brood rearing. Be careful to place no drone comb in the midst of the brood nest at this season, unless drones are desired very early for the purpose of Italianizing. If this is desired a sheet of foundation placed in the center the first of this month will give drones as early as swarming is generally desirable in the Middle States.

This should be regulated by the climate. Regular feeding with thin sugar syrup about sunset during this month, pays well in additional stores later in the season. But even when stocks are all strong and feeding deemed unnecessary it is well to feed in the caps during any continued cold or rainy spell in this month and May. These notes apply more especially to the great middle sections of the country. As bees are rapidly increasing during this month, common sense teaches us to take away absorbing material and cover the brood nest as closely as possible with warmer covering so as to prevent upward ventilation, and retain as much as possible of the heat of the hive. There is no danger of getting the hive too hot in this month, except in the far south. Sunshine on the hive stimulates them in spring. At this season kill every worm or miller that may be seen. This saves trouble, as each one rears four generations during the summer. Be careful in spring, and then keep strong stocks, and the danger from worms is very small, especially if Italian or hybrid bees are kept. April and May are, perhaps, the best months for transferring; April in the south and May farther north. When the first great brood rearing is over if any queenless stocks still remain unite them. Feeble colonies should be reinforced by a frame of hatching brood, placed in the center.

During this month do not cut away comb because it is dark, or even moldy or soiled. Comb can be easily renovated by water and the extractor, or with a strong syringe. Combs in which bees have died should be cleansed of them, even if it be necessary to scrape away a part of the cells on one or both sides of the comb.

Reynoldsburg, O., March 19, 1881.

For the INSTRUCTOR.]

Bill Against Adulteration.

L. C. ROOT.

Those of your readers who read the report of the last North-Eastern Bee-Keepers' Convention will remember that the attention of that body was called to a bill which was to be presented to our State Legislature, for the prevention of fraud in the adulteration of Cane Sugar, Syrups, etc., and that I was appointed as a committee of one to endeavor to secure the adding of honey to the bill, and to

do what I could to secure its passage.

This adulteration question is one of the deepest interest to bee-keepers, and your readers will be interested in the bill, as it has been so amended as to include honey. The action that those who are interested in grape sugar have taken in the bill, proves the importance of its becoming a law. I desire to state my own opinion of the grape sugar question most positively. I am opposed to its use in any way in connection with our pursuit. The time has come when bee-keepers should take strong grounds in matters which are so seriously threatening us. It seems certain that the bill will be passed, and become one of the laws of the State, as it would be hard to find a body of men who could oppose it. Following is the text of the bill as introduced by myself, read twice and referred to the committee on trade and manufactures, reported favorably from said committee and committed to the committee of the whole, which indicates the progress so far made:

AN ACT, To prevent fraud in the adulteration of sugars, syrups, molasses and honey.

The people of the State of New York, represented in Senate and Assembly, do enact as follows:

SEC. 1. Any person, company or corporation engaged in the manufacture, refining or mixing of sugars, syrups, molasses or honey for sale, who shall mix the same with glucose or grape sugar or any article of adulteration, shall, before selling or offering the same for sale, cause to be marked on the cask or package in which it is contained, the per centage of glucose or adulteration therein contained. Such mark or label shall be in plain Roman capital letters, not less than one-half inch each in dimensions, in black ink or paint, and on the upper and most conspicuous part of the cask or package.

§ 2. Any person, company or corporation who shall sell or offer to sell such mixed or adulterated sugars, syrups, honey or molasses containing glucose, grape sugar, or any articles of adulteration, shall expose and sell the same in or from the original packages in which it was consigned from the manufacturer or mixer of the same, and shall be plainly and conspicuously marked or labeled as required in the first section of this act.

§ 3. Any person who shall violate the provisions of this act shall be deemed guilty of a misdemeanor, and on conviction thereof shall be liable to a fine of not

less than \$10 nor more than \$200, or to imprisonment in the county jail for not more than sixty days, or both fine and imprisonment in the discretion of the court.

§ 3. This act shall take effect on the first day of June, 1881.

Mohawk, N. Y., March 26, 1881.

