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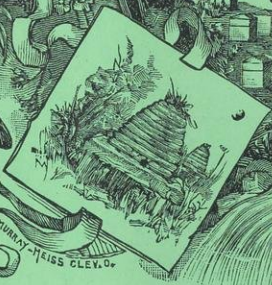
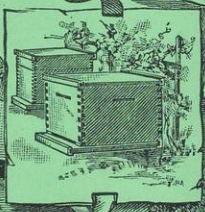
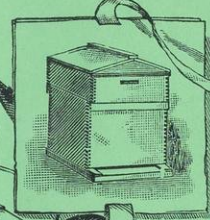
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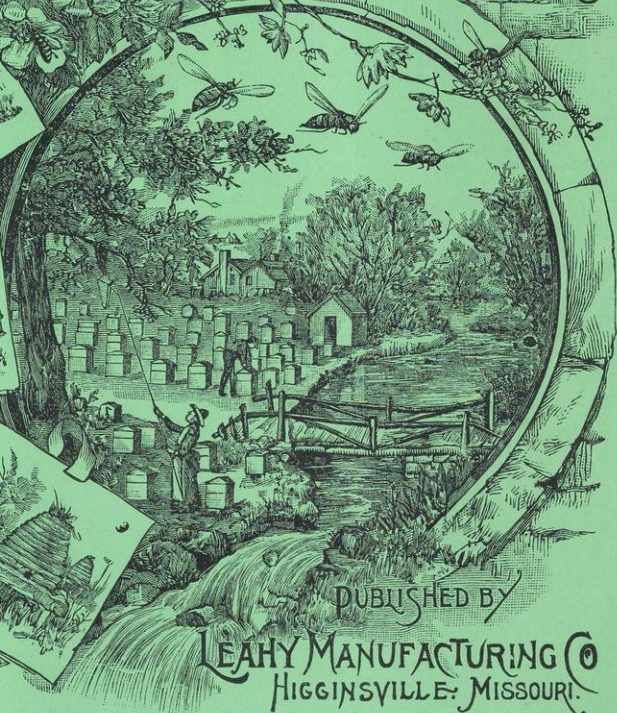
APRIL 1, 1897.



MURRAY-HEISS CLEV. O.

PROGRESSIVE BEE-KEEPER

A JOURNAL
DEVOTED TO BEES, HONEY AND
KINDRED INDUSTRIES.



PUBLISHED BY

LEAHY MANUFACTURING CO
HIGGINSVILLE, MISSOURI.

Entered at the postoffice, Higginsville, Mo., as second-class matter.

ADVERTISING RATES.

All advertisements will be inserted at the rate of 15 cents per line, Nonpareil space, each insertion; 12 lines of Nonpareil space make 1 inch. Discounts will be given as follows:

On 10 lines and upwards, 3 times, 5 per cent; 6 times, 15 per cent; 9 times, 25 per cent; 12 times, 35 per cent.

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MUNN & CO.,
361 Broadway, New York.

CLUBBING LIST.

We will send the Progressive Bee Keeper with

The Review	(\$1.00).....	\$1 35
Gleanings	1 00	1 35
American Bee Journal.....	1 00.....	1 35
Canadian Bee Journal	1 00.....	1 35
American Bee Keeper.....	50	85

Colman's Rural World.....	1 00	1 35
Journal of Agriculture.....	1 00	1 35
Kansas Farmer	1 00.....	1 35
Home and Farm.....	50.....	75

BEE BOOKS.

No bee keeper can afford to be without a library of bee books. A book costing from fifty cents to one dollar is worth many hundreds of dollars to one who would succeed. Every beginner should have a book suitable for beginners, (one that will point out the road), and those more advanced will need something more scientific as a reference book. We will here give the names of such books as we recommend, and will be pleased to furnish you, sending them by mail at the following prices:

The Amateur Bee Keeper, (a gem for beginners), by Prof Rouse, price, 28c.

Advanced Bee Culture,—by W. Z. Hutchinson; price, 50c.

A Year Among the Bees,—by Dr. Miller; price, 50c.

Manual of the Apiary,—By Prof. A. J. Cook; price, \$1.25.

The A, B, C of Bee Culture, by A. I. Root; price, \$1.25.

A Treatise on Foul Brood, by Dr. Howard; price, 25c.

Address,

Leahy Mfg. Co., Higginsville, Mo.

FREE! A copy of **Successful Bee-Keeping** by **W. Z. Hutchinson**, and our 1897 catalog for 2-cent stamp, or a copy of the catalog for the asking. We make almost everything used by Bee-Keepers, and sell at **Lowest Prices.**

OUR FALCON POLISHED SECTIONS are warranted Superior to All Others. Don't buy cheaply and roughly made goods, when you can just as well have **the best**, such as we make.

THE AMERICAN BEE-KEEPER, (monthly, now in its 7th year.) 35 pages, 50c a year. **Sample Free.** Address,

W. F. FALCONER MFG CO., JAMESTOWN, N. Y.

If You Want to Know

how to run out-apraries for comb honey with almost no swarming, read the December **BEE-KEEPER'S REVIEW**.

If you want to know the method followed by Mr. M. M. Baldrige in securing drawn combs for use in the sections, read the **January REVIEW**. If you would know how to make a home-made foot-power buzz-saw, the equal of any foot-power saw made, read the illustrated article by the editor of the **REVIEW**, on this subject in the **January REVIEW**. If you want a journal that is up with the times and full of practical information that will help you in making money in the apiary, read the **REVIEW**. It is \$1.00 a year, but if you are not already a subscriber, see the special inducements offered to new subscribers in the advertisement that occupies this position in **Gleanings** for February 15.

W. Z. Hutchinson, Flint, Mich.

The

Waverley

Bicycle



\$100

\$60

The Waverley Bicycle for 1897 is the acme of bicycle construction. New and expensive principles of construction involved make the cost of building enormous. Hence the price is **\$100**.

The only bicycle with true bearings

Last year the Waverley was as good as any wheel in the market—better than most. Because new machinery was not needed for its continued construction, the price of the improved 1896 model has been reduced to **\$60**—a saving of **\$25** to you. *Catalogue Free.*

INDIANA BICYCLE CO., Indianapolis, Ind.

Please mention the "Progressive" in answering this advertisement.

Texas Queens!

Golden Italians, Adel or Albino Queens.

Dr. Gallup of California, writes Oct. 6, 1896: "The queens received of you are decidedly the very best honey gatherers I have in a lot of 30 stocks, and I have received queens from ten different parties this season." Price of Untested Queens, \$1.00.

J. D. Givens, Lisbon, Tex.

Please mention the "Progressive."



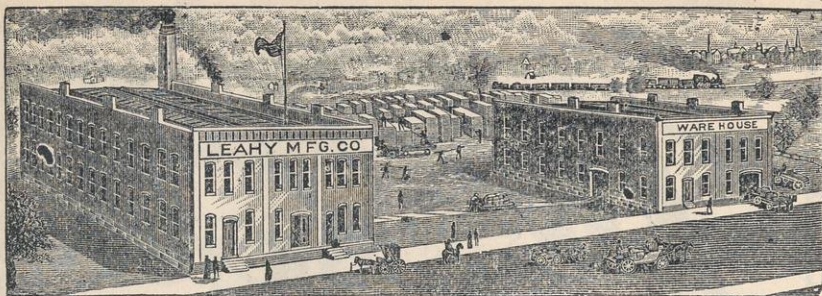
MAKE YOUR OWN HIVES

Bee-Keepers will save money by using our Foot Power Circular Saw in making their Hives, Sections and Boxes. Machines sent on trial if desired. Catalogue free.

W. F. & JOHN BARNES CO.,

914 Ruby St.

ROCKFORD, ILLS



A COOL MILLION

of beautiful Snow White Fectious, elegantly made, (polished on both sides) and manufactured from snowy Wisconsin basswood. Do you want some of them? If you do, to introduce our goods where, heretofore they have not been used, we will, during April, sell you in lots of five thousand, regular, $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$, at \$2.00 per thousand. Cream Sections as above, at \$1.75 per thousand. No. 2's, at \$1.50 per thousand. Send for our beautiful, illustrated Catalogue of Apian Supplies.

The Amateur Bee-Keeper, a 70-page book for beginners, by Prof. J. W. Rouse, price, 25c.

Address,

LEAHY MFG. COMPANY,

Higginsville, Missouri.



PRICES OF Bingham Perfect Bee-Smokers and Honey Knives.

Smoke Engine	largest smoker made.	per doz.	each.
Doctor	$3\frac{1}{2}$	9.00	1.50
Conqueror	3	6.50	1.00
Large	$2\frac{1}{2}$	5.00	.90
Plain	2	4.75	.70
Little Wonder	2	4.50	.60
Honey Knife		6.00	.80

All Bingham Smokers are stamped on the metal, patented 1878—1892—Knives B. & H.

