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PUBLISHED FOR AND IN THE INTEREST OF BEE-KEEPERS, BY ONE OF THEM.

Written for the Bee-Hive.

## A BEE'S SOLILOQUY.

BY JOHN JAMIESON.
It may be that we are a pest, And give some nelghbors much unrest;
Be patient, generous and kind, A gift the fiercest eye can blind.
Take Paul's advice; shun litigation, It seldom brings much mitigation: The peaceful way is always best; Keep out of law and you'll be bless'd.
When nearest neighbor wants to plow, Just tell him when the Bees allow; on chilly, cloudy, windy day, The furrows you can even lay.
Our happiness on self depends,
Much more than on our warmest frlends. Give grumbling John a mangled comb, To please his little wife at home.
If you can show both good and strong, That we have done a neighbor wrong, The damage soon will be redressed, By keepers wise-then let it rest.
The "scientific pleasantry,"
Offended the bee peasantry; No one can manufacture honey, Neither for love nor yet for money.

The truth, professors ought to tell; To encourage fraud is not well. Root's offer yet a while will stand, Till the inventor makes demand.
The orb of day will rise and set, Thro' long and unknown cycles yet; And still the claimant not appear To grab Root's thousand cheer.
Well, after all we may be proud Our praise is sung both long and loud, And invalids join in the song, To daud the honey-making throng.
We gather honey by the tun, They send it round the world to sun, That all mankind may have a treat; To sip the Yankee's linden sweet.
(Continued next month.)

Written for the Bee-Hive.

# Those Holes in Combs. 

## BY H. L. JEEFREY.

A Valuable Article From Practical Experience.
(N the query of Wm. B. W. about the holes in combs, he shows fear about them. I must tell the readers of the Bee-Hive not to be scared about the holes, and how I treat them. Years ago I used to be troubled about those holes, but now I like them and work to make them quite often in this way: Whenever I find a place in the comb that I don't like, I commence by cutting in a line with the perfect worker-cells, generally it is slanting, then I cut across the top, then slant the other way, then do the same to the bottom, and quite often this hole is six sided, the same as a cell, and four to six inches across. Sometimes it is diamond shaped and sometimes three sided; but always make it large enough.

These combs are generally used in the weak swarms or where I have young queens, and they are always in these two cases built out worker comb. But if these combs are put into strong swarms with old queens they will be built out with drone comb, and for that reason I have made a practice to place some of them in such swarms and close the bees down compactly and feed plentifully where I wanted early drones; because in these new cells the queen will make no delay to deposit her eggs as often as she gets the chance to use them; therefore the
beginner must keep his eyes open for what he wants the holes filled up with. If it is worker comb, keep them from strong stocks and old queens.
I am using about 150 of these mutilated combs this spring, and I shall have them all filled out nice worker combs, and about 15 lbs . of nice clean wax to furnish me the foundation to fill at least 1,000 sections.

Most of your readers will say, "I have no foundation machine." Well, then either get a pair of plaster moulds for 5 -inch strips or sell the wax, or save it till you can get it made up.

## Saving Wax.

I have not seen 10 lbs . of wax bought for the use of over 50 colonies in ten years. The trimmings from the combs and the little bridges and bits of wax saved every year, have furnished all the fdn. wanted in that time, and we use full sheets in the brood-frames and three-fourths of the boxes.
The bees always secrete some wax when they are working to any extent, and it can be saved without costing half its worth. If there is no other way to save it place an empty frame in the center of the brood-nest, with only a narrow starter of fdn. or comb fastened to the top-bar. On the fifth day cut out the drone comb and lay it away, and in five days more do the same again. To save this comb nicely have a box with a slanting lid and a slatted bottom about 6 inches from the lower edge, and a slot the whole length of the box about 5 inches from the bottom edge.

Into this box place these pieces of comb, having the box slanting on the ground. The small ants will clean out all the larvæ and bee-bread, and the bees will work through the slot and clean out the honey, if there is any in the comb.

