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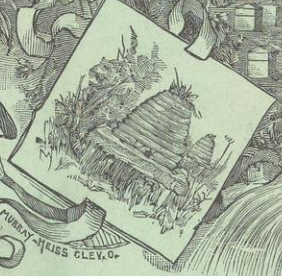
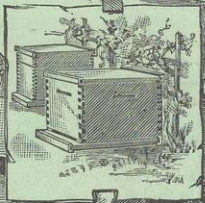
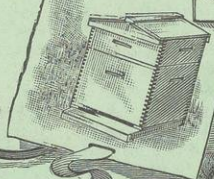
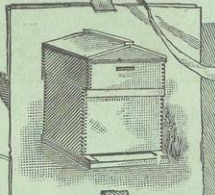
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AUG. 1900.



PROGRESSIVE BEE-KEEPER

A JOURNAL
DEVOTED TO BEES, HONEY AND
KINDRED INDUSTRIES.



PUBLISHED BY

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HIGGINSVILLE, MISSOURI.

MURPHY & LEISS CLEV., O.

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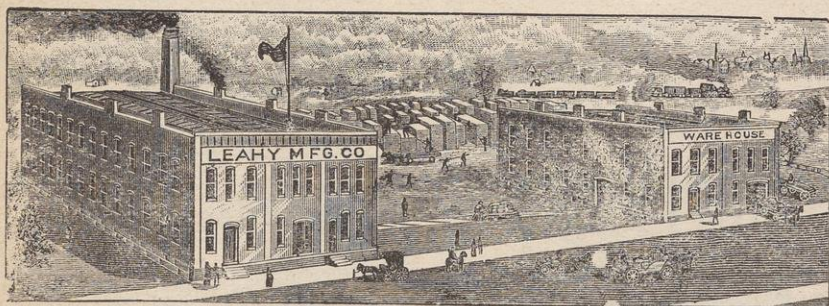
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The Progressive Bee-Keeper.

A Journal Devoted to Bees, Honey, and Kindred Industries

50 Cents a Year.

Published Monthly by Leahy Manufacturing Company.

Vol. X,

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No. 8.

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COMMENTS.

F. L. THOMPSON.

You see, Somnambulist, what Mr. Rouse has to say to you on page 188. I trust that the admonition will do you good, and that hereafter you will make no reply to any strictures we may see fit to make upon your sentiments, much less criticize your critics—fie! fie!

"An old-fashioned acquaintance of mine complains that reading a modern Review leaves him with an unpleasant sensation, as of having dined wholly off honey. The book reviewer of today is altogether too lenient, too considerate, too apologetic, too blandly deferential a creature to suit this reader's robust taste....

An ill-natured reviewer who takes pleasure in saying things likely to wound the feelings and cloud the prospects of his author, seems to me about as respectable a person as the scamp who strews tacks on a cycle path. But deprecating a return to the old gall-and-wormwood style of criticism does not estop one from regretting a tendency in the modern Review to eschew fault-finding altogether and become a mere honey-pot. It can hardly be denied, I think, that the criticism of a modern reviewer is mostly of a sort that does more credit to his heart than his head. His eagerness to praise constantly impels him to over-praise—to lavish upon mediocrity terms that should be reserved for genius. I have often thought that the sanguine American lady who was gently taken to task by Matthew Arnold for asserting that excellence is 'common and abundant' must have been a great reader of Reviews. The habit would easily account for her cheerful delusion.

Perhaps, after all, a slight infusion into the honeyed sweetness of the new Review of the spice and vinegar of the old might not be unsalutary."—W. R. K., in *The Dial*, May 16.

By the way, Somnambulist, is there any difference between the cruelty of justice in crushing wrong and the cruelty of slander, etc., in creating it? But, of course, don't answer.

Home.

How dear to mortals is the ingle, home,
 A name beloved by men the wide world o'er,
 Loved where Pacific waters lash the shore,
 Loved where Atlantic waves upross the foam,
 Earth has few names so sweet; where'er we
 roam,
 In distant lands untouched by foot before,
 Grim, ancient countries of peculiar lore,
 Home, hut or palace, underneath the dome
 Placid with sky, is title passing dear,
 One time the Saviour in old Nazareth
 Resided. Mary, on whose lap He clomb,
 The Master loved and gladdened many a year,
 Each light command observing, until death
 Recalled Him to His Father and His home.

—Will Ward Mitchell.

"It is with considerable reluctance that I have decided to discontinue the Department of Criticism. I am led to take this course for the same reason that I dropped the other departments, viz.: the gradual accumulation of excellent original articles for which I have no room. I believe that more good will be done by the publication of these articles than in criticising what appears in the other journals. As I said before, the dropping of these departments is no reflection upon the men who conducted them; it simply means that I think the space can be better used in a DIFFERENT WAY."—Editor of the Review, in the April number.

Look on that picture—and then on this:

"The Department of Criticism, in the Bee-Keepers' Review, which for some time has been in charge of Hon. R. L. Taylor, appears for the last time in the April number. Editor Hutchinson gives as the reason for its discontinuance: 'I think the space can be better used in a DIFFERENT WAY.' No doubt about that. Mr. Taylor is a clear and forceful writer, and undoubtedly a good bee-keeper, but how he could consent to put in his time and space as he sometimes did, in petty pickings and hypercriticisms" (etc., etc.—too childish to quote).—*American Bee Journal*, p. 2st.

Well, Somnambulist? Here is one of your bland, gushing writers, deliberately twisting and omitting the truth in order to make it appear that Editor Hutchinson implied a reflection on Mr. Taylor, when he did nothing of the kind; and you would wink at the slander, and pat him on the head, and call him soft names? If you had your way, Somnambulist, would you open the prisons and turn loose the convicts because it is cruel to punish them?

Mr. Hutchinson is undoubtedly right in preferring excellent original work to comments on the same, and is to be congratulated on having secured so much of the former material as to make such a step necessary; but we may also include the wish that the Review be made larger, so as to be able to include Mr. Taylor's work, and justify its name. In two ways, Mr. Taylor's criticisms are of especial significance and value: in piercing to the essential facts of every issue, through the cloak of glittering generalities which our leaders commonly affect; and in insisting on the proof for assertions made. Non-critical articles

must be excellent indeed, and numerous, to wholly crowd out that work. No, Somnambulist, I would not willingly change glasses with you.

"Bees will almost starve on glucose even if diluted with water, as its real sweetening power is very low."—*Gleanings*, p. 139.

Another sample of the electrifying science by which this paper is lately distinguishing itself. Sweetening power equals nutritive power—let's all buy saccharine—300 times sweeter than sugar—and extract and sell all the bees' winter stores, at least a dollar and a half extra profit per hive—whewation!

"It is very seldom that there is any rain at all in Colorado."—*Gleanings*, p. 42. "Everything is so dry in Colorado—no dew and no rain, or comparatively none."—*Ditto*, p. 492.

I really must revise my meteorology, and arithmetic, too, for this puts me sadly behind the times. Rainfall of the eastern states somewhere about 50 inches per annum, I believe; rainfall of Colorado somewhere about 12,—or 12 to 15; proportion about one-fourth; therefore, one-fourth equals comparatively nothing. How foolish I have been to put the saw and smoker under cover at night. This April the rainfall was only a fraction under ten inches for the whole month, which is nothing, or comparatively so. What I have mistaken for dew, in summer mornings in the irrigated districts, must have been an optical delusion, though the frequency with which that delusion recurred is certainly very queer.

"The majority of farmers' wives will not take pay for milk."—*Gleanings*, p. 400.

At last I believe I see what meaning we should attach to "the majority." It means not the majority of the whole, as I have stupidly supposed, but the majority of a certain number limited at will by the imagination. That explains how it was that in my travels in Connecticut, New Hampshire, and Utah, the ma-

majority, in fact every last woman whom I tackled for milk (and I applied to a good many) didn't give it to me free. Of course the explanation is that I came across the members of the minority of a certain class—ah—there is something about that explanation that is not entirely lucid, but I suppose I need another half-mustard-seed of the faith that removes mountains and passage-ways in plain sections.