We are heartily glad, Bro. Root, to hear that you have been successful in getting honey included in the bill against adulteration, and that the prospects are so favorable for its passage. Now, if the legislatures of other States would only pass a similar law and then enforce it, it would remove one of the greatest evils bee-keepers now have to contend against. But while we are opposed to adulteration of all kinds, and honey adulteration with glucose in particular, we are not opposed to it as an article of commerce, if purely manufactured and labeled true to its name and character. It is now claimed that an excellent article of grape sugar is manufactured in Buffalo, N. Y., which is said to be as pure and simple a sweet as the best grades of maple sugar. We may say more on this subject at some future time and will only add for the present, that if used in the apiary at all, it should be with great caution, until we are more fully able to test its injurious or harmless character.

For the INSTRUCTOR.]

Spring Work.—Removing Propolis.—Transfer Wires, Etc.

A. BROOKS.

As the time for spring work, with what there are left of our little pets, draws near, every bee-keeper feels more and more anxious to have everything in readiness, for a few days lost may make the difference between a good or a poor yield of honey. Mr. Jeffrey's description of his method of spring feeding in the March INSTRUCTOR is just such information as many inexperienced and anxious bee-

keepers want; but had he at the bottom of the first column, page 417, given the proportion of sugar and water for syrup, as you have given it near the top of the last column on page 431, it would have been better, for it is the little things that make instruction complete. We occasionally see questions answered, or rather not answered, the same as the last question is in the first column on page 427 of *MARCH INSTRUCTOR*. Now, I don't call that any answer at all, and perhaps the person asking the question was wanting to know just what to do under the circumstances. I suppose every bee-keeper knows that we *ought* to "be sure that all have honey in the fall," but they sometimes run short of food, and we don't want to lose them.

Perhaps some of your readers would like to know of something cheaper than alcohol, benzine, etc., that will remove the propolis from their hands after handling frames, etc., on some hot day when it can not be touched without sticking. I keep slacked lime or else very thick white wash on hand, and rub the soiled places with it. If I use the dry lime I have to keep my hands wet so as to make the lime rather pasty. Sometimes I use a little vinegar to counteract the effects of the lime.

During the 14 years I have been keeping bees I have transferred a great many colonies, and used every device I have seen or heard of for holding the combs in place till fastened by the bees. For several years I used wires cut sharp at the ends and bent, so as to be readily driven into the top and bottom bars of the frames; but nothing has given me such satisfaction as the wires I used last season. I believe I got the idea from some correspondent of the *A. B. J.*, and would like to have all that have transferring to do, to know of it. For the *L* frame I use No. 15 wire, and cut in pieces about 11 inches long. At $\frac{1}{2}$ of an inch from one end bend at a right angle, and $\frac{1}{4}$ of an inch from this angle bend again the same way as the other, and $\frac{3}{4}$ inches from this second angle bend the other end at right angles. The following cut will illustrate it plainer than I can describe it:

(A) B

The end first bent (A) will hook over the top bar of the frame, and the other end (B) can be readily pushed under the bottom bar. If these wires are forgotten

or overlooked, the queen will deposit eggs right up to them, or even under them, if she can get into the cells, and the honey cells will be filled and sealed over, wires and all.

I am glad Mr. House is to criticise articles appearing in the *INSTRUCTOR*, as his articles will certainly, as you say, "be a source of much information."

My bees are all right yet. I have not lost a single colony, and they have now, April 1st, been in the cellar 152 days.

For the *INSTRUCTOR*.]

Imported vs. Home-Bred Queens.

A. B. WEED.

I see in the March number of the *INSTRUCTOR* that Mr. A. F. Moon says: "When Mr. A, B or C tells you that he would rather have a home-bred queen than a pure, imported Italian, you may rest assured that there is something wrong." It seems to me that it would be interesting to know *why* there is something wrong, and what it is. Mr. M. once said, before the N. E. Convention, that "the honey bee is as susceptible of improvement as any other stock." Now, if this is true—and I believe it is—why would not Messrs. A, B or C be right, provided that the home-bred queen which they prefer is one of the improved ones to which reference was made?