The four larger sizes have extra wide shields and double coiled steel wire handles. These SHIELDS and HANDLES are an AMAZING COMFORT—always cool and clean. No more suttly nor burnt fingers. The Plain and Little Wonder have narrow shields and wire handles. All Bingham Smokers have all the new improvements, viz.: Direct Draft, Movable Bent Cap, Wire Handles, Inverted Bellows, and are ABSOLUTELY PERFECT.

☞ Fifteen years for a dollar. One-half a cent a month.

Cuba, Kansas, Jan. 27th, 1897.

Dear Sir:—I have used the Conqueror 15 years. I was always well pleased with its workings, but thinking I would need a new one this summer I write for circular. I do not think the four inch "Smoke Engine" too large. Yours,

W. H. EAGERTY.

Corning, Cal., July 14th, 1896.

I have used Bingham Smokers ever since they first came out. Working from three to seven hundred colonies twelve months in the year. I ought to know what is required in a smoker. The Doctor $3\frac{1}{2}$ inch just received fills the bill. Respectfully,

O. W. OSBORN.

Mt. Pleasant, Mich., Aug. 7th, 1896.

Dear Sir—Smokers came O. K. They are the best I have ever seen; sell like hot cakes. Respectfully,

WM. BAMBU.

With a Bingham Smoker that will hold a quart of sound maple wood, the bee-keepers' trials are all over for a long time. Who ever heard of a Bingham Smoker that was too large or did not give perfect satisfaction. The world's most scientific and largest comb honey producers use Bingham Smokers and Knives. The same is true of the world's largest producers of extracted honey. Before buying a smoker or knife hunt up its record and pedigree

Please mention the "Progressive."

T. F. BINGHAM, Farwell, Mich



THE * PROGRESSIVE * BEE-KEEPER.

A Journal Devoted to Bees, Honey, and Kindred Industries.
50 Cents a Year.

PUBLISHED MONTHLY BY LEAHY MFG. CO.

VOL. 7.

HIGGINSVILLE, MO., A PR. 1, 1897.

No. 4

"BILLIE."

BY WILL WARD MITCHELL.

IN the sunny, bluey southland where forever onward flow Mississippi's turbid waters toward the Gulf of Mexico,

Where the earth is robed in beauty, kissed by smiling azure skies,
Tempting in its radiant glory as a glimpse of Paradise—

In the state of Mississippi, many hundred miles away.

Lives a blue-eyed, brown-haired maiden, laughing-hearted as the May;

One who lately left us lonely in the northern home so dear,

Left us with sweet-hallowed memories of the days together here.

We always called her "Billie," short for Willie, don't you see,

As Will was the diminutive my friends ascribed to me.

And Bishop wore an emblem with a "W. W." there,

It may have been for either Will, or neither, or the pair.

For Billie, and for Willie Ward, and yet it may have been

A symbol of a mystic lodge, an emblematic pin.

We were so glad together in the days so lately past,

Days all too bright and beautiful and summer-like to last.

I miss my winsome pupil in the class where once we met,

That earnest, kindly face of hers I never can forget;

There are other youthful faces greeting me each Sunday there.

But I always think of Billie, as I note her vacant chair.

The best of friends must part, 'tis said, and it is sadly true,

But, Billie, though you're far away, we all remember you.

The April-time is joyous as the liltng days of yore,

But we miss you, and we wish you were among us here once more.

It is hard to be far-severed from the world's most-hallowed spot,

Yet it sweetens even sadness knowing we are not forgot.

And some day in the future you may come to us once more.

To the old Missouri village, and the friends you loved before.

Oh, Mizpah, faithful pupil, and ever-cherished friend;

May God be good to you and yours, and rarest blessings send.

'Till, at last, beyond the partings of the saddened world below.

Billie, you may meet, nor ever part from, friends of long ago.

Higginville, Mo., April 1, 1897.

BALLS OF BEE GLUE.

S. E. MILLER.

I MUST confess that I have not read enough on apiculture the last year to be posted; in fact, I scarcely get to even glance at a bee journal, so am away behind the times. I am not acquainted with the new artificial comb, as I have not even seen a sample of it, and have read little or nothing about it until quite lately. However, the ten years of experience that I have had among the bees, honey, comb foundation and wax, I believe should render me capable of forming an idea and expressing my opinion on this new article.

In the first place, wax is not comb any more than lard is the fat of the hog as it is cut from the slaughtered animal, or tallow the natural fat of a beef. It is very easy to convert the fat of a hog or a steer into lard or tallow, but no one has ever converted lard or tallow into the natural fat of a hog or steer. We can melt combs into wax and may again shape this wax into the form of comb, but who, among all the bee-keepers in America, will say that the artificial article is precisely the same as that built by the bees from the delicate wax scales taken from their wax pockets.

Comb when melted into wax has undergone a change. What this change is, I am not chemist enough to say, but the change has been made nevertheless. That delicate flaky texture has been taken away. It has undergone a change and is no longer in that pure and natural state, as left by the bees.

I believe I can tell just how much foundation has been used in any piece of section honey that may be placed before me, if I am allowed to chew bits of it at a time. That is, I can tell just where the foundation left off and the natural septum commenced, and for this reason it would seem best to use only narrow starters if we wish to produce the most delicious and palatable comb honey.

Taking all this into consideration, how can we contemplate using combs almost finished, and expect the bees to produce from it an article that will compare with their own work throughout?

Would it be adulteration?

Probably not; yet I should not like to offer it to my patrons, were I still keeping bees for a livelihood, and wished to keep up the high standard of my product, and who could say that it would not be adulteration? Would we not be selling as a natural product, an article turned out chiefly, or at least in part, by the hands of man, (unless otherwise labeled). Some may say, Are we not doing that now, in using foundation starters in sections? Certainly we are, to a certain extent, but why use any more than necessary? In order to produce a neat and marketable section of honey, most of us are obliged to use starters to produce straight and even combs, but why use it to an excess? A little of it may be slightly objectionable to the consumer, but a surplus of it may be abominable.

The legitimate use of comb foundation every bee-keeper should favor, and the consumer can not justly object to it, but we should remember that this is in the production of straight and even combs for brood combs and for extracting from, mainly, and not to give to the consumers to chew on.

Have we not, as bee-keepers, been trying for many years past to teach the public that comb honey can not be

manufactured? Why, then, should we wish to take a step in that direction ourselves?

Last, but not least, WOULD IT BE PRACTICAL AND PROFITABLE, EVEN WERE IT HONEST. I THINK NOT.

Rhineland, Mo.

OPPOSED TO ADULTERATION.

We note your editorial in March PROGRESSIVE. We are very much opposed to adulterating comb honey. We positively refuse to handle adulterated extracted honey, and certainly should not tolerate the adulteration of comb. We did not think it was possible for anyone to manufacture comb out of beeswax, that could be sold in competition with that manufactured by the bees. But if someone is clever enough to get up a good imitation, we would like to see it. It positively will not be a success, and should not be sold; but we want to be one of the first firms to have a chance to look at it, so put us on the track of the promoter, and we will write him. Any questions you wish to put to us, we will be only too glad to answer, but you can SET US DOWN AS BEING OPPOSED TO ADULTERATION IN ANY FORM. S. T. FISH & Co.

Chicago, Ills.

I wrote to Fish & Co., and explained that the comb was for the use of bee-keepers only, and would have cell-walls from a quarter to a half-inch high. Here is their reply to my letter.—[Ed.

We are obliged to you for your letter of the 20th, and we shall investigate the machine-made comb. Comb honey is a luxury and in the natural state of affairs the product is increased each year; but if an attempt is made to increase it through artificial means, it is very materially going to affect its selling price and its demand. Trade who can afford to buy comb honey will pay for it, and we think it is much better for a bee-keeper to have a less quantity and better price, than a large quantity and a less price. S. T. FISH & Co.

Chicago, Ill.

TOO MUCH BEESWAX.

From your editorial in the March PROGRESSIVE we see there is a move on foot to place on the market manufactured comb for bee-keepers. We hope that this will not be a success, and we do not believe that it will, as we are satisfied people would have to eat too much bees-wax to get a little honey. We are satisfied it would hurt the sale of comb honey very much, as some people already believe now that comb honey is manufactured. And as we said above, we do not believe that it can be made successful. At least, we hope not.

C. C. CLEMONS & Co.

Kansas City, Mo.

WAYSIDE FRAGMENTS.

SOMNAMBULIST.

To be or not to be?" that the question, or shall I, or shall not put in an appearance this month? Really with two real live editors after my scalp "to onct," it seems about time to retire within my shell.

What's that! Do I hear it whispered all along the line of PROGRESSIVE'S readers. "time to call a halt?" Such a state of mind should have long ago overtaken you. Take care. With some people tis best not to appear over anxious, lest you defeat the desired object. I've about concluded to stand my ground and trust to dodging flying missiles.

In the February PROGRESSIVE I very innocently asked, if you had noticed that Dr. Miller unwarily, but openly, declared that "all his experience lay in a jug." And added, equally innocently, here's a job for A. I. R. In rambling around his straw stack, I discover he has chosen to take up the gauntlet by this retort. "Sommy keeps clear of the law by not saying that something stronger than vinegar was in the jug, but you can see the spirits in him, no matter what may have been in the

jug. I don't get that jug to sour very rapidly, but I've soured on you Sommy."