Some time ago Mr. Harry Howe said in *Gleanings* that he would carry milk as a part of his lunch in going to out-apiaries, but it was impossible to carry it on his bicycle. It was unkind, but I laughed Homerically. Why, any old milk-can, with a strong handle, will do—just slip it over the handle-bar. I have carried it thus hundreds of times. But perhaps Mr. Howe is of the number of those who make a letter S of themselves on the wheel, and affect drooping handle-bars, which nothing will hook on to. Then let him hereby understand that I have carried milk, or rather periodical installments of the same, hundreds of miles on my last trip, in an India-rubber hot-water bottle, holding three and one-half quarts. I generally had it wrapped up as part of a bundle, and no one suspected I had liquid goods on board. Such a vessel only weighs 18 ounces, and takes up little more room at any time than the milk itself does. An occasional rinsing with baking soda keeps it sweet. At first liquids taste a little of the rubber, but that soon disappears. I am using it now constantly in carrying milk to out-apiaries.

"It is claimed that ALL of the wax can not be gotten out of the combs in this way [by the solar extractor], but if any person will take off the glass frame, after the most of the wax has run out, and with a trowel, or something similar, rub down the refuse, so as to break down the cocoons that may remain whole. I think he will have no trouble in securing fully 99 per cent. of all the wax contained in any comb, no matter how old or tough they may

be. At least I never find any such quantities left in the slumgum from my wax-extractor as others tell of, and I have boiled and pressed it many times to see if I was wasting enough to pay me for putting it through this process, as many claim they do."—G. M. Doolittle, in the *American Bee Journal*, p. 228.

I believe I am any person. In the late nineties I was using a solar-wax-extractor at Montrose. I did not allow any loading of the extractor to remain more than one day, as a rule, when the sun shone all day, but on the other hand did not spread it deeper in the pan than one thickness of comb or one to two inches of scrapings and other fine refuse. I took off the glass frame every day, and with something similar to a trowel rubbed down the refuse so as to break down the cocoons that may have remained whole. I kept this up two seasons before treating the refuse, which thus accumulated to 225 pounds. I then boiled and pressed it by the Beckwith method, as described in the *Review*, and obtained a 55-lb. cake of fairly good wax, besides several pounds of chips and scrapings. In an article by H. Rauchfuss which I presume will appear in the *PROGRESSIVE*, [see page 244, this issue.—Ed.] he tells of a similar experience in securing about the same percentage of wax, and asserts that the stronger the pressure, the more wax will be squeezed out. It will be noticed that Mr. Doolittle says nothing of his method of pressure. I suppose it was by his well-sweep and rendering-kettle arrangement, pressing a whole sackful of stuff at once with only one's weight and a limited leverage. But that is not much per SQUARE INCH. By the Beckwith method, which to be sure is rather tedious, only a small surface is pressed at once, and the pressure per square inch is correspondingly greater, and still greater with the powerful screw and lever which Mr. Rauchfuss uses, also with a small surface. That point of SMALL SURFACE under pressure at

one time is one which Mr. Gemmill entirely overlooked in his press, and which Mr. Ferris also seems to have disregarded in the latest form of his. In this age of exact and scientific knowledge, the wax-rendering question is not settled until we cease referring to "pressure" in the customary vague way, but know what we are talking about as well as if mentioning volts and amperes.

I should mention that I did not stir up the contents of the extractor after most of the wax had run out, as Mr. Doolittle advises, but as soon as it was heated so as to be thoroughly disintegrated by the stirring.

Mr. H. Rauchfuss and I don't agree on the best plan of super records. His plan is to put one extra small stone on each super which needs inspection before very long, and two such stones on each one which needs attention the next time. That seems to me too indefinite. He says it is an advantage to stand in the apiary and tell at a glance, by observing the stones, just what work is to be done. My plan is to mark on every super inspected the date on which I think it should be looked at again. In this way I only look at those supers every day which have the date of that day on them, marking a fresh date on any found not ready.

Morrison, Colo.

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Good Things in the
Bee-Keeping Press.
Somnambulist . . .



The editor of the Review has sought to secure the best efforts by offering a prize for the best article written on a given subject, the June number being devoted to "The most hopeful field in bee-keeping. With one exception the writers presented with much force, "The improvement of stock" as "the most hopeful field." J. E. Crane was the successful prize-winner, and we here present you some of his thoughts:

"While the fruit-grower has his improved fruits, the florist his improved variety of flowers, the sugar producer his improved beets, the dairyman his improved cows, the wool-grower his improved sheep, how many bee-keepers have their yards stocked with improved bees? Yet I doubt if anything connected with bee-keeping is any more susceptible of improvement at the present time as the bees themselves. It is not certain that the great mass of bees today are any better for honey-gathering than in the days of Virgil or Aristotle. So busy, indeed, have bee-keepers been during this nineteenth century inventing hives, boxes, sections, supers, foundation, smokers, extractors, with systems of management, manipulation, and a thousand and one other things connected with bee-keeping, they seem to have almost forgot the possibilities of improving the bees themselves. . . I believe we had better, for a time, look for Apis Dorsata in OUR OWN YARDS. If we fail to find it, we may, perchance, find something even better."

Mr. Crane urges improvement in the way of "ability and disposition to gather the largest possible amount of honey," and illustrates the idea he wishes to convey in this wise:

"In visiting a farmer not long ago, he showed me his choice herd of dairy cows. As we passed along he would talk in this way: "This cow gave me last year 400 pounds of

butter; this one 384 pounds; this one 418, and this one 300 pounds when two years old." I complimented him on having so fine a herd, when he replied: "Yes, they are quite satisfactory now, but it has taken me quite a number of years and a good deal of care to bring them up, but it pays." He has the same breed today that he started with, but by constantly breeding from the best he has, I presume, nearly or quite doubled the product from his dairy. Now, suppose that instead of trying to improve his stock, such stock as he had, he had spent his time trying one breed and then another; or in improving his stables, or his butter-making implement, or marketing packages, or milking machines, what would have been the result? While he has not overlooked these smaller matters, he saw an open field for improvement which he occupied, and has made his business a success. Will bee-keepers be as wise?"

He has tested the practicability of his theory, and is most decided in the opinion that a similar experiment on the part of those most interested, would prove not alone pleasant, but surprisingly profitable.

In the same issue E. S. Miles unfolds and bears aloft a banner, and as it unfolds to the breeze, our eyes are greeted with "Improvement in the Direction of Non-Swarming Strains of Bees is the Most Hopeful Field."

S. E. Miller, a former member of the PROGRESSIVE family, follows with an article headed, "Improve Your Stock by Selecting the Best Queens and Drones in Breeding." Some of his best thoughts, in the eyes of your humble gleaner, are these:

"I take it that the question really is, How shall we best improve the opportunities that lie around us? If my bees can not gather honey that will bring 8 cents per pound (for extracted) I would rather have them gathering 4-cent honey than doing nothing. Sweet clover here comes at a time when the bees have practically nothing else to do; and I wish there were a thousand acres or more within reach of my bees. It can easily be induced to take the place of more noxious weeds, and I have no doubt that many of us will live to see it planted as a profitable farm crop, especially for soiling, and redeeming dry clay soils. There is much room for thought and labor as well as improvement in this field. We will, for example, suppose a case of an apiary consisting of one hundred colonies, and take for a full crop, or 100 per cent, 100 pounds per colony (you may suppose it to be either comb or extracted, whichever suits you best.) Now, taking apiaries as they run, is it not a fact that among the 100 apiaries we will find some colonies that do not store over 25 per cent of a full crop; while others in the same yard, having access to the same field will store over 100 per cent, and still others will store all the way between the

two extremes? Do the best colonies fly farther and gather sweets from fields unexplored by their neighbors? Do they work earlier and later, and make more trips in a given time? Do they carry heavier loads? Do they work on flowers that other bees pass by because their proboscis is not long enough to reach the nectar? Or do they just work and work, while many of the other colonies hang around the hive? Probably no one will answer these questions; but the fact remains that some colonies are far ahead of others; and this, in my humble opinion, goes to prove that there is vast room for improvement in the strain of bees we are keeping. If every colony were equal to the best, what a vast difference there would be in our pocket-books after the crop is sold... Let us pick out ten of the best; and then out of the ten let us take five of the very best. Now, I mean the best in every way; not necessarily the ones having the most yellow bands. I think we should be satisfied with three, and not chase after golden bands at the expense of some more substantial quality. We want first, bees that gather more honey than their neighbors; second, queens that will fill a hive full of brood in a short time, and put a host of workers on the field of action just when most needed. Third, gentle workers; fourth, markings or color... Remember that the gold that comes into the bee-keeper's pocket after the honey crop is sold, gives greater and more substantial satisfaction than the gold bands across the bees' backs."