I see that Mr. M. advertises queens of his own raising from imported mothers. Now, if I were buying I would prefer one of his breeding and selection to an imported one that had been taken at random; for I have proved to my own satisfaction that a skillful breeder, such as Mr. M. is, can make an improvement in his stock, in each generation that he raises.

Detroit, Mich., April 1, 1881.

Question Box.

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

1. Bees are dying badly in this vicinity. There will be upwards of two hundred stocks lost within a circuit of a mile from my apiary. Most of the hives will be left just where they stand, and the combs will be destroyed by moths.

Now I wish to enquire how far moth millers will fly?

2. Will the moths not get so thick that it will be almost impossible to keep bees about here?

3. If I could buy the combs do you think I could sell them, and what ought they be worth?

4. What book on bee culture would you recommend for a beginner?

Alliance.

J. H. Mc.

1st. You are in about the same fix as all the rest of us are. We have been thinking the matter over, and have come to the conclusion that it will pay us to buy all such comb and melt it into wax, rather than let it become a breeding place for moths. We do not know how far moths will fly, but they can certainly go far enough to get to your hives.

2d. Yes, we think so. A number of years ago some itinerant transferers came this way with a new-fangled, back-action, side opening, moth-proof hive, and succeeded in convincing the farmers about here that all they had to do to get rich was to have their bees transferred into these hives. They did their work very badly, and as a consequence most of the bees either died or swarmed out. As it was a very busy time of the year they were not thought of or looked after, and as a matter of course were soon a mass of moth webs. For several years we had to fight to keep them out of even our best colonies, while prior to that we scarcely ever found one in our hives.

3d. We do not know. You could probably sell some by advertising, although there will be so many empty combs that they will probably be of slow sale. They are worth a little more than a sheet of foundation of the same size. It will not pay to buy if they have to be shipped far.

4th. Quinby's New Bee-Keeping and Cook's Manual of the Apiary are standard with us. We will answer your other questions and fill your order if you will please send us word where you live. We fail to find your state on your letter.

Recognizing the importance of a plant that furnished both honey and food for stock, we addressed letters to a number of persons whom we knew to be growers of millet, Hungarian grass, etc., asking if they ever noticed bees at work on any of the plants spoken of, in any con-

siderable numbers. At present writing none have replied except Friend Wm. S. Fontaine, of Reidsville, N. C., who writes to us as follows:

F. L. WRIGHT—*Dear Sir:* Yours of Jan. 12th has been overlooked until today. I explained in my Feb. communication to *Gleanings* how it was that bees obtained honey from pearl millet. Just as the millet is about to run to seed, there is a syrupy exudation on about five or six joints, between the fodder and the joint—or at least it was so during the latter part of August, 1880. I noticed the bees sucking this syrup, and upon tasting it found it quite sweet. I never observed it before, though I have been raising millet for the past four years, but doubt not, however, but that this exudation takes place every year. In addition to the honey thus gathered they get enormous quantities of pollen from the spikes.

WM. S. FONTAINE.

If replies from the others contain anything new or important they will appear in future numbers of the INSTRUCTOR. Should any of its readers have anything *new* to relate on this subject, or should they during the summer notice bees at work upon any flower not familiar to them, we hope they will not hesitate to send us descriptions or specimens (both of flower and leaf) of same. We wish to make out a list of the most important and newer honey plants for the benefit of the readers of the INSTRUCTOR, and will thank you all kindly for your co-operation.

Editor's Corner.

Queen breeders desiring to reach the bee-keeping fraternity without the expenditure of much money, should patronize the "Queen Breeders' Directory." It will pay them.

The fourth semi-annual meeting of the North-Western Bee Union will be held at Hastings, Minn., commencing on the 17th of May, at 2 o'clock P. M. Lack of space prevents us from giving the program. For further information address the Secretary, F. B. Dorothy, Taylors Falls, Minn.

As spring is now here and it is time to prepare for the coming season's work, we would suggest to those bee-keepers who

intend purchasing hives or apiarian supplies of any kind this season that now is a good time to do so, before the busy season comes on, and manufacturers are crowded with orders. Much vexatious delay, and perhaps actual loss, may be saved by ordering early, while nothing can certainly be gained by waiting until the last minute.

MELILOT, OR SWEET CLOVER.