Aimed to weed out the conceit within me by a single stroke of his wide spreading pitchfork! The idea of the wearer of so genial a face as that of the Dr's souring on anybody. Paradoxical! "Spouse" I *should* feel "sort-o" scared and "shaky" like, but really I can't bring myself round to that point. "Don't get that jug to sour?" More people are bothered as to how to sweeten jugs. What did you want to hide the contents away from the light of day for, anyhow? No wonder the fluid enters protest. Try a more open manner. Why, since I read of your jug experience I set ten gallons in a keg and am using good vinegar therefrom at this date.

But maybe there's not enough vinegar in your nature to start a ferment, but I really fear 'tis quite different with that other fellow, Editor Leahy. Just listen to his little say in March PROGRESSIVE. "Am I to understand that Somnambulist would kill off the adulteration of extracted honey by the cheapening of comb honey? Now Sommy, I don't want to quarrel with you, you know that, but if I hear of any more such doings, I will quarrel with you. Right hard, too." Who said anything about cheapening comb honey? Not I. No one realizes more fully than I, that bee-keepers must get every possible cent out of their product.

The number who have accumulated fortunes through the production of honey would not startle an inquirer, unless forsooth on account of meagerness. Should the use of ready-made comb reduce the selling price of comb honey in proportion to the increased product, then we would still be at the starting point, unless indeed, through its use we can secure a crop, otherwise not obtainable e. g.: In the production of extracted honey, by furnishing ready-made comb, the bees are enabled to take "occasion by the hand," as it were, and *at once* get to storing the nectar; whereas, were the comb yet to be built by the time all is ready, the flow of nectar has bid us farewell. And empty

unsalable chambers of bees wax are all we've secured. Of course these are good capital for another season, but today, with its ever pressing needs, we have with us, while tomorrow is not ours.

In speaking of artificial comb as Weed foundation has been styled, I fully presumed it would be as acceptable in quality as the extra thin foundation, the latter being heavy enough for me. I once purchased a bee yard from an old style Christian gentleman, who agreed to turn his *trade* over to me provided I used no more of a starter than he did, which was from $\frac{3}{4}$ to an inch in depth at the top, alone, of the section. When ready for marketing, he accompanied me on several trips and was particular to impress on the customer that the honey was from *his* old yard, and these in turn would readily buy, saying to me "he always made such extra fine honey. No fish-bone in it." After that experience I always felt slightly nervous about whole sized starters, and gradually used less and less foundation in the section. Now as to the adulteration of comb honey. If the use of foundation can be called adulteration, then for years, there has been but precious little pure comb honey produced. Foundation, nine times out of ten gets the name of comb from a visiting novice. You will hear on one side and then the other, "just see what nice comb they make." "You make this comb yourselves, don't you? or do the bees make it? Is it made? etc., etc." If doubts or suspicions they have, would there be an increase of the same were the cell walls of the foundation to be raised $\frac{3}{4}$ of an inch? This question is similar to the so called adulteration through the feeding of sugar. Some will tell you if you must feed, never use sugar, lest you acquire the unsavory reputation of feeding for the purpose of adulteration. Ridiculous as this appears to bee-keepers of long experience,

there still is considerable truth in it. In disposing of comb honey honey crops in one of the largest western cities, I am frequently asked the question, "did this honey come from so and so's apiary? because if it did, I've no use for it. *They make the comb* out there and fill it with sugar syrup. I prefer to make my own syrup." The truth of the matter being, that the apiarist indicated, is compelled each fall to feed, for winter supplies, there being no fall crop in his locality. There is practically no difference between his honey and mine.

I have never had an opportunity of even inspecting a small piece of the new process foundation, and don't know that my judgment would prove correct had I had, but the coming season will decide to a great degree as to its practical value. The product arising from its use must of necessity prove to be as eatable as that built on extra thin foundation. Failing in this, its fate is sealed. But all this agitation will not have been without avail. Ella Wheeler Wilcox has it, there are two kinds of people in this world, "those who lift, and those who lean." I think I shall join the great army of leaners this season. I'll just lean back in the shade and let those more able, experiment with the new fangled foundation. I happened long ago to have learned that novelties of all kinds, from hats to hoes or from beginning to end, were expensive. Having several times been burned, naturally I dread fire. But won't unfinished sections command my respect.

By furnishing ready-made comb, we shall most certainly increase our crops, and, too some extent, determine the kind of honey we shall have to put on the market. But this must not be done at the expense of quality. In short, quantity must yield to quality. Remelting wax discolors it, and many claim hardens or toughens it as well. If this be true, to produce a foundation

as light and friable as natural comb, were impossible. So that in the end, to accomplish our purpose, we shall be compelled to depend on the bees. B. Taylor's plan of securing drawn combs in the sections by the utilization of the dark honey for that purpose, recommends itself at this juncture. No adulteration about these. If we could increase our yield of pure comb honey materially, couldn't we afford to take a little less per pound, and thus place this God given luxury within the reach of those of moderate means. Would not the doing of this verge on to missionary work? How many times in handling your beautifully finished product, have you noted that longing wistful look on faces whose owners realized the possession of the same to be beyond the reach of their slender purse. After the price of any commodity has passed a certain limit, it leaves one or more classes of customers behind and must cultivate a closer acquaintance with those who are left. Sales become proportionately duller, and sometimes one is tempted to take a little less and keep up brisk sales. The only manner in which I conceived to give adulteration a blow through comb honey, was the exclusive production of the same. I have always deemed comb honey secure from adulteration through its being impossible. And felt so thankful that I could look a customer in the face and tell him how impossible it was. But I've had them to contend to the contrary, and in fact some have failed to yield their point altogether, maintaining strenuously that comb honey was successfully counterfeited.

Really glad to see "Observer" has once more waked up to business, and as glad to know he's not been napping all this time. Thanks for kind expressions from that quarter. Highly appreciated, coming from such authority.

Naptown. Dreamland.

MANUFACTURED COMB.

No Good to Come From Its Use, and a Danger of Great Harm.

GEO. O. GOULD.

FRIEND LEAHY.—As to the advisability of using manufactured combs to be filled with honey by the bees, I must say that from what I can learn of it, I can see no good to come from its use, and a danger of great harm. I am always in favor of true progress in bee-keeping, and would prefer not to censure anything new too severely until I had proven its merits or demerits. As you say your comparative tests show its weight to be over twice as much per square inch as thin, or nearly three times that of extra thin foundation, therefore it would never do for our use. We find the best of extra thin foundation to contain too much wax for us to use more than a starter, averaging not over $1\frac{1}{2}$ inches wide. Although we know we could have our combs drawn out and filled a little quicker by using full sheets of foundation in the sections, we find the leathery and objectionable fish-bone too noticeable in our fine comb honey, therefore we use but starters, as we work for quality rather than quantity.

THEN AGAIN, TO USE FULL SHEETS OF EVEN EXTRA THIN FOUNDATION FOR SO MANY COLONIES, RUNS UP IN MONEY VERY FAST, AND TO THINK OF USING COMB OF THREE TIMES ITS WEIGHT AT EVEN THE SAME PRICE PER POUND, TO PRODUCE AN INFERIOR ARTICLE OF COMB HONEY, I NEVER COULD.

I am not quick to fall in with new and untried ideas on bee-keeping, but like the Dutchman, believe in "going just a leetle slow."

It seems to me it would be best to have this new comb thoroughly tested by a few practical bee-keepers before placing it on the general market

I AM JUST ENGLISH ENOUGH TO BELIEVE IN CALLING EVERYTHING BY ITS PROPER NAME, AND IF IT MUST GO ON THE MARKET, LET IT GO BY ITS TRUE NAME, 'MANUFACTURED COMB,' THEN THE CONSUMER WILL HAVE A CHANCE TO KNOW WHAT HE IS PAYING FOR.

I believe it is just impossible for man to produce a friable, delicate comb anything near approaching the natural product of the honey bee, but if he should, it would be so bulky and fragile as to be very difficult and expensive to ship. Our markets are being hurt already by too much honey being thrown on it in an untidy and unattractive condition. Every bee-keeper should try to produce as *pure, melting and delicious* a product of comb honey as possible, then place it on the market in neat and attractive packages.

The use of the drawn combs of the unfinished sections, emptied of their honey, combs leveled, then carefully repacked and stowed away in a good tight room with a paper between each super, as was practiced and advocated by B. Taylor, is all right. But unless one can use something of the pains-taking care and precision that he used, he had better not even try *that*, for if your hives are faulty your sections will be dauby, or if careless and let dirt get to them, they would never be marketable, and it would be better to cut out the combs and melt them into wax and burn the section. But if one is very careful they are a great help and save something we already have.

As the days warm up and the time draws near for active work among the bees, our thoughts naturally revert to the resolutions of reform, or the use of new ideas picked up from

the winter's reading, or past experiences which we desire to put to a practical test at the earliest opportunity.