Would that these offerings might stir the souls of sleeping bee-keepers all over the land, and arouse them to action. Awaken them to the fact that golden opportunities await, just outside the door, to be grasped by the hand of welcome. The mysteries of the dark room of photography are truly wonderful, but not more so, nor nearly as much so, as the possible bringing out of hidden wealth of beauty and utility which literally encompass us round about. It takes time and labor to accomplish almost anything, and in most things it takes much longer to become interested than it does in the various works of bee-keeping. By keeping constantly at it and becoming familiar with the work, everything begins to open up, and you find the field rich with surprises. Again, no matter how long you are acquainted with it, no matter how well you know the work, it never ceases to bring wonderment in its study. The only question is, shall opportunities go begging, or shall we welcome and develop them? Were it the better to make use of

our talents, or to bury them? Verily it seems to be a case of "the harvest is ready, but the laborers are few." One writer (C. E. H.) threw his influence towards "association and co-operation" as the most hopeful field, and summarized as follows:

"Advantages:

- 1st. Saving of freight rates;
- 2d. Uniform grading;
- 3d. Encouragement of cash buyers;
- 4th. Relief of individuals from the trouble and annoyance of marketing their own crop;
- 5th. Stiffening of prices by knowledge of markets, etc."

In addition to this feast of good thoughts N. E. France gives a lively account of a day's work, which sounds very like the tale of an outing, and did everyone copy his style, bee-keeping would be one continued picnic. His description of a practical movable tent may prove of service to many, so here it is:

"This bee-house has simply four corner posts seven feet above the ground. The sides of the house are each ten feet, with a foot-wide board around the top and bottom. Cheese cloth, two yards wide and forty feet long, forms the entire siding, and a heavy ducking cloth, 10x12, forms the gable roof, which gives plenty of shade in hot days and sheds water if caught in a shower. Small strips of leather are sewed to the edges of these cloths through which to drive the wire nails to hold them in place."

One other point of practical value he furnishes is:

"Almost all kinds of gummed labels will not stick to new tin cans or pails, but they will stick for all time and not wash off, if put on with a paste made of demar varnish reduced with alcohol."

With two slightly conflicting opinions, also found in this number of the Review, I will close:

"Of course, we might produce extracted honey, but were everybody to raise extracted there is no telling where the price would go. I know by experience in selling honey that a great many people won't use extracted honey at all. There is an attraction about nice comb honey that appeals to the eye; and what looks pleasing, tastes good."—C. E. Hatch.

Against which I place N. E. France's statement:

"Our home-market consumes about 10,000 to 12,000 pounds of extracted honey, and 500 pounds comb honey per year."

Naptown, Dreamland.

EXPERIENCE AND ITS LESSONS.

R. C. Aikin.

(Continued from July PROGRESSIVE.)

CHAPTER XXIX.

Getting Extracting Combs Cleaned or Dried.—Wholesale Outside Feeding; How to Do It.—Something About Solar Wax Extractors.....

I have been writing of the production of extracted honey, but principally of removing same from the hive and getting the bees out, and of the process of extracting. This article will scarcely get to the readers to be seasonable for any discussion further on the same lines, but perhaps there are yet a lot of extracting combs wet and sticky. The getting the combs dry is quite an item.

My preference is to let the bees do the work in the open air. I take the chambers of combs and set them in or near the yard, first putting a bottom board or something down to keep the combs and hives off the ground, then pile the super chambers on top of each other from 3 to 6 high. In piling them I set them as loosely and openly as possible, instead of closely, as in piling smooth with the sides and ends all parallel, set one with the sides running say to the north, the next to the northwest, the next as the first, and so alternating that there may be the freest communication possible. In this way I spread out 25, 50 or 100 supers, and let the bees have a free pitch in. Never put out a half dozen or so for a whole apiary of 50 or 100 colonies, for as soon as they find it they rush out, and there not being room for all to get a lick, they pull and quarrel, and in trying to crowd each other out, tear the comb to pieces. With

surface enough so all can get at it, the combs are little damaged.

Another scheme to keep them from tearing the combs, is to dip the combs into water or sprinkle or spray them, thus the adhering honey uniting with the water becomes SWEETENED WATER instead of HONEY, and this fact and the increased quantity cause less excitement or eagerness to get at it. If the combs have MUCH water in them the bees will be slow to clean them, yet if there is a LITTLE sweet, some of them will keep pegging away till all is out, but with little or no excitement.

If one has not enough combs to busy his apiary and give all comers a chance without crowding and pushing each other, better place on some colony or colonies to clean. There is, however, a trouble that comes up so often in placing these chambers over colonies for cleaning, which makes it usually not to be desired, viz.: they will lick the combs all right and remove the stickiness, but so often the honey licked off is shoved back into the comb. Such honey HERE would candy before spring. If they would carry it below all would be well; but to stick it back into the comb is not what we want. In the open the comb is totally dried.

I have once or twice left combs over winter. A year ago I extracted a lot that had been in the house till in the winter, and extracted in December, and as the weather was cold I could not have them dried till spring. The honey left candied on the combs. In the spring I dipped, or rather soused, the combs into water, and put them out. The water liquified a considerable, and the combs were tolerably well cleaned.

There is a knack in filling combs with water to do it expeditiously.

I undertook to squirt it in with a spray pump, but this seemed quite tedious, so I took a much more speedy way. I just put a lot of water in a small tank, then I would seize a comb and chuck it into the water, edge first, using considerable force. As the comb struck the water, it dashed it back, making a hole in it, and when the water closed in on the comb again, it came back with a slap that sent it into the cells. I found this more rapid by far as compared with the pump, and I believe as effective.

I sometimes use a plan like this when feeding. When one has a large apiary and is melting combs into wax frequently, there is an accumulation of unsalable honey that we wish to feed. If the feed is wanted in any certain colonies, of course we must put it there by filling combs and giving direct to the colony, or we may give it in a feeder; but if the feeding is to be general and we do not care much which colony gets it, but that all get a portion, the quickest way is by general exposure.

I take these off grades honey that I accumulate (usually in the solar wax extractor), dilute them with water to about the consistency of raw nectar, making them $\frac{1}{2}$ to $\frac{3}{4}$ water. When feed is given in any other way than in the comb, as in feeding by combs of honey, it should always be quite thin. If thick, the bees cannot load near so quickly and well, and should they get into the honey or get it onto their bodies, being so thick and tenacious, it is hard for them to get cleaned and back home. Watery honey, or rather sweetened water, will not cause a bee nearly so much inconvenience when daubed with it, and the bee can far more quickly handle it.

I usually fill this thinned honey

into the combs either by the "sousing" method hereinbefore mentioned, or by placing a tank or can with a faucet above a broad pan or tank, then hold combs under the faucet and constantly shift the position of the combs till the stream has struck and largely filled one side, when the comb is reversed and the other side treated likewise. The pan or tank beneath catches all that slushes or splatters off the comb, and also what drips from the comb when set up edgewise or hanged in the super or chamber. In this way I often feed 400 or 500 pounds of honey that has been watered to 1,000 or 1,500 pounds, setting the extracting combs and chambers about the yard as before explained for drying them after extracting. Of course if your neighbors have bees within a quarter or a half mile, you will feed some of them, too, under the circumstances, yet it is possible to feed in this way and no trouble with neighbors' bees.

Suppose it is a time that there is a dearth of ANYTHING in the fields, so there are very few bees out, or if the weather also be a little bit cool. Take any condition that will cause the bees to remain quiet at home, yet warm enough that they can fly if they wish, and at such time a lot of combs may be cleaned, or several barrels of sweet water be fed within $\frac{1}{4}$ mile of other bees, and they get little or none of it. Bees will go out the forepart of the day and search, but if nothing is found they settle down to a sort of rest or quietness the rest of that day, the sun and warmth of the next morning again drawing them out to roam and hunt.

Taking advantage of such conditions, I have gone to an apiary in the afternoon and fed several pounds of syrup, and all done before dark. The first thing is to put out a lot of

the filled combs, then go to each colony and drop a teaspoonful of the liquid sweet on the alighting board, and at the same time, if no bees are there to receive it, strike the hive to cause the bees to rush to the entrance for defense. The guards rushing out, run into the sweet, stop and lick it up, take it back to unload and communicate with others, and in a very few minutes the whole apiary is in an uproar, every colony entrance full of guards and excited bees, others sailing out to see what is wrong and where the sweet comes from; thus in a very few minutes the whole apiary is going pell mell after the feed. A bee from a neighbor's hive happens along, scents the feed, loads, and goes home; a few others catch on and return with it, and so by and by they, too, are out in force, but your own having the start of your neighbor's, will have the goods out of the way before the others get to know where it is, except possibly a very few.