We wish to merely make mention of this plant, in connection with the article of Noah Gilman, M. D., found in this number. As a honey plant the difference of opinion seems great (owing, it may be, to locality), but not greater than as to its value as a food plant. From the article in question it would seem that it is excellent for food, while our bee authorities say that it is "worthless, except as a honey plant." How does this come? Has our correspondent and others confounded some other variety of clover with *Melilotus Alba*, or sweet clover?

We have a quantity of the seed of Figwort or Simpson Honey Plant on hand, which we raised ourselves and know to be strictly pure, and will, upon receipt of a 3-cent stamp, mail a package of it to all of our present yearly subscribers, and to those who subscribe before the 15th of June. It will be put up in small packages, with directions for planting and cultivating, and the stamp will just about pay for the printing and mailing. As the seed is *very* small each package will contain enough for several thousand plants. It is a favorite plant with bees from about July 5th until frost, secreting honey during the entire day.

The *Exchange* for March contains quite an interesting letter from Frank Benton, who is at present visiting different parts of Asia and the far East in search of new races of bees. The letter was written from the island of Ceylon, where Mr. Benton secured several swarms of a species of bees that he describes as only three-eighths of an inch in length, very industrious and prolific, and less inclined to sting than any other species of which he has any knowledge. The natives describe another kind of bees on the island as being very large (saying that thirty men have each taken a load of honey from one tree), but as they are such incorrigible liars the information can not be relied upon, unless substanti-

ated by something more positive and trustworthy than their mere assertions.

GLASS! GLASS!

Glass is now quoted at retail at \$3.00 per box, and upward, but we have made arrangements whereby we are enabled to furnish it to our subscribers and advertisers, in lots of from one box (50 square feet) up, at the remarkably low price of \$1.85 per box, which is as low as it can be purchased for in large quantities at *wholesale*. The glass is to be ordered through Mr. Geo. W. House, of Fayetteville, N. Y., and shipped from the factory at Pittsburg, Pa., and those of our subscribers and advertisers who desire to avail themselves of the offer should write to us and say so, enclosing a stamp, when we will send them a certificate showing that they are patrons of the INSTRUCTOR, and therefore entitled to the benefits of this offer. This certificate and the money for whatever amount of glass is desired must be sent to Mr. House, as it is through his kindness (he having made arrangements, as a jobber, to handle several thousand boxes) that we are enabled to furnish it at such low figures. Recollect, neither we or Mr. House make a single cent on it, it being done simply as a favor to the patrons of the INSTRUCTOR, both present and future. It will be cut any size desired, if ordered at an early day—say before the middle of May.

As the mortality among the bees has been so great during the past winter, most apiarists will have a surplus of combs on hand, many of which will be filled with dead bees. All such combs should have the dead bees cleaned out of them in some way, even if the comb has to be scraped away in patches to the septum of the cells, as it is supposed to be more labor for the bees to clean out the dead bees than to build out the cells. If they are not too numerous they can be cleaned out pretty well with the small blade of a pen-knife, and thumb and finger, or with something like a darning needle by catching it in them well down in the cells. If the walls between the cells should be injured the bees will easily repair them. If combs can not be cleaned at once they should be hung up in a dry place so that the bees may dry and shrink, when the most of them can be shaken out by jarring the frames, which

should be done gently so as to not injure the comb. Our advice, however, would be to get the bees out as soon as possible, that the combs may be kept clean and pure. Every apiarist who has these surplus combs should take especial care to guard against the moth. Fumigate them with sulphur, and hang up in some dark, dry place, an inch apart, examining them frequently to see that the moth miller does not get the start of you, for once in the lead it is very apt to stay there.

As this No. of the INSTRUCTOR will reach many dealers in apiarian supplies, and other advertisers, we desire to call their attention to the superior inducements it offers as an advertising medium. Some of the principal reasons for its superiority are as follows:

First: We do not deal in apiarian supplies of any description, and consequently the patronage of our subscribers is not divided between our advertisers and us, they getting the *full benefit* of the advertising they pay for. Second: In addition to the regular circulation of the INSTRUCTOR we are sending out hundreds of sample copies each month, and in this way alone advertisers will, by the end of the year, have placed their business before several thousand bee-keepers, most of whom could be reached in no other way without the expenditure of a great deal of money. Third and last, but not least, our advertising rates are lower than those of any other bee journal in America.