As everything is raised here by irrigation, the irrigating ditches are everywhere present. And I noticed last season, with no little solicitude, and feelings of regret, the great numbers of our "little pets" that found an untimely and watery grave in these ditches in their endeavors to procure water. It troubled me to see hundreds of them swept away day after day. I set to thinking what I could do to avert it. I furnished my bees in Kansas during drouths with water in three gallon stone jars, with a piece of partly rotted wood set up in each, and placed in the shade. They did finely, and kept the bees from bothering the horse trough.

But now I think E. Whitcomb's glass jars (say one-half gallon or gallon) inverted on grooved boards, placed in the sun and protected from the cold winds, with a board wind break, will be best for the early spring. If I can not induce all of the bees to stay away from the treacherous ditches, I can at least save thousands of them at a time, when I can ill afford to lose them. I am satisfied the furnishing of pure water in the apiary for the bees is an item worthy the attention of all bee-keepers. For there is no question but the per cent of bees that are lost, both by cold and drowning, in their efforts to procure the necessary water to carry on early brood rearing, is very large. In connection with the furnishing of water, comes to my mind the feeling of something to supply the place of early pollen, particularly in places like this where there is a lack of early pollen, owing to scarcity of timber. Rye flour wheat shorts, bran and shorts, or fine flour mixed with bran are all good. I have always fed something of this kind with what seemed to me good results. I first got the idea when I was a small boy in Minnesota, from seeing my la-

mented uncle B. Taylor, make shallow wooden trays and feed his bees, by placing these trays containing the feed on the sunny side of his shop and honey house, where I used to watch the bees roll in the flour. The protection provided for the water jars might also serve to protect the feed trays.

These small matters may seem unimportant, but they may do more to help up the profit side than some might think. Of course locality will have to determine as to whether we need to feed to supply pollen or not. In fact, the bees will not take the flour if pollen can be had. If the bees should be slow about starting to work the flour, some small pieces of comb containing a little honey or syrup should be placed in the trays to attract them.

I am located on the Arkansas river about fifty miles east of Pueblo; can see Pike's peak, the Spanish peaks and the Greenhorn range, all of which are covered with snow, and show like mountains of silver in the sunlight. Old settlers say the abundance of snow in the mountains insures plenty of water, and consequently a good crop year, and of course, if the alfalfa does well, we bee-keepers also hope to harvest our share of the sweets. The bees so far seem to be wintering reasonably well, and fly quite strong every fine day. There seems to be pretty generally the impression that alfalfa honey is all of an amber color, when as a fact all *pure* alfalfa honey is very white, and very thick, and makes about as nice comb honey as I ever saw, and I was raised among the basswoods of Minnesota. The fall honey is usually of an amber color, some of it decidedly so, and is due to cleome, and is dark or light owing to the amount of cleome worked. Extracted honey from old combs will have a slight amber tint also.

I and my good wife and five children will busy ourselves with close to three hundred colonies the coming season,

and if it seems good, I may tell something of our methods hereafter. Yours with the bees.

Rocky Ford, Colo.

ARTIFICIAL COMB

Will Bring Evil Results. Its Use Will Not be Practical.

IMPROVEMENTS THAT ARE NOT IMPROVEMENTS.

J. W. ROUSE.

IT is with some trepidation that I read in the different bee journals of the so-called artificial comb, for I am not sure, even if it can be made, that it will prove a boon to the production of comb honey. I have never seen any of this "artificial comb," but have this to say: Even if it can be successfully made, and then put on the market at a price that bee-keepers could afford to use it, and supposing that it would take nothing from the deliciousness of pure comb honey—if one person can make it, what is to keep others from making it? I notice Mr. Doolittle congratulates the bee-keepers that a patent is to be obtained, and if it should prove a detriment, it can be generously suppressed; but I have an idea that what one person can do, opens a way for others to do the same thing; and while a patent may cover the manner to produce a certain thing, I have noticed that all things (so far as I know, of any importance) made can be and are made by someone else, even if it has to be made in some other way.

I have had certain reward cards in my possession for some years, which I have used a number of times to help me to down the adulteration of honey. The reward cards referred to read something like this:

“\$1,000 is offered for one pound of Artificial Comb, filled and sealed over.”

This is not all there is on the card, but enough to show what it was designed for—namely, that it was then thought a mechanical impossibility to make honey comb by artificial means; but if a way is found to make artificial comb, it seems to me that the hardest part is accomplished, and it will be a comparatively easy job to fill the artificial stuff, and seal it over, and then goodbye to the general market on honey.

I do not wish to appear as a needless alarmist, but must confess I feel apprehensive in this matter. I have also noticed what several others have had to say, *pro* and *con*, but I think some of the criticisms or comments on the so-called product are well founded. I will not discuss these points, but it does seem to me that unless we, as bee-keepers, can devise some way to defeat the adulteration of honey, or the sale of manufactured stuff as honey, that is now being sold, bee-keeping is almost doomed, as glucose can be obtained for 1½¢ per pound, and that is what most of this stuff is made of. I came across the following advertisement recently:

Honey without Bees. With my recipe you can make artificial honey that your friends can't tell from genuine. Better than any syrup for pancakes and general table use. Recipe and full directions for 12 cents.

Delicious Maple Syrup without use of the maple tree. For 12c I will send recipe and full directions by which anyone, anywhere, can make delicious maple syrup at a cost of 30c a gallon. Both recipes, 20c.

There are many persons who do not know but what this advertisement is all right, and that honey can be made artificially.

WHEN BEESWAX, OR SOMETHING ELSE, IS MADE INTO THE SHAPE OF HONEY-COMB, ALL THE ARGUMENT THAT BEE-KEEPERS CAN PRODUCE WILL

BE OF NO AVAIL TO CONVINCING PEOPLE OF NON-ADULTERATION OF COMB HONEY.

I used to see much opposition against bee-keepers obtaining patents on bee fixtures, the sentiment appearing to be that they should be liberal-minded and free in giving their inventions to the bee-keeping fraternity, but it seems that so much and sharp competition has changed the minds of some on this line. However, I wish to say I have nothing to complain of, as I am not hurt in any way in the least, so far as I know.

There are some changes being made that are called improvements, which I very much doubt if they are improvements; and by having so many changes, which I have no doubt is sometimes made to head off competitors, it also so confuses bee-keepers that many are at a loss to know what or when to obtain supplies, for fear that a change will be made for something else, and the first ones will be all wrong. Still there are many sturdy bee-keepers who do not jump at every so-called improvement, and still they succeed right along. I am not indifferent to improvement, but want to be sure it is an improvement before I invest much in it.

Mexico, Mo.

**THE USE OF MANUFACTURED COMB
WILL DECREASE THE DEMAND
FOR HONEY.**

**It Will Cause the Suspicious to Become
More Suspicious.**

BEESWAX NOT A CLEAN ARTICLE.

FRED S. THORINGTON.

FOR some little time I have noticed a move on foot to push to the front an artificial comb made of wax,

having cells one-half inch deep. I believe its manufacturers claim it will lessen the labor and increase the quantity of comb honey.

FRIENDS, I AM AFRAID IF THIS FALSE COMB IS USED AT ALL. OUR COMB HONEY WILL BE INJURED MORE THAN THE EXTRACTED HONEY HAS BEEN AT THE HANDS OF ADULTERATORS, AND EVENTUALLY FORCE THE HONEST BEE-KEEPER OUT OF THE BUSINESS. I BELIEVE IT WOULD LOWER THE PRICE OF COMB HONEY SO THAT THE BEE-KEEPER WOULD RECEIVE LESS PROFIT FOR HIS LARGE CROP OF HONEY PUT UP IN GOBBY WAX. THAN THEY DO NOW, PUT UP AS IT IS BY THE BEES IN THE LIGHT, CRISPY COMB WHICH NEARLY MELTS IN ONE'S MOUTH AS ONE EATS THE DELICIOUS SWEET IT CONTAINS.

If it has any merit worthy notice, we will find it out, and then is time enough to adopt it. It is said, sometimes, the more haste, the less speed, and I think the rule will hold good in this case. Many people at the present time are afraid the comb honey is adulterated, and some think it is manufactured, and of course never sees the bees. Take an illustration:

I asked a lady if she wanted to buy some comb honey. She said she didn't know; what was the price of it? I told her the price, and at the same time handed her a nicely filled one-pound section to look at. She said, as she took the section, This looks like honey we used to buy. Last winter I bought at a grocery store some honey put up in a one-pound box (section) that was manufactured somewhere in Chicago. It looked nice, but did not taste anything like honey. She bought my

honey, but still had the impression that the honey she bought at the store was a manufactured article. At another place a man asked me if I had any comb honey to sell, stating that he didn't like to buy it at the store for fear of getting that which was adulterated, as he had once got some of that kind of honey, and didn't want any more. Another man said he once got some honey at a grocery, and the comb was a beautiful white, but the honey was most tasteless. These people were all intelligent. The men are druggists, and ought to know when they get a good article. I am afraid if the manufactured comb is used, our customers would soon all be like the ones mentioned above. I know a dealer in hides, eggs, tallow, pelts, butter, beeswax, etc., who has done a good business to the amount of several hundred thousand dollars a year, and he keeps his house as clean as as he can for one of that kind. But it is needless to say it smells bad in hot weather, for that is putting it in a very mild form. Who of us wants to chew comb made from wax bought at such places? If the bees filled this artificial comb with honey, I don't think it would be right to offer it to the public as comb honey. If we did, I think our sales would be few and far between. Then where would be the profit of the extra large honey crop obtained by the wax comb?