This about feeding is not seasonable, yet it comes in so nicely with the description of cleaning combs that I give it now. It is hard to tell everything just at the time it is most likely to be heeded and put into practice. More than this, the man who is alert will store in his memory such items of interest as he may find from time to time, and a principle or idea is more likely to be properly applied if thought over and over, thoroughly digested and analyzed before putting into practice.

The use of the solar extractor might well be mentioned here. I notice that a goodly number are advocating the steam machines. There is no process that is so simple and inexpensive as the solar. It is a method that requires so little time or bother in its management that it

would seem that even though an apiarist had a steam machine he would want a solar. In our gathering of scraps for wax there are always some that have more or less honey in them. It may be a few cells of candied, a few double-decked cells, or even a scattering cell here and there. To render with steam is to waste all these, while the solar process saves all. Even if the solar does not remove the wax so thoroughly as the steam process, the refuse can afterwards be subjected to steam. One feature in favor of the solar process is that the very blackest and dirtiest of combs will give a nice yellow wax, but the same by steam or water often gives us a very inferior grade of dark wax. The solar process saves all the honey, and this alone ought to more than pay for a second treatment of the refuse from the solar.

As to the size and shape of a solar, the most of them are too small and too flat. Many are made long from north to south, and narrow the other way, getting but the minimum of heat, unless shifted toward the sun frequently. Make your solar long east and west, by all odds longer east and west than north and south; then you get the benefit of the sun almost all day without shifting. Remember, too, that the effectiveness is very much increased by an increase in size. Do not make your solar too little.

Several things lead me to the belief that we not only want our solar wide east and west, but that we could improve by making them more nearly perpendicular. The upright solar, however, is not yet a practical invention, yet it might pay some genius to study the matter somewhat. I hope myself to know more of the matter by the time this comes before the readers of the PROGRESSIVE.

Loveland, Colo.

Recapitulation by G. M. Doolittle.

Combs are Little Damaged.—Bro. Aikin, that is what we have been told before. If we will only put out enough combs, either those which have been extracted, or part filled sections, so the bees will not crowd each other, or get the job of cleaning up done much before night, the "combs are little damaged." Wonder if Bro. A. realized when he wrote about this matter of having combs cleaned in the open, what a nice job it would be for a novice, yes, or a practical apiarist, to guess just how much to put out so that it would last till nightfall, with an apiary of from 50 to 100 colonies? Dr. Miller has told us something near the same thing Bro. A. has here, only he wrote about having part filled sections cleaned. He piled them up loosely in the cellar, and when the right day came the cellar doors were thrown open and the bees given access. Result, cleaned combs, with "*little damage done.*" Well, I am generally willing to "stake" by Dr. Miller, so last fall I tried the plan, putting out in the bee cellar the accumulation of part filled sections from both apiaries. On the forenoon of a fine warm day I opened the doors, and in one-half hour the yard presented the appearance of a fine flow from the linden or basswood, and the flow did not seem to lessen, so but what at nightfall it seemed unabated. The doors were shut when night came, and on the first day the bees did not fly the nice (?) cleaned combs and sections were brought to the storage room. An examination showed that about five-sixths of the honey had been taken, so there was enough left to insure against crowding, or "pulling and quarrelling," but, notwithstanding, very many of the combs which the sections contained in the morning, lay as a pile of rubbish on the cellar bottom in the evening, while very many more were from one-fourth to three-fourths cut or torn out. Fully one-fourth of the sections which the

bees cleaned up that day were so spoiled, as to comb, that they were nearly or quite worthless as "bait" sections. But perhaps I am too particular, and what I would call "being nearly spoiled, Bro. Aikin and Dr. Miller would call only "a little damaged." Or perhaps locality might account for it. But no matter how this may be, my advice to all who have not made a success of, or who have never tried this "outside way" of getting combs cleaned and dried, is to go slow in the matter.

Better Place on Colonies to Clean.

—This is what, Bro. A., we should do, where we do "not have enough combs to give all comers a chance without crowding and pushing." Just so. And my idea is that this is just what should be done, no matter if we have "ten acres" of combs to be cleaned and dried. And as to the trouble of having the "licked off honey shoved back in the comb" in places, if we but place a quilt or sheet of enameled cloth over the frames having the colony of bees which are to do the licking, then turn back one corner of the same, setting an empty chamber on this, and top of the empty chamber the combs we wish dried, we shall have no trouble along this line, unless we give so much that the bees think storing time has come again.

Why Have the Combs Cleaned?—

But will Bro. Aikin please tell us why he wants those extracting combs cleaned? He goes on and tells how he once or twice left them uncleaned over winter on account of late extracting, and how, in the spring, he dipped these left over combs in water, and thus got them cleaned. I have often extracted thus in late fall or early winter, but never thought of having the bees clean the combs in the spring, for I never see any reason for so doing. Nor do I see that Bro. A. gives any valid reason for the course he pursues. To be sure, he says "the honey left candied on the combs."

But what hurt did that do? With combs in sections, some seem to think that the little sticking to the sides and bottoms of the cells and candying there during the winter, causes the honey in the filled sections to candy the next season, and candied section honey is always very unsalable. But this argument, even if sound, which I do not believe, does not apply with extracting combs, for does not Bro. A. and Doolittle advise selling extracted honey in the candied form? And for those who so advise, the little "bait" (candied honey) left in the cells, will help our extracted honey to candy, in shape for market, much sooner than it otherwise would, and thus we are gainers along this line. Yea, more! We save all the work and worry of having these combs cleaned and dried. And now let me say candidly that I think this drying process of no use whatever. I used to do so, but of late years I don't, no matter whether it is combs in sections or frames. And the reason for my not doing so longer is that I find that where either extracting supers or sections having comb in them, (the honey being extracted from them in the fall), are placed in position for storing at the time when they should be so placed at the EARLIEST BEGINNING OF THE HONEY HARVEST, the bees will clean out all of the honey in the cells to these combs, whether candied or not, before they will store any honey from the fields in them. And if this is so, a thing which I have proven many times, how will it cause that which is stored from the fields to candy, or what reason is there for having the bees clean the combs either in the fall or spring? Lest some may think I have contradicted myself, I will say that I tried the Dr. Miller plan of having combs of section honey cleaned, last fall, to save the process of extracting the honey from part filled sections. Hereafter I shall either extract, or feed from above an enameled cloth and empty super, in

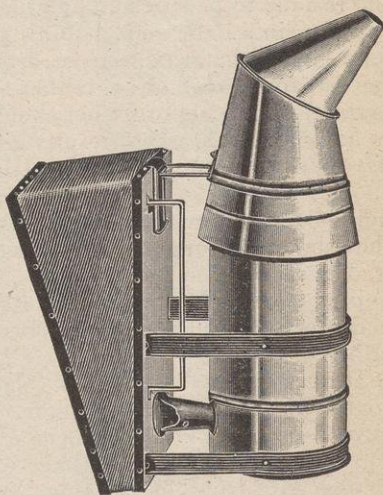
case of part filled sections, as I have formerly done.

Filling Empty Combs.—I don't like Bro. A.'s wholesale outside feeding, and never did, preferring very much to give to the "poor and needy," (and to all) as "their necessities require," rather than adding very largely, and out of proportion to the "rich and the affluent;" but I think I can help the reader more by telling them how to fill combs with thin syrup or honey, than by giving my reasons for feeding each colony what it needs inside of its own hive. Now, the how of filling combs, is all told by Bro. A., under his tank and faucet plan, except the one essential thing. That *essential thing* is a pan whose bottom is of the same size as the outside of your frame. Get your tinsmith to make you one having a bottom of that size, and four or five inches deep. After getting it home, punch the bottom full of holes, using an awl or wire nail from one-sixteenth to three-thirty-seconds in diameter, punching from the inside out, and having the holes about three-eighths apart. Now hang this pan to the faucet, let the stream of syrup in the pan by opening the faucet so it will keep the whole bottom of the pan covered, or if half full it will do no harm. Then have your boy, girl, or wife, hand you the combs, and presto! there they are filled, just as fast as you can handle and turn them. Now having them filled, set as many in each hive as the colony needs, and you have just a little the nicest way of feeding syrup or thin honey there has yet been proclaimed to the world.