## New Comb For Starters.

These pieces cut into strips $3 \frac{3}{4}$ long
and 1 inch wide make first-class starters for the pound boxes, reaching the whole length of the top of the box. I have practiced this plan with the pound boxes, both with and without separators, since 1882, and I am satisfied with it; using the boxes in the two center rows with comb starters and the two end rows with full sheets of fdn. in the crates without separators. The comb-starter boxes are not always filled out at the bottom as nice as are those with fuil sheets of fdn., unless another narrow starter is put at the bottom. But put 10 crates of each sort on to hives, that is, 10 crates with boxes all full of fdn., and 10 more with the comb starters in the center rows, and you will find that the 10 hives having the crates with the comb starters will be at work in their crates first, and if the comb starters are put top and bottom it is better yet, and those two center rows with comb starters will be finished before the center rows with fdn. in them. I have tried it thoroughly.
I was perplexed some ai first but I am well enough satisfied with it, so I use all the new comb that I can get, and I take pains to get the comb.

I prefer the two starters, let them be either comb or fdn. I call it the Stoddard plan, because it was first practiced by Wm. G. Stoddard and shown to me in 1882, and the first Heddon crate I ever saw, practical and reversible, was shown to me in 1879 by Harvey R. Stone. It is the prettiest way to get nice $4 \frac{1}{4}$ sections filled out that I know of. And mentioning reversing sections makes me want to :ay a few words about

## Reversing The Brood-Frames.

There is nothing that will send your bees into the sections better than reversing the brood nest, and it will quite often entirely upset swarming When it does not upset swarming entirely, it is an advantage.
First. Build up your colony till they are all ready to swarm, and if
they have two inches of honey under the top－bar it is all the better．Now reverse every frame，destroy all cells， place the two combs with the most eggs and larve next the sides of your hive，and the two with the most hon－ ey in the center；put on the skeleton honey－board and your crate，and I have ret to see the colony that don＇t take to the sections in good shape．Try it and see．And if the colony swarms gain it will be with combs solid with brood and a great deal stronger smarm．
Second．Don＇t reverse a frame just as the brood is beginning to hatch near the bottom－bar，or you may near－ Yevery time get the honey put there in place of brood；but reverse when there are four or five rows of eggs or luve next the bottom－bar，if you can．
I first saw the reversing of the whole brood－chamber practically used by Robt．Blacks，of Black Hollow，in 1883，on some stubborn colonies，and Ihave used in ever since as a common practice．

> H. L. Jeffrey.

New Milford，Conn．


For the Month Ending May 15， 1889.
HIRST the bees；they are building up very strong for the harvest． All the old bees are gone and rob－ bing is over until after the bass－ rood flow．They have got a little loney along back，but not enough to spply their increasing daily needs． This warm weather is making it hot lir them，and most of us will wish vme sort of shade or protection from he broiling sun．Chaff hives，paint－ 41 white，do not get as hot as those where the bees are only separated
from the almost blistered paint by a thin board．

Various trees are also useful for shade，for the hives．Were it not for the swarming of the bees one would desire the stately elm or wide spread－ ing maple，but taking into considera－ tion the fact that we must use the trees more or less as an alighting place for swarms，lower trees are de－ sirable．Cherry，plum，and other fruit－trees do duty in our yard．

Henry Alley＇s new method for rear－ ing queens is at hand，in pamphlet form．It is to simply crowd the bees to the swarming fever by feeding，and if necessary，by the addition of bees in the brood form．When the cells are nearly ready to seal they are given to queenless colonies to finish．The best of queens should certainly be ob－ tained by this method．
The British Bee Journal is publish－ ing portraits of the foremost bee－ keepers of England，the first being that of Mr．C．N．Abbott，the first pi－ oneer of the movable frame system in that country．

The following definition of＂Car－ niolan Bees＂is from Mr．Cowan，ed－ itor of the above mentioned paper． ＂A race of bees found in Carniola，a small district in South－western Aus－ tria．They are black bees with bands of white hairs surrounding the abdo－ men，are remarkable for gentle dispo－ sition，prolific，hardy，good honey－ gatherers，build extremely white comb， and are great swarmers．＂