COMB MELTED INTO WAX HAS CHANGED ITS FORM MUCH LIKE THE GRASS DOES WHEN CUT AND DRIED. IT THEN IS KNOWN AS HAY, AND NO POWER OF MAN CAN RESTORE IT TO ITS FORMER SELF. IT IS MY OPINION WE SHOULD NOT ENCOURAGE THIS MANUFACTURED COMB.

March 15.—Weather fine and bees flying.

Chillicothe, Mo.

ADULTERATING COMB HONEY.

Shop-Made Comb Will Lead to Shop-Made Comb Honey.

A DISHONORABLE PROPOSITION.

GEORGE W. WILLIAMS.

FEEL like throwing up the sponge, and saying to the *honest* bee-keeper. Let's quit the honey business. I find that bee-keepers, like every other class of individuals, are impregnated with a good supply of human nature, and are honest because the *law* makes them honest.

After all the fight that has been made by bee-keepers against adulterated stuff called honey, manufactured by parties who never owned a bee, and could not tell a drone from a worker, now comes the startling news that the very leaders in the fight come forth with an *adulterated* comb, and unblushingly say it is all right and honest to use a comb drawn out by machinery. Now, say, gentlemen, let us be fair. If you are opposed to the placing on the market a "stuff" called extracted or liquid honey that the bees had no hand in making, why not as strenuously oppose placing a honey on the market stored in "stuff" the bees did not make? Don't you think one is just as dishonest as the other? What caused the price of extracted honey to drop to such a low ebb and in proportion forced down the price of comb honey? It was the adulterated stuff you "kicked up" such a racket over. Now send out your shop-made comb, and the effect will be to ground prices of honest comb honey.

WHY NOT TAKE YOUR ADULTERATED COMB, AND FILL IT WITH YOUR ADULTERATED HONEY, AND THEN PUT IT IN YOUR SUPERS, AND LET THE BEES DO THE SEALING UP, UN-

TIL WEED, ROOT & CO. INVENT A PROCESS BY WHICH THEY CAN DO THE SEALING. AFTER WHICH THE LITTLE FAITHFUL HONEY BEE CAN GO TO—Jericho. Then, the "home of the honey bee" would be the home of the honey *A*—up head—see?

In an article before me, from the pen of Mr. Root, in the American Bee Journal, the writer says: "In the new product (drawn foundation) we propose to put this wax where it cannot be detected in the eating." Admitting you do, or can, it will be there just the same. I have eaten of adulterated honey that was hard to tell from the genuine article, but it was "home-made" honey just the same. Brother Root's asserting that he will put it in in such a manner that it cannot be detected in the eating, certainly savors of the idea that a fraud is all right if it can be practiced without detection. His theory reminds me of the drummer whose clothes were a little seedy, and his brother drummer asked him why he did not dress better. He replied by saying that his salary would not admit of it. He was advised to buy a suit, and charge it up to the firm he was working for. He tried the experiment, but when the auditor of his expense account, in running down the column of expense, came to the item. "One suit of clothes, \$26.00," he turned to his man, and said, "Here is an item we can't pay; you must buy your own clothes." Crestfallen at his failure, he went to his friend, and poured out his woes. The friend said, "You did not manage it right; you must charge it up by littles, adding it in your expense account as you go along. For instance, your expense from Higginsville to Sedalia is \$1.35; enter on your account, \$1.50, and so on." A new light dawned upon this *new* commercial man, and winter also came, which brought the needs of an overcoat, and he purchased

the much-needed warmer. On his next trip to his auditor's office, standing by the desk, the auditor happened to notice the new overcoat. "Why, Bill," said he, "you have a new coat, and a dandy. What did it cost?" "\$21.50," said Bill. The auditor then jestingly remarked, "Have you got that coat in this expense bill?" "Yes," said Bill, "but you can't find it!" Same Brother Root is going to put his adulterated comb in with the honey, but the honey eater can't find it. But it will be there, and a bigger fraud than if he could find it.

I work altogether for comb honey, and if I could get the bees to build the combs straight in the sections, I would not use any foundation; not as a matter of economy, for it is economy to give the bees plenty of starter comb; but to produce *better* comb honey. As it is, I use just as little as I can get the bees to build straight on. I take a piece $3\frac{3}{4}$ inches square, and cut it in four pieces, cutting diagonally across, and stick it to the top of the section, long point down; and if Friends Weed and Root will take the *extra thin* foundation, and cut it in that shape, then let the bees build to it—draw it out (?)—leave a super on until late fall, or until the bees carry the honey down, take one of the sections, hold it between him and the sun, and note how easily he can see the shape of the starter. If this can be done with extra thin, then how absurd to think that half-drawn comb could not be detected, even if the dishonest bee-keeper wanted to use it.

As a word of caution, I would say, if we want to hold up the price of comb honey, to use just as little and as *thin* starter comb in the sections as possible, and let Weed, Root & Co. enjoy their discovery of adulterating comb.

Yours, for pure comb.

Humansville, Mo.

THAT ARTIFICIAL COMB WEED

Should Be Root-ed Out and Cast by the Wayside, like the Canadian Thistle.

AN APPEAL TO THE BEE JOURNALS.

W. H. RITTER.

FRIEND LEAHY.—You say on page 85, March PROGRESSIVE, "Whither are we drifting?" I wish I could answer that query. Comb honey (No. 1) has in all ages been classed as a luxury by all people the world over, and deservedly so. It has been held at a relatively high price, as compared with sugar, generally obtaining from $2\frac{1}{2}$ to 3 times the price of sugar; yet for all that, no bee-keeper has got to be a millionaire from selling or producing honey. Well, now, what will be the result if we bee-keepers all rush pell-mell into the use of this new "Wee-din" comb? It is a very simple question, and very easily answered. If we adopt this thing, it will encourage the improvement of the machinery for the manufacture of the stuff, until it is so perfected that it will be possible to make the complete comb, and fill it with sugar syrup, seal it up, and put it on the market as clover honey, and *the result will be 5c a pound for our best white honey everywhere.*

Fellow bee-keepers, don't you believe for one minute that if this Wee-din comb machine is a practical success, you can ever get over five cents a pound for your best white clover honey any more after the introduction of the new comb process. Why should, or why *would* anybody pay over five cents a pound for any kind of syrup, when they can buy all the sugar they want at five cents per pound? Well, you say, *We* don't propose to sell sugar; we are going to let our bees fill these complete combs with clover honey, and we ex-

pect to gain lots of time for our bees by using complete combs, and get a much larger crop. Oh!—Excuse me—I didn't say—I never thought about any *bee-keeper* doing such a thing. But the manipulator and manufacturer will do it, for they will be green enough to believe that they can fool the people, and get fifteen cents a pound for the stuff because they call it *honey*—but they won't. The people are already on to this thing.

Two years ago, when I was selling here in Springfield, Mo., some nice clover honey, I was asked by two parties if my honey was not "made combs". The fact is, ever since the invention of the foundation mill, a great many people have gotten the idea that half the comb honey on the market is machine comb.

Brother Leahy, do you see the point? We have gone to sleep, and let a great Weed (they spell it Wee-din) grow up in our blessed honey field to blast all our future hopes. We have been hoping for better times, but all hope is gone unless we can dig up and burn this great weed. I am afraid it will be worse than the Canada thistle if we ever let it get a start.

NO, BROTHER BEE-KEEPERS, LET US BOYCOTT THIS THING FROM THE VERY BEGINNING. LET US USE THE BEST LIGHT FOUNDATION WE CAN GET FOR SECTION HONEY, AND JUST AS LITTLE AS POSSIBLE. I SINCERELY HOPE ALL THE BEE PAPERS WILL DISCOURAGE THE WEE-DIN COMB IDEA. IT OUGHT TO BE NIPPED IN THE BUD WITH A SOLID FREEZE.

Springfield, Mo.

Someone has pertinently remarked that one is always known by the company one keeps—out of.

MANUFACTURED COMB.

A Club to Beat Out the Brains of the Bee-Keepers.

PROF. WILEY'S COMB.

THOMAS G. NEWMAN.

I HAVE read with interest the articles in the bee periodicals, by Mr. T. F. Bingham, and Mr. W. Z. Hutchinson, about the use of the new "Weed" foundation, and must say that I share their apprehension respecting the effect it may have on the pursuit of honey production and honey consumption."