Amen and Amen.—To the two paragraphs before the last two in Bro. Aikin's article, I wish to say amen and amen. Read them over, once, twice, three times, or as many more as is necessary to get the matter stamped in your memory perfectly. Seasonable articles are good things, but the man who cannot in some way remember a good thing, written out of season, long enough to put it in practice when the

proper time or season comes to use it, will never make a *successful* bee-keeper. Why, the successful, alert bee-keeper picks up his knowledge all the year around, year in and year out, and has it always at "his tongue's end," ready to tell it or put it in practice *just at the right time!* And Bro. A. has said none too much in praise of the solar wax extractor. I have tried water, steam, presses, etc., only to come back to the solar wax extractor as *best* of all. And by having a piece of wood or metal shaped to fit a portion of your metal surface upon which the combs or scraps are thrown, and by scraping together the refuse while hot, and applying a portion of your weight, by way of the hands, on the shaped piece, you have a press which will secure you so nearly *all* of the wax, that what is left will not pay to fuss with afterward.

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A Model Wax-Press.

H. RAUCHFUSS.

In regard to Mr. Aikin's method (page 65) of getting almost all the wax out of combs by means of a solar extractor big enough to allow the residue to be spread out thinly and remain a long time, I think the only reason that wax keeps on draining out for a week or so, is that the extractor is too big to get hot enough to accomplish the same result in a day or two. And as to not getting enough wax out of the residue by boiling to pay for the trouble, after the solar extractor gets through with it, I have obtained some wax by boiling it under water in a sack, and pressing, and it was not black either.

It does not pay to put old, black combs in the solar extractor. I have done so, spreading them out so there was not more than one thickness of comb on the tray, and then crumbled and stirred them up, without getting a bit of wax. The cocoons absorbed it all. But from other combs of the same lot I obtained several pounds of wax by boiling them in water.

I think the proper principle is to press the slumgum under boiling

water, and the greater the pressure the better. Labor is saved, and a quantity of the finest grade of wax obtained, by first running most of the combs and scraps through the solar extractor; but it pays, in my experience, to treat the residue from the solar, and the oldest combs, by boiling and pressure. The cocoons absorb a certain amount of wax that stays with them, even under water, and can only be removed by pressing. In boiling slumgum with water in a can on the stove, I found that about as much wax was afterward obtained from the lower portion of the mass as from the upper, showing that the wax does not rise, but clings to the cocoons. From a barrel and several boxes of solar slumgum I obtained about 160 pounds of fairly good wax. I weighed 40 pounds of an average lot of this slumgum, and boiled and pressed it separately, and obtained 11 pounds of wax, making 27½ per cent. That pays.

A lard-press is the proper arrangement for pressing out wax, except that the spout should not be at the bottom of the can, but near the top, so as to allow flooding. I am using a press made on the same principle. It consists of a rectangular frame of wrought iron, ½ inch thick and three inches wide, the frame being about two feet high and fifteen inches wide. Through the center of the top end a screw an inch and a half in diameter passes, turned by a wheel about eight inches in diameter. To this is lashed a piece of gas-pipe about four feet long for a lever. This gives a very powerful pressure, but it is not any too much. Inside of the bottom end of the iron frame is put a two-inch plank to take the pressure from and serve as a support for a common fifty-pound lard-can. In this can is fitted a spout about two-thirds of the way

up, to draw off the wax and water by tilting up the can. Mine also has a faucet at the bottom, but in practice I do not use it. A disc made of two layers of wooden slats, the upper layer at right angles to the lower, nailed together, the slats $\frac{3}{8}$ in. thick and about 1 in. wide, spaced apart 3-16 of an inch, rests in the bottom. The lower layer, fits the can, and the upper layer fits the interior of a cylinder about ten inches in diameter, which I think is about right to get the best results, a larger diameter implying less pressure on the slumgum. Holes 5-16 in. in diameter, $1\frac{1}{2}$ inches apart, are punched in the cylinder, which is made of No. 16 galvanized iron, tinned. The sack is made of the same material of which bran sacks are made, which is porous. A small quantity of boiling hot slumgum is placed in it, and it is put in the cylinder and folded. Over it, under the screw, I have been using a heavy wooden disc, with a thick piece of iron across the center; but this is unsatisfactory, as the hot water and the pressure warps even a heavy hardwood disc out of shape; and a disc of cast iron, about an inch thick in the center, tapering to $\frac{3}{8}$ in. at the edges, I think would be better. The sack and upper disc being in, the can is filled up with boiling water, so as to submerge everything, and the screw turned as far as it will go. The wax pressed out rises to the top of the water, and both wax and water are then drawn off into another can. This flooding keeps the sack entirely free from adhering wax. When not in use, the discs and the cylinder are kept in a vessel of boiling water, so that they are always hot, and no wax sticks. The cylinder I use is riveted down the side like boiler iron. But I think it would be better if, like the cylinder in a lard-press, it

was fastened together only with a pin running through flanges, like the pin in a door-hinge, but removable. Then if the sack ever gets stuck, the pin can be drawn out, and the cylinder will spread out a little, allowing play enough to right matters.

It is a common thing in Germany to press the slumgum under boiling water in just that way, and they have good presses, as good as mine; but some people buy even the refuse from the presses, so they must have a better way yet.

Elyria, Colo.

[In his article in this issue of the PROGRESSIVE, F. L. Thompson refers to the foregoing article from the pen of Mr. Rauchfuss.—Ed].

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Red Clover and Improvement of Bees.

S. P. CULLEY.

About the first of June, as I was coming home afoot from an out-apiary, my attention was attracted to Italian bees working on red clover blossoms. I watched them with interest, and recalled all that Mr. Crane, "Uncle Elisha," and others had then said about non-swarmling bees, improved stock, etc., and my thought was, "What a promising field for apiarists to work it would be to bring those red clover nectaries and those anxious tongues TOGETHER! Those blossoms secrete tons of honey, but alas! nine-tenths of it JUST THE MERE FRACTION OF AN INCH BEYOND THE REACH OF THE BEES! If this fraction of an inch could be bridged over or eliminated, it would mean far more in value than the production of a non-swarmling strain of bees." Then and there I decided to think, write and work on this subject.

Since then I notice that the Bee-Keepers' Review, which had offered a prize for the best article on the subject of "Which is the Most Hopeful Field," has awarded the prize to Mr. J. E. Crane's article on "The Improvement of Stock." In his editorial comments, Mr. Hutchinson says: "It is a significant fact that all of the articles, with one exception, urged us to labor for the improvement of our bees."

Also in July 1 Gleanings, just received, Editor Root has something to say about "the car-loads of honey that annually go to waste in red clover fields for want of bees with long tongues, etc."

Now, here is a problem of vastly more importance than the size of hives, or than non-swarmling—a problem the solution of which would mean a revolution in honey production. And the improvement of bees

by lengthening their tongues is only one-half of it; the improvement of red clover by SHORTENING THE STEMS OF THE FLOWERETS being the other half. It is a problem we can approach from two directions; first, by breeding for long tongues; second, by shortening the stems of red clover flowerets. And anything that throws light on the solution of this problem should be welcomed and utilized. Our bee journals publish columns and pages about things of less importance.

It is a well known fact that the first crop of red clover produces very few seed, and this because the flowerets are not fertilized by the bees. The second crop produces seed, because by the time it blooms bumble-bees (or humble-bees) are numerous enough to fertilize them. With them as a starting-point, together with the fact that honey-bees work to some extent on red clover (and presumably work most on those plants having the shortest flowerets), it is possible—mind you, possible—by saving seed from the first crop, we might find a near cut to the goal, might thus with comparative ease secure a short-flowered red clover.

This year the bees have worked on red clover quite strongly. It is reasonable to assume that they visit and fertilize those blossoms ONLY which have the shortest flowerets. If this be the case, then saving seed annually from the first crop would probably shorten permanently though gradually, the flowerets of red clover. Therefore we suggest that every bee-keeper secure at least a few first crop seed, if no more than a few dozen seeds.

As to the other side—the lengthening of bees' tongues—we should all assist in that also. A few months ago Dr. Miller said something about an instrument for measuring the length of bees' tongues—a glosso-

meter, he called it. So in his enthusiasm, Editor Root, in July 1 Gleanings, says: "Now, Dr. Miller, trot out your glossometer and your long-tongued bees; and to prove our faith by our works, we will pay \$25.00 to the bee-keeper or queen-breeder who can produce the longest tongued bees this season; and \$10.00 to the one who can furnish the next longest. Contest to close by the 1st of October." Who will offer a reward for improved red clover?

There is wisdom and weight in Mr. Crane's suggestion in the Review that we "look for *apis dorsata* in our own yards."