A new method of preventing swarm－ ing is given by a correspondent of the Canadian Honey－Producer．It is sim－ ply to exchange places with colonies daily，from early spring until after the honey－flow．This is dose without labor，by a sort of cart－wheel arrange－ ment．
＂Natural swarming is，therefore，in
my opinion, the correct way to get increase, if that increase is expected to put cash into the exchequer of the owner, by gathering honey."-Eugene Secor in Am. Api.
"I have used several hives of the Huber type-closed end bars-and I believe, after all, that, for the general bee-keeper the regular Langstroth hive is yet the best."--Prof. Cook.

The new Japanese Buckwheat appears to be about to revolutionize buckwheat culture. Sow a little and distribute the seed among your neighbors next spring.

In a private letter the gentleman known in Gleanings as "Rambler," says: "Out of 102 Heddon hives I have lost and doubled down 6 colunies, leaving 96 , the majority full of bees." In a spirit of justice we are glad to give the above.

Once mure the seasons have rolled around and the critical time to the apiarian has come, soon is a good or a poor season to be recorded for 1889, and the bee-man's purse to feel the influence of his past labor and care, or neglect and errors. Wishing success to the diligent and giving a warning to the lazy, we are "entered for the race."
"Bees work for man; and yet they never bruise
"Their master's flower, but leave it, having done,
"As fair as ever, and as fit for use:
"So both the flower doth stay and honey run."
Apis Americana.

## A Vermont Bee-Keeper.

An Interesting Description of Mr. Manum's Apiarles and the Bristol Hive.

令E extract the following article from the American Agriculturist, knowing that it will be of general interest. It was wiitten by Mr. Cushman of R. I.-

The most extensive apiarist in this
section, and probably the one having the largest number of colonies in New England, is A. E. Manum. He commenced in 1870 with two colonies, and although like other bee-keepers he soon found that a good season was usually followed by a poor one, his success led him to extend the business, and in the spring of 1885 he had in five different yards 470 colonies.
That season was an unusual one, and he obtained from them 19 tons of comb-honey and 3 tons of extracted honey, and an increase in bees, making 850 colonies in the fall. This large crop was nearly all gathered in twelve days, and one of the best colonies on scales at Yard No. 2, while working on basswood, gathered in one day 33 pounds and in four days 124 pounds.* The largest yield fiom one hive was 228 pounds of comb-honey. His greatest yield in 1883 was 312 pounds of comb-honey from the bees in one hive.

As an offset to this and the previous good years, each season since 1885 has been a poor one, and his bees have not paid expenses. With a few exceptions in favored localities, beekeepers every where have fared the same, although three such poor seasons in succession are unparalleled in the history of the industry in this country.
Mr. Manum's out-apiaries are from 2 to 16 miles from the home yard. The long rows of symmetrical and neatly painted hives, covering a hillside or appearing among the trees of an orchard, arrest attention and ex cite in terest.

## The Bristol Hive.

At the start Mr. Manum tried all the different hives and studied and experimented to get the best practical work. By combining, modifying and inventing new features he turned out that which met his ideas and which with a system of management suitel
*See March number of the Bee-Hive, page 101 , for honey yield of this colony.-Ed.
to it is now used in all his apiaries and many others. The hive is doublewalled and consists of a stand, inner live or brood-chamber and an outer case. The entrance is through the the stand underneath the brood-chamber and cannot be clogged by snow, is protected from rain, and by means of a slide can be graduated from 2 ins. long by $\frac{3}{8}$ of an inch wide in winter to from 14 ins. long by 2 ins . wide-the full summer width when the slide is removed.
The outer case is movable and is in three separate sections. The roof is of clapboards. In each gable is a 2 . inch auger hole for ventilation. This is protected by a wire cloth funnel projecting outward, which allows the bees to leave one at a time, but not to enter, This is an important proviso when bees are hastily shut in or when surplus honey is removed.