For years I fought the statement of Prof. Wiley that combs could or would be made by machinery, filled with honey, and be placed upon the market. I stated that it was untrue, and even went so far as to say that I did not believe that it could be done. I desire to protect comb honey from the suspicion which might attach to it, if it was thought that the combs COULD be made and filled with adulterated, glucosed, or bug-juice honey, or even the poor qualities of dark and unpalatable nectar.

I wanted to keep the sections of comb honey so far above suspicion that the fact of their being so put up would be a guarantee of purity. Virgin comb, filled with God-given nectar by the bees, and fit for the banquet of "the gods of old Olympus," or for any mortal or immortal being in the universe.

I TREMBLE FOR THE RESULTS. AS I NOTICE THE EFFORTS NOW BEING PUT FORTH TO MAKE THE CELLS NEARLY ONE-HALF AN INCH DEEP, BY THE NEW FOUNDATION COMB OF THE WEED PATTERN. IT COMES TOO NEAR—HORRIBLY TOO NEAR—TO THE MANUFACTURED COMB

DESCRIBED BY PROF. WILEY A DOZEN YEARS AGO.

Making the tubes, and cutting them with electric wires, plastering on a floor as a base for the cells, dipping this in a liquid of glucose and trash, and perhaps fitting on a roof by some "hocus-pocus" method, is too near the precipice! Then how easy to be cheating the bees, robbing honorable apiarists, defrauding consumers, and destroying the pursuit!

Is it not putting a club into the hands of the enemies of the pursuit to beat out the brains of the apiarists? If not, it is standing on dangerous ground.

True, I grant you, it is *intended* for honorable work, but it makes dishonest work possible, and should be shunned as you would an adder! I surely think it will injure the sale of honey, and destroy the pursuit, unless a halt is called.

Another danger is seen. It may give chance for the "mid-rib" scare to arise again, and be a detriment to honey consumption. To apiarists let me say, Do not think of such a thing as using even *thin* brood foundation in the sections, nor countenance the Weed-abomination, called "manufactured comb."

The remarks of Mr. T. F. Bingham, are to the point, and very appropriate. He says, "Butter is butter, but melted butter is grease; so comb is comb, but melted comb is wax." Let us be very careful not to allow the pursuit to be injured by the use of too much wax in the sections of comb honey.

San Francisco, Cal.

Brothers of the Pen and Pencil, as we here together stand,
Each a pupil of the genie with an ink-horn in his hand,
Let us evermore remember as we scatter drops of ink,
That the hand of fate is forging good or evil, link by link,
From the words we daily pinion to the lotus leaves that speed
On their mission to the peoples of whatever clime or creed;
And while hand can shape the ink-drops, life's great law of love obey.
As we write for a Tomorrow which, when born, is called Today.—W. E. Pabor.

THE WEED-ROOT COMB,

An Excessive Desire for Gain May Prove Our Destruction.

WE SHOULD HESITATE TO DO THAT WHICH BODES US WORSE EVIL.

JAMES CORMAC.

FRIEND LEAHY.—Your editorial, page 85, March PROGRESSIVE, protesting against the Weed-Root project to manufacture and put upon the market a deep cell foundation, meets my entire approval, and my sincere wish is that apiarists everywhere will give utterance against it as emphatically as you have done. It may be that I am protesting without knowledge, but from experience in the production of comb honey, were it not to prevent the bees from building otherwise than from the center of the section, I should use no foundation whatever. From many careful tests to ascertain whether the bees draw out the foundation while adding their wax in completing the comb, and thus rendering it more delicate, reducing the gobby foundation to as delicate a structure as their own, and rendering it anything but repulsive to a delicate taste, have been failures, as not in a single instance have I found a condition otherwise than one can separate the bees' work from the manufactured article in the same condition as when inserted in the section or frame. The desire to reap greater rewards from the pursuit in the line of preparing artificial cells, is likely to be a boomerang. Observation has often convinced me that beyond a small starter used in sections, foundation was a detriment, and produced a waxy *gob* (no other name seems descriptive) to the comb, while that work of the bee is so friable as to be al-

most imperceptible in the eating. But with full sheets of the thinnest of thin made by man, there is a mid-rib that requires spitting out after chewing and dissolving the honey in eating. That it will be the cause of injury to users of section honey, seems needless to attempt to prove, or argue. When it is impossible for the art of man to point a needle as fine as the sting of the bee, it is more impossible to make a comb wall as delicate as the work of the bee; where as the work of the man is a tough, leathery production, that of the bee is a construction of small scales attached together, forming a porous septum and side walls easily broken down into fragments, while wax walls and septum, however thin, are only bent and mashed together, not broken, thereby forming a gob or quid like unto gum, and rejected by the consumer; and if noticed by a person who is easily susceptible of nausea, produces in them disgust.

FOR THE GOOD OF THE APIARIST, WE MUST MINISTER TO THE EPICUREAN SENSE OF THE CONSUMER OF COMB HONEY MORE THAN TO AGGRAVATE AN ACKNOWLEDGED EVIL BY ENCOURAGING AN ALREADY EXCESSIVE DESIRE FOR GAIN THAT MAY PROVE OUR DESTRUCTION.

Furnishing weapons in the highest style of art to be used in the line of artificial comb, and filled by machinery, with glucose or sugar syrup. Readers of the various bee journals know how for years we have fought that mischievous charge that is yet unquenched, and now to endorse deep cell foundation under the guise of drawn comb, which has been so elaborately discussed of late as so advantageous to the comb honey producer, which now seems to have been cunningly advanced to prepare the way for deep cell foundation advocates to secure the approval

of the bee-keeper, if indorsed and used, will, I fear, work greater injury to our interest, as a class, than would the practice of feeding sugar syrup to fill honey comb. Our productions are at a low rate already from many obvious causes beyond our control, and therefore, if sane, we should hesitate long to do that which bodes us worse evil.

While it is no new idea that drawn comb in every section used would greatly aid in securing a larger surplus, and thereby add measurably to the profits of the apiarist, and a system of securing these in a perfect condition as possible for the reception of nectar, we should leave this work altogether to the bees, and take heed in due time to the warning that UNTIL WE CAN REPLACE THE BEE IN GATHERING, STORING AND RIPENING NECTAR INTO HONEY, SECRETING WAX, AND BUILDING CELLS IN WHICH TO STORE THE SAME, WE WILL BUT BRING A CURSE UPON OURSELVES BY IMITATING THEIR PRODUCT IN THE USE OF MELTED HONEY COMB TO REPLACE THE NATURAL PRODUCT.

Des Moines, Iowa.

"FRUITAGE"

FOR FRUIT MEN ONLY.

The Exclusive Fruit Paper of America

is a 32-page paper, the reading matter of which pertains to nothing but fruit. It is indispensable to any one engaged in fruit growing. Is a great fruit section, (PORTLAND, OREGON), and costs 50 cents per year. We want every one of our readers to have it on their table and will therefore give it free to all our subscribers who will send their back subscription and one year in advance, or to new subscribers who will pay one year in advance. This offer is good for but a short time.

Please mention the "Progressive."

WANTED!

10,000 pounds of BEESWAX, for Cash. Address,

LEAHY MFG. CO., HIGGINSVILLE, MO.

THE USE OF ARTIFICIAL COMB.

It Would Prove Detrimental to the Honor
and Integrity of Our Organization
if it Becomes Known.

F. J. R. DAVENPORT.

YOUR remarks in the March PROGRESSIVE have been read with increasing interest, and I hasten to express my condemnation of the artificial honey comb referred to. I have noticed several articles in regard to the comb, but the idea of investing in it has been so far from my intentions and conscientious consideration of what would be justice to my patrons, that I have not really given the matter as much thought as I probably should have done. In fact, I regard our beekeepers' association as being composed generally of some of the most honorable men and women of our land, and the thought that they would encourage the manufacture of this article to an extent that would prove detrimental to the honor and integrity of our organization, and to our success as producers of the king of sweets, has been far from my mind.

"There are black sheep in every flock," and, as a matter of course, we cannot expect our organization to be entirely devoid of this dark animal, comparatively speaking, for there are rascals and unprincipled men in every organization and avocation, and some of them are sure to "bob up" occasionally with some of their nefarious plans for deceiving a confiding public.

THE MAN WHO ADULTERATES HIS HONEY DOES NOT ONLY DECEIVE HIS PATRONS, BUT HE TRAMPLES HIS OWN CONSCIENCE AND BARTERS HIS PRINCIPLE AND GENTLEMANLY HONOR SIMPLY FOR A LITTLE

FINANCIAL GAIN. WHAT, THEN, ABOUT THE MAN WHO IMPOSES THIS ARTIFICIAL COMB UPON HIS PATRONS? SHOULD NOT HIS NAME BE REGISTERED UPON THE SAME LIST? HE MAY DO IT UNDER THE GUISE OF THE HONOR WHICH THE BEE-KEEPERS, AS AN HONORABLE BODY, ARE STRIVING TO MAINTAIN, BUT IS HE NOT A FINANCIAL ANGLER WHO IS BAITING HIS HOOKS WITH DISHONOR AND DECEIT TO ENSNARE THE CONSUMERS OF HIS PRODUCTION?