If corn ears can be lengthened by selection; if Lima beans can be made assume the bush form by selection, surely the flowerets of red clover can be shortened.

A higher level of prices for honey is essential to the prosperity of growth and permanence of apiculture. Some excellent suggestions as to co-operation are being made, but not half enough is being said and done.

Taking the country over, it seems the honey crop of 1900 will be light. This should make it easier to secure fair prices.

The price of supplies has sharply advanced, and we have reason to suspect that trade has fallen off. No business can prosper with advancing prices on things it has to buy, and falling prices on the product it sells. High prices for supplies should be offset by fair prices for honey. And the beneficiary of the supply business, as a matter of self-interest, should aid in maintaining reasonable prices for honey.

National and state organizations are good and useful, but more local work should supplement these. Organization by counties, as well as states, is needed, and would pay.

LATER.—The foregoing was written July 5th. Today, July 20th, have just received July 15th Gleanings, and on page 579 are given some measurements of bees' tongues. These measurements are 15-100 to 18-100 inch. We are not supplied with instruments for making accurate measurements, but have already been trying to measure the depth of red clover corolla-tubes, and believe a Missouri FIRST CROP red clover tube is over rather than under 44-100 inch. This would leave quite a "chasm," to be sure,—about 25-100 to 30-100 of an inch. That is to say, a bee's tongue, if 15-100 inch, would lack 25-100 to 30-100 of reaching the bottom of a red clover floweret's tube. If these measurements are approximately correct, then indeed will it be necessary to work on the shortening of the flowerets, as well as on the lengthening of tongues.

But surely a bee's tongue is longer than 15-100 inch. Our theory for a good practical glossometer would be a delicate glass tube, or a number of tubes, made as much like a red clover tube as may be, filled with diluted honey, and bees allowed to take out all they could reach, and then measure the depth of the empty tube. This would tell us to what depth Mr. Bee could use his tongue. Anyway, the two points to be accurately determined are, 1, From what depth of floweret tube can any particular strain of bees extract honey? and, 2, How deep are the red clover tubes? These points determined, we would know just where we are "at" on this problem, and just what we have to do to assure success.

We have another plan for shortening the red clover tubes, which we may give later.

The questions to be determined first are: 1, How deep a tube can

bees empty of nectar? 2, How deep are red clover tubes? How many hundredths of an inch have to bridge over?

Higginsville, Mo.

Program of the Thirty-First Annual Convention of the National Bee-Keepers' Association. To be Held at Chicago, Ills., Tuesday, Wednesday, and Thursday, August 28, 29, and 30, 1900; Sessions to be Held in Wellington Hall, 70 No. Clark Street.

TUESDAY EVENING.

Call to order at 7 o'clock.

Song, Dr. C. C. Miller, Marengo, Ill.

"How to Sell Honey," S. A. Niver, Auburn, N. Y.

"Bee-Keeping in the City," L. Kreutzinger, Chicago, Ills.

Question-Box.

WEDNESDAY MORNING.—9:30

Song.

Invocation.

President's Address, E. R. Root, Medina, O.

"Queen-Rearing by the Doolittle Method," Mrs. H. C. Acklin, St. Paul, Minn.

Question-Box.

WEDNESDAY AFTERNOON.—1:30.

Song.

"Bee-Keepers' Rights and their Protection by Law," Herman F. Moore, Park Ridge, Ill.

"Trials of the Commission Man," R. A. Burnett, Chicago, Ill.

Question-Box.

WEDNESDAY EVENING.—7:30.

"Breeding for Longer-Tongued Bees," by J. M. Rankin, of the Michigan Experiment Station.

"Bee-Keepers I Have Met and Apiaries I Have Visited," by E. R. Root, assisted by Dr. C. C. Miller, Dr. A. B. Mason, E. T. Abbott, and others. Illustrated by a stereopticon.

THURSDAY MORNING.—9:30.

Song.

Invocation.

"Various Forms of Disease Among Bees; Cause and Cure," Dr. Wm. R.

Howard, Ft. Worth, Tex.

Report of General Manager, Hon. Eugene Secor, Forest City, Iowa.

"Pure Food Legislation," Rev. E. T. Abbott, St. Joseph, Mo.

Question-Box.

THURSDAY AFTERNOON.—1:30.

Song.

"Chemistry of Honey, and How to Detect its Adulteration, by Thomas Wm. Cowan, Pacific Grove, Cal.

"How to Ship Honey to Market, and in What Kind of Packages," Geo. W. York, Chicago, Ills.

Question-Box.

THURSDAY EVENING.

"Co-Operative Organization Among Bee-Keepers," R. C. Aikin, Loveland, Colo.

"My Trip Through Wisconsin and Minnesota," W. Z. Hutchinson, Flint, Mich. Illustrated by a stereopticon. Unfinished Business.

One prominent feature of the convention will be the stereopticon work. Messrs. Root and Hutchinson, with a powerful stereopticon, will project upon the screen some photos they have taken of apiaries they have visited in various portions of the United States. The convention will be held in Wellington Hall, 70 North Clark St., about a block and a half from the office of the American Bee Journal, and about five blocks directly north of the court-house. The hotel at which delegates may secure lodging is the Revere House, about half a block from the convention hall. The rate for lodging will be 50c per night, and the proprietor has assured Mr. York that good beds are provided, but that several will have to occupy the same room. But when anyone desires a room with a single bed, the charge will be \$2.00 per night. If two men wish to take a single room in that way, they can do it, sharing the expense between them. G. A. R. people will have to pay 75c per night for a single bed, so bee-keepers are specially favored at 50c. The hotel is almost within a stone's throw of the convention hall, and right near the hall are first-class restaurants where meals can be secured at reasonable rates.

It is a little too early yet to announce what the railroad rates will be during G. A. R. week; but it is assumed that they will be low, probably one cent a mile each way.

Chicago is a central point, and there

will undoubtedly be a large attendance; and, considering the attractions, it is earnestly hoped that bee-keepers will turn out in good strong force.

E. R. ROOT, President.

DR. A. B. MASON, Secretary.

Bees Taxable Like Other Property.

E. D. NICHOLS.

The question of taxation is given on pages 27 and 28 of the February issue of the *Western Bee-Keeper*; and as I was appointed at the state meeting of last year to interview the Attorney-General on this question, I will beg permission and space in your journal to state that having investigated this question from a point of duty as assessor, and as one interested as a producer, will say that in my opinion bees are property and are taxable the same as other property. Simply because we can not identify our individual bees or even an absconding swarm, cuts no figure in the case. We as bee-keepers do not consider the individual bee of any estimated value nor do we waste much time hunting for some runaway swarm, but the value is in the combined strength of the colony when once established in a hive with honey enough for their support. Here then is where taxable value lies. Here is the property that you can identify: either by the particular hive used, the color of paint, or other markings peculiar to each bee-keepers' ideas, likes or dislikes. For instance, if some person comes into my apiary and steals a hive of bees. I miss the hive and notify the sheriff; a search is made, the hive is found; I identify and prove my property; the crime being now located, the party can be punished, the same as in any other case of larceny, and I desire the protection of the law in this case just the same as if it had been a horse, a

cow, or other property.

• In the General Statutes of Colorado of 1883, under the head of revenue division 1, section 3, we find this: "All property both real and personal within the state not expressly exempt by law shall be subject to taxation." Then by looking at section 4 of the same division, under exemptions, we find nothing that seems to cover this class of property. Now the question is, are bees in the hives property? Attorney-General Carr's opinion was that anything that could be bought and sold and that the ownership could be protected by law was property, and subject to taxation. Then again in the statutes of 1882, page 824, under the head of definitions, we find personal property defined thus: "The term 'personal property' includes everything which is the subject of ownership, not included in the term 'real estate'."

And now it seems clear (to me at least) that bees are property, and that we as bee-keepers should not object to pay our portion of taxes, for we are asking laws enacted for our protection against spraying fruit too early, foul brood, and for the appointment of an inspector who must be paid for his services. Now the question is, are bee-keepers going to shirk this burden? I think not. I can imagine I see all progressive bee-keepers with their shoulders to the wheel helping to bear our share of the taxes, for the maintenance of the government.

Montrose, Colo.

The Sun.

The sun that smiles from heaven's isles
Is fleeting as a breath,
When from the sight he sinks at night,
He speaks to man of death.

But when at dawn, as stars are drawn
Awhile from mortal view,
The sun from peaks of morning speaks
Of resurrection, too.

—Will Ward Mitchell.