BRISTOL HIVE.
The 3 -in. space between the walls is filled with chaff or sawdust, which is allowed to remain winter and summer. Then damp, it can be readily replaced. Having so many loose parts, the hive can be moved without heavy lifting, and when properly packed is suffcient protection from New England minters. The hive-stands rest on two lengths of joist to keep them off the ground, and are set perfectly level. Hives once located are not afterward
moved unless carried away from the yard.

The brood-chamber is covered by a board, when the sections for honey are not in place, and contains 12 hanging frames, 12 ins . long by $9 \frac{1}{2}$ inches deep. The surplus arrangement consists of cases, at one end of which are a follower and wood screw, by which the sections are tightly clamped together. Each section is supplied with with a full sheet of foundation, and between each row are placed thin wood separators to insure perfect combs.

Mr. Manum was probably the first to make a white poplar dovetailed section, which is now so much used. Previous to this they were of pine, and made to nail. The section, put together with glue, is not only the strongest but the neatest section in use. Two of the Bristol clamps cover the brood-chamber and can be tiered up as high as desired. When filled with finished combs, the cases are disconnected from the brood-chamber, and before they are removed to the honey-house the bees find their way out at the bee-escape in the gable. A cord and a simple device allows the hive cover to be tipped back instead of having to lift them off bodily when opened.

## Manner of Working the Apiaries.

The hives are five feet from each other in rows twelve feet apart. To prevent upsetting by heavy storms in winter, a large cord is thrown across the roof and fastened to a stake driven in the ground on each side. During the winter every thing needed in the summer campaign is prepared ready to be quickly supplied to the different yards by the teams which are then constantly on the road.

In the spring at certain intervals Mr , Manum and his assistants spend a day in each apiary giving that aid to colonies which is so important. These rounds are made more and more often until the swarming season is about to commence, when one competent per-
son is placed in charge and is in constant attendance for six or eight weeks, or until the honey-season is over.

Board is usually obtained at the farm house near which the yard is located, and the help are continually employed in hiving swamms, putting on or taking off boxes and in attending to other necessary details. As experienced men are not always to be had, many knowing nothing of the business must be taught, and as they usually commence for themselves as soon as really competent, this instruction must be given again and again. After a few weeks' instruction some are able to do nicely the remainder of the season, with occasional looking after.

Women are also emplojed, and one who did not know a queen from a drone when she commenced, took entire charge of 116 colonies the second season. At each arialy there is a building containing a honey-room where clamps of honey are temporarily stored, and a work room where fixtures not in use are also housed.

In each yard one hive stands on scales, of which a close watch is kept after the clover and basswood blossoms open. On the front of every hive in plain black figures is the colony's number, while inside is a record of the colony, its origin, age of queen, date of each examination that season and their condition when examined. This is written in abbreviated characters on a piece of section or smooth board and laid on the packing. The apiarist also keeps in a book a list of the colonies casting swarms, and of those requiring special attention at a certain time.
The wings of all queens are clipped to prevent their going off with the swarms. When the latter attempt to leave, they are caught by an arrangement consisting of a wire cloth cage fastened to a pole. It is made to stand any where by two legs, which fold up when not in use. A sufficient number of these are always at hand.

When a swarm issues, the queen is caught on the ground near the hive and placed in the cage of the catcher, which is stood or held in the midst of or near the flying swarm, and the bees soon settle upon it. They are then left, and attention is given to the others, which usually issue at about the same time. If the swarm has gone some distance, or clustered in the top of a tall tree, it will soon return, as it is without a queen. So the catcher containing their queen is stood in front of the hive from which they came, and as they return they find her and cluster upon it. To make this more certain, the entrance of the old hive is covered with a cloth. This plan differs from that of most beekeepers and enables Mr. Manum to quickly handle many swarms. In hiving, when time is more plenty, about a third of each swarm is shaken back in front of the old hive and the balance of two or three swarms, with one queen, is hived in a new hive. As this makes a powerful working colony in the new hive, abundant room in sections is immediately given.