As an individual, I conscientiously denounce the use of artificial honey comb, and believe that the bee-keepers generally will do the same. Nature so ordained that the bee should construct its own cell for the receptacle of its honey, and when we do not allow it to do so, we are cheating our patrons—the consumers of comb honey—out of the natural, fragile, delicious comb, and imposing upon them a leathery gum. As a citizen, as a business man of any avocation, a true, conscientious principle should be the basis of every consideration.

Since I have been in the bee business, I have handled a great deal of honey, and not one pound have I ever adulterated. I have and do use some foundation comb for my sections, but as it is such a small piece in each one, it is no disadvantage to the quality of my honey. I, as a bee-keeper, have a good patronage, and as I wish to maintain my honor as an upright, conscientious citizen, I emphatically denounce the use of artificial comb, for it will be quite an imposition upon the people, and as a natural consequence, it would deteriorate greatly (if it became known) the sale of our honey production.

Hoping that everyone interested will justly consider this matter from a con-

scientific standpoint, I am very respectfully yours.

P. S. You are welcome to use my letter in any way that you deem would be of any advantage in the matter. Let us hear from you again.

Nash, Tex.

DEEP CELL FOUNDATION.

The Public Already Suspicious, and Watching for Something of this Kind.

O. P. MILLER.

IN relation to the adulteration of comb honey, will not this product, if put on the market without labeling it, deceive? Yes, most emphatically, it will deceive the people, even if it should be labeled, as many of the people take the word of the salesman as to the quality of the honey, as they do not understand the difference between the different kinds of honey, but think all honey is alike.

One of my customers said to me: "I can't tell the difference in honey, and don't care, so it tastes good, if it is glucose, or what it is." That very person would be the first to kick, should he get his mouth full of this manufactured comb, and then shut down altogether on the honey business. For, fix it as we may, honey is looked upon as a luxury instead of a necessity. I have been told numbers of times that my father or brother or someone else knew a man who could manufacture honey that I could not detect the difference between that and bees' honey. Others ask such questions as this: Is this regular bees' honey? or did you make it? The public is just looking for such an article as this will probably be, and have been looking for it for years.

In the town of Stuart, a man, purporting to be a bee-keeper, bought

three barrels of sugar, and made it into syrup, and flavored it with rose-water, and sold the towns-people this mixture for pure honey. I afterwards went in with pure comb and extracted honey. The grocer said, No, I bought a lot of honey from one of you bee-keepers, and it's nothing but sugar molasses. He would not buy either comb or extracted, and I can sell only to those I am well acquainted with.

Not long ago, a man bought a box of honey from a well-known merchant. After testing it, he took it back, saying the honey was nothing but sugar syrup put into the comb by the bees.

You see everybody is watching us, not for good, but for bad. We've got a black eye by the acts of some unprincipled rascals posing themselves as bee-keepers.

No, I am opposed to the manufacture of anything that will work against the sale of pure honey. I would not use foundation at all, if I could avoid it. As it is, I only use a very small piece in each section, managing to use a few sections in the center of each section-case with comb in built the previous year, thereby avoiding, as much as possible, the use of foundation.

IN FACT, I AM OPPOSED TO ANYTHING IN BEE CULTURE THAT IS DISHONEST, OR THAT WILL NOT BEAR THE STRICTEST INVESTIGATION OF THE PUBLIC IN GENERAL.

Glendon, Iowa.

Those Golden Beauties and Three Banded Italians Ready

The golden strain can not be beaten for business and beauty. Three banders bred from imported mothers. Also have the Cyprans, but they are mated to Italian drones.

1 L. Frame Nuclei with warranted Queen,	\$1 75
2 " " " " " "	2.25
3 " " " " " "	2.75
Untested Queen, 75c; three for	2.00
Tested " "	1.00
Fine Breeder,	2.50

Safe delivery guaranteed.

A-5-t

P. J. THOMAS,
Fredonia, Kans.

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

Weed 'em out.

Honey comb on a stick.

Somnambulist writes, "I do not intend to use any of the 'Manufactured Comb.'" Sommy, the hatchet is buried.

The PROGRESSIVE and a beautiful Golden Italian Queen for \$1. The PROGRESSIVE without the queen is 50c. The golden queens are 75c each, or three for \$1.80. Orders in April will be filled from our breeding yards in Texas.

The Jennie Atchley Co. writes, "The March PROGRESSIVE suits us, according to our judgment. Hurrah for the old PROGRESSIVE." Thanks, friends. I can truly say that if I was keeping bees extensively, there is no bee journal that I would rather have than the Queen. Your school for beginners is especially good.

The following is from E. R. Root, in *Gleanings*, page 152:

I had not thought of it before, but I do believe that American consumers, so far from disliking the so-called fishbone, as a result from the use of foundation in sections, actually do like it. It gives them something to chew. The fact of the matter is, I suppose, the average consumer does not know how honey in natural combs does taste. If he ate the honey of his fathers, he has forgotten how it chewed; and as practically all comb honey of to-day on the market is built from foundation, the consumers do not know that there is any difference between comb honey from foundation and that which was made without. But this is true.

Melican man he much likee chew. Other Melican man he say, "Me give him plenty chew, and make me richee. Hi! hi! Olli mocki hi! Hi! hi! We! we!" O, for a thousand—??—to chew.

The editor of *Gleanings* says that I have been so careless as to misquote them; that I have made them say what they did not say. In speaking of the new Weed comb, on page 204, Mr. Root

makes this quotation from the PROGRESSIVE: "They say it contains no more wax than the thinnest foundation," and Mr. Root then says: "If Mr. Leahy will show us where we have claimed it was as light, I shall be greatly obliged; but I have said we *hoped* we might make it—that we had not yet." I have three letters in which Mr. Root claimed that they *COULD* (not *hoped*) make this deep cell-wall foundation, 12 sq. ft. to the lb, or more. As these letters of Mr. Root's were written a long time ago, I supposed they were doing what they *COULD*. I give one of these letters here; it is from Mr. Elwood.

R. B. Leahy, Higginsville, Mo.:

Mr. Editor—You wish to know if I endorse the deep cell foundation. Mr. Root said it could be made as light as desired, or twelve square feet to the pound. The foundation we use is twelve square feet to the pound, and the resulting comb is thinner than the bees make."

Mr. Root, you will see in the above that you did not say "hoped," but *COULD*. Mr. Elwood further says:

"It may be that this comb business will have to be regulated by law. Also sugar honey, which is the worst blow the comb honey industry has ever received. The devil is loose, and it will take more than one bee-keepers' union to cage him. P. H. Elwood, Starkville, N. Y."

Now, Mr. Root, have I misquoted you? As I am crowded for room I will reply further to Editor Root in the May number of the PROGRESSIVE.

I have not had time to read everything that has come in this past month, but from what I have received, I am satisfied that my editorial on machine-drawn comb, or pressed comb, has met with the approval of our readers. I think I am safe in saying that I have received a hundred letters and postal cards relative to the spurious comb, and of this number, there are three, only three, that are for it. Their names are as follows: P. H. Elwood, E. T. Flanagan, and Dr. C. C. Miller, and they are only for it, provided it will not hurt the honey market. Mr. Elwood's letter appears elsewhere. Of course all the letters are not long. Some of them are like the following:

I think the manufacture of deep cell foundation for bee-keepers' use will hurt the market.
ORAN H. REED.

West Falmouth, Maine.

Gentlemen—Was glad to see your article in the last PROGRESSIVE on Drawn Comb Foundation. Hit 'em hard! hit 'em harder! for if a success, it will lead to the adulteration of comb honey.
O. P. HYDE & SON.

Hutto, Tex., March 30, 1897.

Leahy Mfg. Co., Higginsville, Mo.:

Gentlemen—I notice what you say in regard to the so-called artificial comb. I can but voice what you have to say in regard to the matter. The "Wiley Lie" has done enough mischief in its time, but I am much afraid this artificial comb will leave it so far in the background that it will be forgotten.

Uvalde, Tex.

C. R. MYRICK.

Friend Leahy—I am glad to see your vigorous protests against the Weed, Root & Co.'s new scheme regarding the manufacturing of artificially drawn comb for comb honey. But then—Mr. Root is such a pious Christian; from him, and his kind, a fellow hardly expects "crookedness." — Ahem!

WM. STOLLEY.

Grand Island, Neb.

I believe with you that artificial comb is the worst blow ever dealt to comb honey producers, and as a producer of comb honey myself, I hope to see this thing "nipped in the bud." The winter loss of bees in this locality has been great. I have about 200 colonies still in the cellar.

THOS. EVANS.

Lansing, Mich.