Iowa Items.

O. P. MILLER.

A Davenport man writes that the bees around here are not on a strike, and yet the prospects for a good local yield of honey are not of the brightest. While it is practically certain that the harvest of the clear, sweet, finely flavored clover honey will amount to practically nothing, the time for its gathering is waning rapidly, and the bees are not storing it in marketable quantities. This is just the state of affairs in this country. I never saw finer white clover and linden bloom. Much of the white clover is in bloom yet, but the bees are doing nothing but rob and steal wherever they can get a chance, but the honey crop is practically a failure. I have got about 500 pounds of comb honey by giving the very best care to my bees. Many of the crates were full of combs in sections, and all had bait sections in them. There is one thing I think I've learned this year: that is, that the bees will fill a two-pound section almost or quite as quick as a one-pound section; that is to say, they will not consume any more time in making and filling a two-pound section than they will a one-pound one, and they will go to work in a two-pound section more readily I think. I've been thinking of trying a section 4x6, 6 high and 4 wide. They would just fit into the section holder and extend two inches above.

Honey is very scarce and high in this country. Any kind will bring 12½ cents per section.

I do sincerely hope that we will have a good fall flow of honey; but if we do not, we will be disappointed, but not discouraged so as to quit the business.

May the good Lord bless and prosper the fraternity of bee-keep-

ers everywhere, and especially editors of bee journals, and their families, everwhere. Fraternally.

Glendon, Ia.

The Falling Star.

Some years ago David Barker, a distinguished poet in the state of Maine, after the birth of his first child, wrote and published the following pretty poem:

"One night as old St. Peter slept,
He left the door of heaven ajar,
When through a little angel crept,
And came down like a falling star.

One summer, as the blessed beams
Of morn approached, my blushing bride
Awakened from some pleasant dreams,
And found that angel by her side.

God grant but this—I ask no more—
That when he leaves this world of pain,
He'll wing his way to that bright shore,
And find the road to heaven again."

John G. Saxe, deeming that injustice had been done St. Peter, wrote the following as St. Peter's reply:

"Full eighteen hundred years or more,
I've kept my gate securely fast;
There has no "little angel" strayed,
Nor recraent thro' the portals passed.

I did not sleep, as you supposed,
Nor left the door of heaven ajar.
Nor has a "little angel" left,
And gone down with a falling star.

Go ask that blushing bride and see
If she don't frankly own and say
That when she found that angel babe
She found it in the good old way.

God grant but this—I ask no more—
That should your number still enlarge,
You will not do as done before,
And lay it to old Peter's charge."

—Fraternal Voice.

Ho, For Oklahoma.

Congress has authorized the opening to settlement of the famous Kiowa and Comanche reservation, offering rare opportunities to secure free, fine farms, valuable town lots and rich mineral claims. Excellent openings for business and the professions. Morgan's Manual, a book of nearly 200 pages, tells you how to initiate and perfect your claims. A complete settler's guide. Recognized authority. Morgan's Manual, a fine sectional map of this new country and Oklahoma, and a book, (illustrated), over 100 pages, full of valuable information concerning Oklahoma, all three sent on receipt of \$1. Address, DICK T. MORGAN, Land Attorney, Perry, Oklahoma. 2t

EDITORIAL.**The Progressive Bee-Keeper.**

A journal devoted to Bees, Honey and Kindred Industries.

TERMS: Fifty cents per year, in advance.

R. B. LEAHY, }
G. M. DOOLITTLE, } - - - Editors

Mr. G. M. Doolittle writes that his mother, who is 85 years of age, had a fall about a month ago, and seems unable to rally from the shock. We are sorry to learn of this good woman's mis-

the south, there are no more sections for him now. In the first place, he can produce at least one-third more chunk honey in frames, then, when put in cans, it can be shipped at a less freight rate, going as fourth-class. Section honey, in glass-front shipping-cases, goes at firstclass rate and at owner's risk; while honey put up in two 60-lb. cans to a case, if damaged en route, will be settled for by the railroad companies. This is greatly in favor of comb honey put up in cans, and Mr. Atchley has had enough section honey smashed to bring down the price as low as that of chunk honey. Some object to such a mess, but are sections ever set on the table? And when the section is cut, it is just that way, too. If cut out of the



A BEE-KEEPERS' PICNIC IN KANSAS. (NO. 1.)

fortune, but hope soon to hear of her recovery.

Speaking of chunk honey vs. section honey for the south, E. J. Atchley says that both are good. He used to think that section honey was the best and nicest thing, and for many years did not produce any other, and advocated the production of comb honey in sections. Of course, section honey is very nice, but he thinks the dollar is nicer. As chunk honey brings more money in

section it is chunk money, too, but nothing like a chunk out of a can, with nice honey all over and around it; and, indeed, there is nothing more inviting when hungry, and nothing nicer. If everything is favorable to produce section honey, it is all right; but two supers of chunk honey can be produced to one of section honey.

Bro. Doolittle writes under recent date from Borodino, N. Y.: "No honey here; not even a single section of

surplus; unless buckwheat should happen to yield, which it does not as yet. Have had to feed considerable during the summer."

ON THE RAILWAY TRAIN AND NOT "ON THE WHEEL"

I have been away from home almost continuously for the past six weeks, and my trip has covered a territory nearly to the Gulf of Mexico to the northern borders of the United States; have visited a large number of bee-keepers and factories, and gained much knowledge and information, which I hope to interest our readers with during the coming year.

Before my visit to Texas, I was very much opposed to the plan of the Texas bee-keepers of cutting honey from the frames, placing it in cans with large screw tops and selling it for comb honey. It looked to me too much like a retrograde movement. But since visiting that section, becoming more familiar with the needs and the demands of that state, considering the climate and the honey resources, and hearing the eloquent southerner plead his case, I feel more willing to let him make bee-keeping pay in his own way, which he is surely doing, with as much success as we of the north are in producing our dainty one-pound sections for the bottons of Chicago, New York and Boston. I will not attempt here to give any whys and wherefores, but expect to take up the matter of canned comb honey at some later date. But to delay any apprehension that may arise in the reader's mind, I will say there need be no fear of this canned comb honey entering in competition in our northern markets, where the beautiful white section honey reigns supreme. Canned comb honey is a product of the south, and it is consumed where it is produced.

While in Texas, I visited the Central Texas Bee-Keepers' Association, and I have never met with such an enthusias-

tic gathering of bee-keepers in my life. There were present about 130 bee-keepers, representing between 7,000 and 8,000 colonies. Hutto, the town in which the convention was held, was handed over to the bee-keepers to the extent of their requirements, free and without price. Whole families moved out of their houses and went to visit some distant relatives, turning their homes over to a selected committee, who assigned them to the bee-keepers, while that splendid host, Bro. O. P. Hyde, regaled the crowd under a large tent, where was set a long table loaded with the choicest of food and delicacies.

The bee-keepers of Texas know how to enjoy themselves. They live on the sunny slope of this life; they entertain with a lavish hand and an open heart—and to those who made my visit to the Lone Star State one of the most enjoyable periods of my life, I wish to extend my heartfelt thanks. More anon.

Can Heaven Know?

Can heaven know a fairer sight,
A moon-white night in summer time,
Torched with far-glowing stars and bright,
Hung in the deep abyss of night,
And moved by matchlessness sublime.

Robed in her wedding garment blue,
Imperial Dian moves among
Night's palaces, with crescent new
Entrancing vision to the view,
Poets her praise have fitly sung.

O, what a goodly, lovely sight,
Robed in the garments of the hours,
This world appears, a rare delight,
Even may bring us rest, the night
Rare stars, but day unfolds the flowers.

—Will Ward Mitchell.

HIVES FILLED WITH HONEY

such a poor year as this speak well for the stock. We are breeding from queens that have made record THIS YEAR and before as HONEY GATHERERS.

Untested Queens, 50c each; after Sept. 1. 35c
Tested Queens, \$1.00 each; after Sept. 1. 75c

NUCLEI AND COLONIES.

It will pay you to requeen at these prices, to rid of old, inferior queens, and get the honey next year.

CULLEY & LUTTRELL,
Higginsville, Mo.

Headquarters in Chicago for Bee Supplies.

Good goods, right prices, prompt service.

Catalog free.

If not now a subscriber, send for free sample copy of the weekly **AMERICAN BEE JOURNAL**. For catalog or sample, address,

GEO. W. YORK & CO.,
118 Michigan St., Chicago, Ills

The Amateur Bee-Keeper



SEND 25 cents, and get a copy of the **Amateur Bee-Keeper**, a book especially for beginners, by Prof. J. W. Rouse. By mail, 28c.