A close watch is kept of the apiary, and more storage room is added ${ }^{9} 9$ fast as used to advantage, and the fill. ed clamps are removed as soon as completely sealed. A large crop can be cut off from communication with the brood-chamber in a short time, and when free from bees is carried to the honey-room and afterward carted to the central honey-house. It is then scraped clean of propolis by women and girls, and after being graded is stored in the honey-room to ripen.

In the fall, wood sides of white poplar in tead of glass are fastened to each section, and they are shipped to market in white poplar crates holding two 1 lb . sections. Sections full of nice white comb, those full of darker combs and those light in weight, are each crated separately and the crates are marked "Green Mountain," "Comb Honey" and "Light Weight," accorl-
ing to contents. A few of the very best and most perfect are selected from the first quality and go as the "Snow Flake" brand.
As most of the crop is secured as surplus and but little is gathered aciter its removal, that remaining below is no more than the bees need during the season. Therefore, to keep them alive until spring, each colony must in early fall have its ration of sugar syrup. This season 28 barrels of the best granulated sugar were required to insure sufficient winter food. For feeders, maple syrup cans with small holes punched in their bottoms are used. Three short legs of tin raise them enough to give the bees room to get at the holes. These cans are filled with syrup and set over a hole in the cover of the hive, and are renewed until the proper amount of food is consumed.
After the honey-season, instead of a constant attendant at the out-yards, frequent visits are made, as in spring; and are continued until the bees are suug for winter. Then an occasional trip is made on a warm day when the bees' can fly, to see that all entrances are clear.
Mr. Manum has, at present, 700 calonies in eight different yards. The number in each is limited to 125 in the fall. The colonies in excess of this number are either sold or carried to a new location. For this work a double and a single team are used.
By the use of rocks which hold a second tier, the former takes fifty colmies and the latter twenty-three colonies. Before loading, the frames are immovably fixed and a sheet of muslin is tacked over the brood-chamber to give air, while in very warm weathtrarim covered with wire cloth is necessary to their safety. Mr. Manum's bees are mostly Italians, although in some apiaries there is a trace of Wack and Holy Land blood. He is about to test a few Carniolan queens. The working queens are reared
from the best Italian colonies, which are selected out of this large number as possessing unusual excellences. I saw many fine large queens a shade darker than the average Italians, having very plump and thick-set bodies. In each yard, distributed among the regular hives, were many nucleus colonies - the temporary quarters of surplus queens. Mr. Manum has planted honey-producing crops on a limited scale, but is not yet certain that they can be made to pay.

Written for the Bee-Hive.

## Apiary Work For June.

BY chas. h. SMITH.
Some Practical Thoughts for Beginners.Dividing.
UNE is the month of months for a begirther to learn about bees. It is now that he can see for himself the truth of what he may have read during the past winter. The pictures and descriptions of the queen, worker and drone cells, and the great differences existing between them, have excited his curiosity greatly; but now a look into his strongest swarm will, without doubt, show him the whole thing.

The bee, from the egg along through its rapidly changing: stages to the moment that it crawls forth from its cell -a perfect bee- is a continual wonder, and I believe never fails to excite the admiration of the bee-keeper. Today I lifted out a frame of worker comb, straight and even as a board, and literally filled with larvæ about four days old. Holding the frame in such a position that the sun shone into the cells, the sight was pretty indeed. Nearly a thousand plump coils of white, coriugated ivory, separated from each other by a thin, pale brown partition of wax-who could help but admire it? All that was lacking, was the presence of some brother bee-keeper who would look over my shoulder at the picture and exclaim: "What a
sight!" Just now we want our queens to be doing their best. Every frame should be filled with brood. If opening a hive, you find all the center combs thus filled, whereas the outer frames contain no eggs or brood, just spread those in the center placing the other combs there, for it is of prime importance that each colony should have all the eggs they can care for.