Those who have once patronized the advertising columns of the INSTRUCTOR need no testimony as to its value. But for the benefit of those who have not, we publish the following from George W. House, of Fayetteville, N. Y., as showing what is thought of its value in that respect by one who has tried it. Mr. House inserted a two-inch advertisement in the March No., offering 100 colonies of bees for sale. On the 25th, of March, less than two weeks after the INSTRUCTOR was issued, he wrote to us follows:

"I hereby withdraw my 'ad.' as I have more orders now than I can fill. Could have sold 600 colonies if I had had them. It pays to advertise in the INSTRUCTOR."

The moral is plain, and we hope it will be heeded.

THOSE SMOKERS.

Under date of March 23, Mrs. L. Har-

ison writes to us as follows:

"There are no smokers like ours in the market now. Some prominent bee-keepers who are too diffident to 'speak in meeting' have written to us *privately*, enlightening us with regard to those now for sale, and when we find the 'boss' we'll tell. Women are not gifted in the art of keeping secrets, and if we had used four as 'Jack in the Pulpit' did last year, we would tell which smoked best."

As Mrs. Harrison will see by this No. of the INSTRUCTOR, two bee-keepers of experience (one of whom—G. M. Doolittle—is probably as widely known as any bee-keeper in America) who are not "too diffident to speak in meeting," have given us their opinion on the smoker question, both recommending the Improved Double-Blast Quinby Smoker, manufactured by L. C. Root and Bro., Mohawk, N. Y. [L. C. Root is the son-in-law of the late M. Quinby, the *original* inventor of the bellows smoker.] We have received one of these smokers from the Messrs. Root, and are very much pleased with its appearance, and with the limited trial we have given it pronounce it A, No. 1. It is very light, but neat, strong and durable, being made of the best material throughout, with the wood part finished with shellac, and we believe no bee-keeper need be afraid to invest in one. Perhaps the one feature about it most worthy of notice, and which places it in advance of any other smoker we know of, is the double blast, by means of which it may be changed from hot to cold blast and *vice versa* at pleasure, thus avoiding all risk of starting a conflagration (especially of your own clothes), or of blowing cinders or ashes among the bees..

CIRCULARS, ETC., RECEIVED.

From Chas. Dadant & Son, Hamilton, Ill., a very neat 24-page pamphlet on "Harvesting, Handling and Marketing Extracted Honey." Friend Dadant & Son have produced and sold about fifty thousand pounds of extracted honey during the past three years, and this pamphlet embraces the results of their large experience. To any one wishing information on the subject named the work will be almost invaluable, the advice on marketing honey being especially worthy of adoption. Price, 15 cts.

The *Kansas Bee-Keeper* is the name of a new paper devoted to bee culture, recently launched on the sea of journal-

ism by Scovell & Anderson, of Columbus, Kansas. It is a neat little four-page sixteen-column paper, and we wish its publishers much success in their venture.

Edward B. Beebee, Oneida, N. Y., sends us a very handsome 16-page catalogue of apiarian supplies of all kinds.

Alfred H. Newman, Chicago, Ill., a 32-page catalogue of general apiarian supplies.

L. C. Root & Bro., Mohawk, N. Y., a very neat 12-page catalogue and price-list of supplies of every description.

L. H. Pammel & Bro., La Crosse, Wis., a tasty little 4-page circular and price-list of bees, queens, bee hives and comb foundation.

D. S. Given, Hoopston, Ill., a 16-page circular and price-list, pocket size, of his foundation press, machine for wiring frames, etc., with a sample of very perfect foundation. The press is no doubt a great invention, especially for making foundation in wired frames, for which purpose it is confessedly unrivaled.

Hiram Roop, Carson City, Mich., 1-page price-list of bees, supplies, etc.

E. W. Hale, Newark, W. Va., 4-page price-list of Italian queens and bees.

Henry Alley, Wenham, Mass., circular and price-list of bees, queens and supplies.

Chas. Dadant & Son, Hamilton, Ill., 4-page price-list of various apiarian supplies, together with some extra fine specimens of foundation.