Address, **LEAHY MFG. CO.,**
Higginsville, - - Missouri.

Lone Star Queens, \$1.



Every queen warranted, purely mated.

G. F. DAVIDSON & SON, Fairview, Tex.

ONE DIME! 10 CENTS!



THE FREESIA is one of the very best bulbs for window culture, and the grace and elegance of its pure white flowers have made it very popular with florists for cut flowers. Everyone can grow it as its culture is very simple and easy. Five bulbs are enough for a large pot, and will give an abundance of waxen blossoms of exquisite fragrance. For ten cents we will send postpaid to any address the

Western Florist and Fruit Grower, a semi-monthly magazine, 20 pages, three months on trial,

10 Fine Freesia Bulbs, and our **Fall Catalogue** of Fruit and Ornamental Trees, Shrubs, Roses, Plants, Bulbs, etc. Address,

L. H. COBB & CO.,
Lock Box B 57 - Perry, Okla.

California Queens of Pure Italian Stock.

YARDS COMPLETELY ISOLATED.
NO OTHER BEES WITHIN TEN MILES
EIGHT YEARS' EXPERIENCE.

1 untested queen before July 1, 90c; per doz., \$9.
1 untested queen after July 1, 80c; per doz., \$8.

Write for descriptive price-list.

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H. L. WEEMS, Hanford, Cal.

Golden Italian Queens,

which give satisfaction, are the kind that H. G. Quirin sends out. The A. I. Root Co. tell us that our stock is extra fine. Give us a trial order for our

Selected Stock,

and see how well we can please you. All Queens sent PROMPTLY BY RETURN MAIL, with safe delivery guaranteed. Have bred queens for 12 years.

PRICE OF QUEENS AFTER JUNE.

	1	6	12
Warranted.....	\$.50	\$2.75	\$5.00
Selected Warranted.....	.75	4.00	7.00
Tested.....	1.00	5.00	9.00
Selected Tested.....	1.50	8.00	
Extra selected tested, the best that money can buy.....	3.00		

Address all orders to

H. G. QUIRIN, PARKERTOWN, ERIE CO., O.

Money order office, Bellevue, O.

Foundation Mills For Sale.



We have just taken in a second-hand foundation mill in exchange for goods. This mill has 2½-inch roll, the round bottom cell, of which the foundation comes off so easy, and from the looks of the mill, I do not think it has ever been used. The price of such a mill is \$30.00, and we will take \$18.00 for it on cars at Higginsville. This is very little over half price.

We also have one second-hand six-inch mill for making extra thin foundation, and one second-hand ten-inch mill for making medium or light brood. These are for sale cheap. Write for prices.

LEAHY MFG. CO.,
Higginsville, Mo.

Selection.....

Selection has been the chief factor in the development and building up of our improved breeds of horses, cattle, sheep, swine and poultry. Men have devoted the best years of their lives to a single line or branch of this work—and not without their reward. In bee-keeping but little has been done in this direction. The development of a bright yellow bee has been the most noticeable thing that has been done in this line. This is the most easy of accomplishment, as results are so quickly and easily discernible. To breed for honey-gathering qualities is a much slower process. As soon as bees hatch out we can decide in regard to their color, and as to whether we wish to rear queens from their mother for the purpose of improving the color of our stock; to decide in regard to their working qualities requires months—perhaps years.

Every experienced bee-keeper must have noticed how much more surplus is stored by some stocks than by others. Time and time again, when visiting bee-keepers, have I been shown some particular colony, and heard the owner tell with pride how much honey it had stored year after year; always coming through the winter in good condition, or doing this or that that was so desirable. The strange thing is that bee-keepers so seldom seem to realize the value of such a colony, or queen, as a starting-point from which to improve the stock of their whole apiary. If they do realize it, they seldom take advantage of the knowledge. Suppose, by the introduction of improved stock, a man can increase his surplus, on the average, one year with another, ten pounds per colony, and that is not an extravagant estimate, on 100 colonies his crop would be increased 1,000 pounds. The cost for hives, grounds, labor, wintering, etc., is nearly the same with one kind of stock as with another, just as it costs as much to keep a scrub cow as it does to keep a Jersey, and a gain in surplus that comes from improvement in stock is the most profitable that can be secured. To improve your stock, get the **VERY BEST** that you can for breeding purposes, and with this stock your apiary; then watch carefully, and breed from the colonies that do the best. Continue this year after year, and you will be surprised at the results.

This matter of beginning with as good stock as you can get is all important. Don't lose years of time by commencing with common or inferior stock. Get the best; and thus be able to commence right where some other breeder left off.

As explained in previous advertisements, I am selling queens from stock upon the development of which a good man has spent twenty years; making crosses, and then each year selecting the best to breed from. I have several times tried this strain, and know it to be the best I have ever tried.

The price of these queens will be \$1.50 each. This may seem like a high price, but the man who pays it will make dollars where this breeder and myself make cents; and when you come to read the conditions under which they are sold, it will not seem so high. The queens sent out will all be young queens, just beginning to lay, but as there are no black bees in the vicinity, it is not likely that any will prove impurely mated. If any queen **SHOULD** prove to be impurely mated, another will be sent free of charge. Safe arrival in first-class condition will be guaranteed. Instructions for introducing will be sent to every purchaser, and if these instructions are followed, and the queen is lost, another will be sent free of charge. This is not all; if, at any time within two years, a purchaser, for any reason **WHATEVER**, is not satisfied with his bargain, he can return the queen, and his money will be refunded, and 50 cents extra sent to pay him for his trouble. It will be seen that the purchaser runs **NO RISK WHATEVER**. If a queen does not arrive in good condition, another is sent. If he loses her in introducing, another is sent. If she should prove impurely mated, another is sent. If the queen proves a poor layer, or the stock does not come up to the expectations, or there is **ANY** reason why the bargain is not satisfactory, the queen can be returned and the money will be refunded, and the customer fairly well paid for his trouble. I could not make this last promise if I did not know that the stock is **REALLY SUPERIOR**.

I said that the price would be \$1.50 each. There is only one condition under which a queen will be sold for a less price, and that is in connection with an advance subscription to the **REVIEW**. Anyone sending me \$1.00 for the **REVIEW** for 1900, can have one queen for \$1.00; that is, I will send one queen and the **REVIEW** for 1900 for only \$2.00, and in addition I will send 12 back numbers of the **REVIEW** free. Just see what you can get for only \$2.00: 12 back numbers, the **REVIEW** for all of 1900, and one of those superior queens. I can now fill orders for these queens of Superior Stock by return mail. This is something that I have never before been able to do.

W. Z. HUTCHINSON, Flint, Mich.

WE MAKE A.....

SPECIALTY OF

SECTIONS,

Being located in the great BASSWOOD timber belt of Wisconsin; admitted by all to be the best for making sections.

A GENERAL LINE OF BEE-KEEPERS' SUPPLIES,

In stock, and at prices with the times. Write for Catalogue and prices, Free.

**MARSHFIELD MFG. CO.,
MARSHFIELD, WISCONSIN.**

Please mention the "Progressive in answering this advertisement.

A Perfect Incubator.

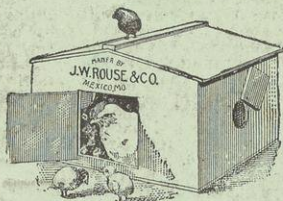
That is what everyone says of the **New C. Von Culin Incubator** (and Brooder.) It has all the latest improvements which have been found of any merit. **Will Hatch every Hatchable Egg.** Self-regulating, safe, sure. Send for illustrated catalog and price list of Incubators, Brooders, etc., free. Poultryman's Plans and catalog, 10c. Address

The W. T. Falconer Mfg. Co.,
Box M, Jamestown, N. Y.

J. W. Rouse & Co., Mexico, Mo.

Apiarian Supplies, Bees and Queens.

THE MODEL COOP,



RAT, CAT AND VARMIN'T PROOF.

One nailed, and five packed inside, making six coops; (ship at low rates. Price, \$3.50.

Illustrated circular free.



*Latest Improved Hives,
Sections, Comb Foundation,
Smokers, Bee Veils, and all
kind of supplies, at low
prices.....*

A beautiful 28-page catalog, free.

The "Amateur Bee-Keeper,"
an 80-page book for beginners; fully
illustrated. By mail, 25 cts.

J. W. Rouse & Co.