When your honey-flow really com-mences-be it now or next monthyou want every swarm strong; by this I mean that the bees should be crowded for want of room, as herein lies the secret of getting box honey. It is a very simple matter, this making bees strong by crowding their quarters : Suppose you were to place your strongest swarm in a hive having just double the capacity of the one they are now occupying, in looking over this swarm now on 20 combs and seeming able to cover only 10 or 12 of them, would you call them strong? No. On the other hand select a fair swarm only, covering, say 5 frames yet having 10 frames in the hive. Now should you remove 6 frames, crowding the bees on to 4 instead of 5 combs, what would be the result? They would want to swarm before long, and you would call this a strong swarm.

Now before putting boxes on any swarm see to it that the bees are strong-strong in the way I have just described. If you do this you almost compel the bees to go into the sections at the start, and this is very desirable. You will needs exercise some judgment in giving these boxes; giving but very few to those small strong swarms and more to those large strong swarms. Yet it might be well for me to add, that there is no danger of giving too few boxes, even to your strongest colonies, as more can be added as the swarm seems inclined to work in them well.

I should not advise the novice to attempt making any artificial swarms this season; it might teach him some-
thing, but I fear the learning would cost high. I know, the books tell all about how it can be done; but after seeing so many woe-begone looking swarms trying to pluck up enthusiasm enough to gather a little honey, I have come to the conclusion that $I$ don't want 'em! I believe that for work there is nothing equal to a good, rousing swarm of bees which have come off naturally. How they will work!
I have seen 80 swarms made from 13 fair colonies. 67 of these were to raise their own queens, 13 of course having queens already. This was done in June, and the fall found 80 very poor swarms, and spring found 80 hives containing combs and dead bees. Do you want to try it?

Yet this man said he saw in the pr per where a bee-keeper increased his bees from one swarm to six and se cured 90 lbs . of honey, and that he didn't see why he should not do just as well, in fact he would be satisfiel with the increase, not minding the honey. Well, I reckon he didn't "mind the honey."

I wish I knew just how many be ginners in modern bee-culture hal tried this dividing business and with what success. Can't a few of them just tell the Bee-Hrve in a few line how it worked with them? I beliere it would interest us all, and perhaps be a good sign-board to direct the nel comers this spring.

Pittsfield, Mass.
[As friend Smith suggests, we hope any of our readers who have practica dividing will tell us how they succeed ed--or if they did not succeed them tell about that.]

## Swarms Reported.

## The Nutmeg State Leads the Van.

 HE following early swarms har been reported:--I captured m. first swarm of Italian bees 1 p. m. Wednesday, May 84 they swarmed on a small peach-trtesout 2 feet from the ground-Geo. 8. Pratt, Bridgeport, Ct.

My first swarm issued May 9th. Bees are in prime condition, and the prospects look fair for a good crop of honey-Wm. Bitzer, Wheeling, W. Va. I have had four swarms come out. Ihad one come out last Thursday, Hay 9th, also one Friday, the 10thloth of them skipped me. One of them didn't alight at all, the other hung about five minutes. I had got every thing all ready to hive them Then they took wing and went to the roods. I had two come out Sunday, May 12, have them hived all rightL. J. Waldo, Merrow, Ct.

We had our first swarm yesterday, Nay 10th; good for ${ }^{\text {N Northern Conn. }}$ How many ahead?-R. Stratton \& Son, Hazardville, Ct.
My first swarm of bees came out Nay 14th, the queen being Carniolan, adaughter of imported from Frank Benton; the bees are yellow, showing Italian blood. I think this early for Western Penn.-Samuel Heath, Tidal, Penn.
I had two large swarms May 23d. White clover in full bloom; commenced to bloom about May 4th.-F. S. Thorrington, Chillicothe, Mo.
[By comparing the above with last season, we find that Harker Bros., of N. J., reported a swarm May 10th, A. N. Griswold, May 22, 23, and L. J. Waldo the 25 , both of Conn. This shows the present season to be nearly tro weeks in advance of last year. Priend Heath's remarks about Carniolan bees leads us to wonder if they swarm as early as the Italians. As greater prolificness is claimed for them they ought to cast earlier swarms. Our first swarm came out the 31st-the last day of May. We shall have to report taking off new honey-one box of apple blossom !but whew! how quick "ye editor" made a shrinkage in that pile(?) of sireets - and longed for more.]
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early hives possessed is shown by the following, relating to the "Gravenhurst Hive," which was made of straw, the frames being "removed from the bottom, so that, in order to open one of these hives, it requires the strength of a strong man to invert it, especially if it is full of honey. The Gravenhurst hive is not intended for ladies." No, we should think not! Just imagine what a job it would be to "roll over" 100 of those hives and remove the frames for examination !