Wm. Ballantine & Son, Sago, Ohio, 1-page price-list of queens and supplies.

F. L. Wright, Plainfield, Mich., cheirograph price-list of grape vines, small fruits, etc., with a 1-page price-list of bees, queens and supplies.

E. M. Hayhurst, Kansas City, Mo., postal card circular of Italian and Cyprarian queens and bees.

S. D. McLean & Son, Culleoka, Tenn., 1-page price-list of bees and queens.

Chas. P. Lake, Baltimore, Md., 28-page circular and price-list of the usual apiarian supplies.

Liberal Premium Offer.

For each and every club of Thirty subscribers to the BEE-KEEPERS' INSTRUCTOR at 50 cents each, I will give one colony pure Italian Bees.

The club list should be sent to my address.

GEORGE W. HOUSE.

Fayetteville, Onondaga Co., N. Y.

Honey and Beeswax Markets.

REPORTED FOR THE INSTRUCTOR.

CINCINNATI, April 1.

Honey—The demand is fair for extracted at 8@10c on arrival. Comb very dull, prices nominal. We retail at 16@20c.

Beeswax—Sells at 20@25c on arrival.

C. F. MUTH.

BOSTON, April 2.

Honey—Market dull. Comb sells at from 16@18c. Small stock on hand. 1 lb new honey very early next season will do well on this market.

CROCKER & BLAKE.

CHICAGO, April 4.

Honey—White clover in 1 lb to 2 lb sections 16@20c; larger sections 16@18c; dark 15@19c.

Beeswax—Dark 20c; yellow or fine 20@23c.

R. A. BURNETT.

NEW YORK, April 4.

Honey—Best white comb in 2 lb sections 16@17c; fair white 14@15c. Buckwheat 11@13c. 4 lb boxes bring 2c per lb less on each grade.

Beeswax—23@25c.

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

SEND FOR OUR

EIGHT PAGE CIRCULAR,

(with cuts and illustrations)

OF HIVES, ONE-PIECE SECTION BOXES, COMB FOUNDATION, SMOKERS, AND ALL SUPPLIES NEEDED IN THE APIARY. ALSO:

Italian and Holy Land Bees and Queens.

Try our

American Bee Feeder.

Single Feeder by mail 25c. Half dozen by express \$1.20. One dozen, \$2.00.

RIEGEL & DRUM,

46 ADELPHI, OHIO.

DARWINISM with its theory of the evolution of man from animals and his extinction at death overthrown. A personal God and an eternal existence for man proven by Science. Infidelity and Materialism dethroned. The Wave Theory of Sound, taught in colleges and high schools for 2,500 years, proved to be a scientific fallacy. Revolutionary in Science and the most remarkable book of this or any other age. Royal Octavo, 700 pages, handsomely bound and containing very superior likenesses of the great scientists of the age, \$2, by mail post-paid. Local and Traveling Agents Wanted. Circulars with table of contents & "opinions of the Press" free to all. **Schell & Co.,** 52 Broadway, New York. 4-5

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 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, well-bound book of plain, practical information for bee-keepers. Its author is himself a bee-keeper—one who makes that his business—and is therefore peculiarly well fitted to give that information to bee-keepers that is most useful to them. Cloth, \$1.50.

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, both to the novice in bee-keeping and the experienced. Cloth, \$1.25; paper, \$1.00.

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 to the times. Cloth, \$1.00; paper, 75c.

BEE CULTURE; OR SUCCESSFUL MANAGEMENT OF THE APIARY, by Thomas G. Newman, presents, in a condensed form, instructions for the successful management of the apiary. 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.

The above are all sent by mail, post-paid, on receipt of price. Address

W. THOMAS & SON, Adelphi, O.

For Sale!

Eggs from the following choice breeds of fowls. Stock from best breeders:

LANGSHAN, per setting of 13,.....\$4 00
Keefer's (PLYMOUTH ROCK, per 13... 2 00
Strain. { BROWN LEGHORN, " ... 2 00

LESLIE MILLER,
ALLIANCE, OHIO.

3 12

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.

3-12 A. F. MOON, Rome, Georgia.

FREE!

We wish to obtain 25,000 New Subscribers to

THE FLORAL MONTHLY

During the next few months, and we propose to give every reader of this paper

FIFTY CENTS WORTH OF CHOICE FLOWER SEED.

Our offer is to send Free of Cost, 50 cents worth of Choice Flower Seeds to each and every one who will send us 25 two cent postage stamps for the Floral Monthly one year. Seeds sent Free by return mail. Specimen copies free. Address

W. E. MORTON & Co., Florists,
616 Congress Street, Portland, Me.

(Natural Flowers preserved to last for years.)

BEFORE PURCHASING

Imported or Home-Bred Italian or Cyprian Queens, Bees by the lb., nucleus or colony, supplies for the apiary, Small Fruit Plants, seeds of honey plants, etc., send description of what you want to us, and get our prices. We guarantee them to be as low as the lowest, and satisfactory in every way.—Material for 8 frame Langstroth hive with 7 inch cap, including frames, etc., ALL COMPLETE, ready to nail, 50 cts. each. All other supplies proportionately low. 5,000 Fine Basswood Trees, 5 to 10 feet, 70c. per dozen; \$5.00 per 100.

Give us a trial. We CAN and WILL please you.

F. L. WRIGHT,

PLAINFIELD, LIVINGSTON CO., MICH.

Heddon's Circular,

GIVING PRICES AND DESCRIPTIONS (WITH CUTS) OF

His Improved Langstroth Hive,



WHITE SPRUCE SECTIONS AND BOXES,
LATEST IMPROVED HONEY SCALES,
Queens and Full Colonies,

UNEXCELLED BEE FEEDER, THE THREE POPULAR AND BEST STYLES OF COMB FOUNDATION (WITH OR WITHOUT WIRES, IN L. ERAMES OR OUT), PROTECTORS, HONEY KNIVES, SMOKERS, GLASS, HONEY AND WAX EXTRACTORS, &c., &c., &c., TOGETHER WITH THE BEST HONEY-YIELDING AND MARKET GARDEN SMALL FRUIT PLANTS, is now ready to mail.

A FIRST-CLASS APIARY FOR SALE---A BARGAIN.

Please send your full address (P. O., Co. and State) to

JAMES HEDDON,
DOWAGIAC, CASS CO.,
Michigan.

 NO CIRCULAR SENT UNLESS SOLICITED. 

NOW READY!

Our **New Circular and Price-List for 1881.** We have something new for every bee-keeper. Remember, we are largely engaged in practical bee-keeping, and know what supplies are of practical value in an apiary. You should see a description of our feeder, you will want one. Our new

DOUBLE DRAFT SMOKER

Is perfection. See what one of the most practical and best informed bee-keepers of the country thinks of it: "Since your great improvement in Smokers, as regards the double-blast, you undoubtedly have the inside track of all the others in the market. This, with the superior workmanship and materials used, should place your Smoker at the head of the list, and secure for it a favorable patronage for 1881. G. M. DOOLITTLE." Price, by mail, **\$1.50 and \$1.75.** Our book,

Quinby's New Bee-Keeping,

Is pronounced the most practical work published. Price, by mail, **\$1.50.**

We furnish everything used in advanced bee culture. Send for Illustrated Circular to

L. C. ROOT & BRO.,
MOHAWK, NEW YORK.

4-9

GIVEN'S Foundation Press.

The Latest Improvement in Foundation. The only invention to make foundation in the wired frame. Send for sample, and catalogue giving cuts and descriptions of press and machine for wiring the frames. We make copper dies of all sizes at reasonable prices.

4

D. S. GIVEN, Hoopeston, Ill.

BEE-KEEPERS' SUPPLIES!

It will pay you to get our prices before purchasing your supplies. Good

Langstroth Hives,

With 8-inch cap, frames, quilt etc., in the flat, only

60 Cents Each.

They are manufactured from good, dry pine lumber, and the workmanship is unexcelled.

CRATES, SECTION BOXES, EXTRACTORS AND DUNHAM FOUNDATION A SPECIALTY.

HIRAM ROOP,
CARSON CITY, MICH.

2-7

In answering advertisements be sure and say you saw them in the INSTRUCTOR.