Messrs. Dadants prefer the "Hanging Quinby" frame (size $18 \frac{1}{2} \times 11 \frac{1}{4}$ ), and after mentioning the principal frames in use say: "It is evident that profit can be derived from bee-culture with almost any style of frame; but it is certain also, that, in every pursuit, some conditions produce better effects than others, under the same circumstances." While they prefer the Quinby frame as giving them better results in wintering and in honey-production, they do not advise the beekeeper who already has Langstroth to change to the Quinby; but they think beginners who winter out-door should use the latter. Bee-keepers who have compared small or contracted hives with those of larger capacity will see the force of the following: "As the harvest of honey is always in proportion to the number of bees in the hive, and as a large colony requires no more labor from the apiarist than a small one, the hive should afford the queen sufficient space to deposit all the eggs which she is able to lay in 21 days."
(Continued next month.)

## E-HIVE.

R. Stratton \& Son, Hazardville, Ct., manufacture the best crate for protecting the outside of sections that we have seen. One side is made remorable to faciliate the taking off of completed boxes of honey.

Don't forget to read all the advertisements and Special Notices-it will pay you.
"Scientific Queen-Rearing" is the name of a new book having 160 pages, and written by Mr. G. M. Doolittle. It is published by Messrs. T. G. Newman \& Son, 925 West Madison St., Chicago, Ills. It is well printed, con. tains numerous engravings and is sold for $\$ 1.00$. A review will be given in next issue.

Though apple bloom has been very abundant in this section and many of the colonies in good strength, but little honey has been stored in surplus boxes. It was several days after a part of the trees were in full bloom before the bees showed any enthusiasm in gathering the nectar, and then it came in very slowly.

Some bee-keepers allow the bees to rear a great lot of drone brood and then shave their heads off (we mean the drones' heads) to prevent their hatching. This is not wisdom or economy. Either remove the drone comb next to outside of hive for the bees to store honey in, or take it wholly away giving worker comb instead.

We wonder if the average bee-keeper has as much dread of fastening starters into the sections as we have had? To us it has always been a disagreeable job, and when possible was either put off as long as we could or we induced the novice to try it, as suring him that it was not a very difficult job (?) We have tried the Park er machine and other methods, none
of which were satisfactory．Well，the other day we had quite a lot of boxes requiring starters，and this＇time the novice wanted us（retribution）to put them in，so at it we had to go，and this is the way it was done：Placing our oil stove on the work bench we then hunted up the cover of a seam－ less tin pail，which would hold $\frac{1}{4} \mathrm{in}$ ． in depth of melted wax，and placed orer the stove，turning down the flame atter the wax had melted so that it rould just keep liquid．The fdn，was then cut into squares of $4 \frac{1}{4}$ inches， and then cut across from corner to cor－ ner in the shape of an＂$x$ ，＂each square making four 3 －cornered starters．A－ bout 25 sections were then placed with the grooves up，close to the stove． Now by taking a starter，dipping one elge in the melted wax and quickly setting it on the center of the section， lengthwise，it became a fixture．When a number was thus prepared the sec－ tions were then folded up．By hav－ ing the wax of the right temperature it is but little more than fun to put in starters；and the best part of it is that when once in place they do not drop off．

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Brood fdn．，per lb．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．．． 45
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