The following is what Mr. Doolittle has to say:

Drawn Comb.—I see by the March PROGRESSIVE that our other editor is down on the "Weed Honey Comb," and as we are to have none of it, except as samples, for the present, whether good or poor, and as very many think that there is great gain in having some drawn comb in every super put on, as a "nest egg," it may be well to see if we can not get the better of Mr. Weed for the present, at least, by having the bees draw out foundation or build down starters, in the sections for these nest eggs. Many fit foundations into frames, put these frames into upper stories, when by feeding or from a honey flow, the bees are induced to draw out the foundation till from $\frac{1}{4}$ to $\frac{1}{2}$ an inch in depth of cell is obtained, and then these partly drawn combs are taken away, cut to the proper size and fitted into the sections. This always seemed to me as a waste of time, when, according to my experience, the bees will do nearly as much work at drawing out foundation or building comb, right in the sections where we wish it, as they will in these frames. But there is another item: Will it pay to have bees doing this work right in the height of the harvest of white honey? Or will it pay to feed sugar syrup or white extracted honey to have this work done? To the former, I should say, no, every time; and to the latter, not as a rule. Well, under what conditions should it be done? In nearly all sections there is certain flowers which yield a quality

of honey which is not very salable, and in this, we find something which we can use to advantage in drawing or building the desired combs. Hence, nearly every buckwheat flow finds Doolittle putting on super after super with sections containing very thin foundation or starters, for the bees to prepare into "nest eggs" for the next season's white honey harvest. If the yield is good and a few partly filled sections left from the white harvest, are scattered about in each super, using the same as a "nest egg" for this work, we will find a nice start made in each section in about four days, when this super is to be taken off and another put in its place, using some of the partly drawn combs for a nest egg again, and so on till the season closes. In this way we turn an inferior honey, which generally goes on market at a very low price, to the lowering of the price of nice white honey, to a good use, for I have always claimed that such partly drawn combs were of more worth to an apiarist than money in the bank; for I verily believe that by this means we can gain in white honey the next season, more than the amount of dark honey we lose, besides relieving an already over-crowded market of so much dark, and generally unsalable and unsatisfactory honey.

—:o:—

How Much Super Room.—I see "Somnambulist" does not fully understand how Messrs. Manum, Doolittle, and others put on a small amount of surplus room at a time and then increase the same at will, along as the bees need more space, all the time only having enough for the bees to fully occupy, or in which to work to the best advantage. Let me whisper in his ear that with a hive which has no hood or cap covering the section, it is about impossible to do aught else than put on a super fully covering the top of the hive at one time, but with any chaff hive or hooded hive, and the right kind of a surplus arrangement, we have the thing perfectly under our control. Now let me very briefly describe two ways of working comb honey. The first, and the most common way, is when white clover puts in its appearance, to go to each hive and put on a surplus arrangement covering the WHOLE top of the hive, giving when filled, from 40 to 60 pounds of honey. Things are closely watched, and as soon as the bees have this super from

half to two-thirds full, the first super is raised up and another of the same size is put under, or between the first and the brood chamber. Then if the bees cluster out on some excessive hot day the two are raised up and a third slipped between, for fear the bees may not have room enough, and, as a rule, unless the season is an extra one, the honey flow stops with very few sections finished, or many imperfect ones, with a disgusted bee-keeper and colonies to be fed for winter. This is what I call "stretching out the bees too much," and it is a sin which obtains more largely among bee-keepers than any other bee-keeping sin that I am aware of. Now let us look at Manum: When his bees are ready for the sections, *not before*, he puts on a clamp of supers which will hold about 10 to 12 pounds when well filled, and when this is about to fail in giving room enough for the working force, another clamp containing the same number is put on, a thin honey board covering so much of the top of the hive as each clamp occupies, when these clamps are not on, and the hood covering the whole, whether sections are on or not. Thus by degrees the top of the hive is covered, and if more room is needed, clamp by clamp is added, as the bees can work in them to the best advantage. Near the close of the white honey harvest clamp after clamp is taken off, thus throwing a large force of bees each time into a less number of sections, so that when the harvest is over nearly every clamp has its sections filled with a plumpness which would delight the eye of O. P. Miller and his customers, as given in PROGRESSIVE, page 81. My way is still different, for by means of small coil wire springs I can put on from two to twelve wide frames holding four one pound sections each, having any number clamped together in any place on the hive, and enlarging and contracting at will, or just as the colony has

need: as I have given in back volumes of the different bee papers. I generally have the top of the hive covered with a quilt and sawdust cushion at all times when the sections are not on, and all I have to do in putting on the sections is to remove the sawdust cushion, roll back the quilt to the amount of room I wish and set on the sections or wide frames containing them. I generally put on three wide frames holding four one pound sections each, at first, and never more than five of these wide frames, the center wide frame containing four sections of drawn comb as a nest egg. As soon as these are fully occupied, with the prospect of a good honey flow ahead, the springs are loosened, and more wide frames given at each side, and so on as needed. When the honey season draws toward a close, contraction commences by drawing the frames together as filled or finished sections are taken out, so that at the end of the harvest no more are on the hive than there were at the commencement. If the harvest is poor, none but those first put on ever reach the hive, no matter how much the bees hang out, and in this lies the secret which has perplexed some in the past, that there has not been a season during the time I have kept bees (28 years) but what I have had a fairly good yield of nice finished honey to report. Here is the secret of successful honey production in a nut-shell: First secure the laborers *just at the right time for the honey harvest*, then keep an eye on things, giving only *just enough room in which to store all the honey coming from that harvest*, and you are boss of the situation.

I had intended to tell the readers what to do this month with the bees, but my room is up so will only say do just what is necessary to keep them from any fear of starving, giving them warm and comfortable quarters, know that they have a good queen, then leave them to do the rest, and they *will do it*.

Sections for Less than Cost.

We have the following sections that have accumulated on our hands the past season, and to close them out to make room for new goods we will sell these for less than they cost to manufacture them.

- 5,000 4 1/4 x 4 1/4 x 2 inch No. 2.
- 3,000 4 1/4 x 4 1/4 x 1 15-16 No. 2.
- 40,000 4 1/4 x 4 1/4 x 7 to ft. No. 2.
- 3,000 4 1/4 x 4 1/4 x 8 to ft. No. 2.

We offer the above lot in quantities of 500 and up at \$1.00 per 1,000.

The following is a choice lot of Cream sections:

- 49,000 4 1/4 x 4 1/4 x 7 to ft. Cream.
- 7,000 4 1/4 x 4 1/4 x 8 to ft.

Any of the above in lots of 500 or more at the rate of \$1.50 per 1,000.

We also have the following 1 1/2 sections:

- 15,000 No. 2 sections 4 1/4 x 4 1/4 x 1 1/2. Price \$1.65 per 1,000.
- 20,000 No. 1 Cream sections 4 1/4 x 4 1/4 x 1 1/2. Price \$1.85 per 1,000

Bear in mind that these will not last long and when they are gone they can't be reproduced for the money asked for these.

LEAHY M'F'G. CO., Higginsville, Mo.



HONEY JARS.

A good small package for retailing honey in is the square honey jar shown in the cuts. They are the cheapest and most popular small package we know of. We handle the Powder Jar, which is made in three sizes, and packed 100 in a package.

The prices are as follows:

- 5 oz jar. 25c for 10; \$2.00 per 100; weight 30 lbs
- 8-oz " 30c for 10; 2.60 per 100; " 45 lbs
- 1-lb " 40c for 10; 3.40 per 100; " 75 lbs

Corks always included. Neck labels for these jars 25c per hundred; 500 75c.

The Amateur Bee Keeper....

A 70-Page Book for Beginners.

—BY—



J. W. ROUSE.



SECOND EDITION JUST OUT.

Many new features added, and the book brought fully up to the times. The first thousand sold in the short space of two years. All beginners should have this book. Price of Amateur Bee Keeper, 25c; by mail, 28c; "Progressive Bee Keeper," monthly, one year, 50c. We will club both for 65c. If not convenient to get a money order, you can send one and two-cent stamps. Address orders to

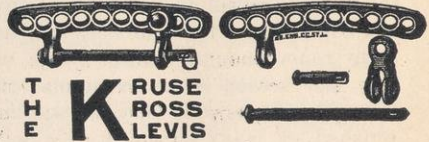
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FOR SALE CHEAP!



One 6-inch Root Foundation Mill, practically new, was used but a few hours. Price \$11.00.

LEAHY MFG. CO., Higginsville, Mo.



This Clevis being adjustable fits any plow. Only one kind to keep in stock. Ask your dealers for them.

Address. Mention this paper.

KRUSE KROSS KLEVIS CO., HIGGINSVILLE, MO.

Please mention the "Progressive."

Northwestern Stock Raising and Agriculture.

The great Northwest is rapidly settling, but there is still room for thousands of farmers to secure good homes; land is yet cheap. Good farm lands can be had at \$5 to \$10 per acre. Improved farms at \$10 to \$20 per acre, buildings all on ready to occupy. Stock ranges for the settlement, with a future payment to the Government of 50 cents per acre. Write for a copy of the **SUCCESSFUL FARMER**, published at Sioux Falls, S. D. Special map of South Dakota, with photo cuts of many ranches, farms, etc., for sale, and statements from neighboring farmers, will be mailed on application. Address

H. P. ROBIE, PUBLISHER, SIOUX FALLS, S. D.

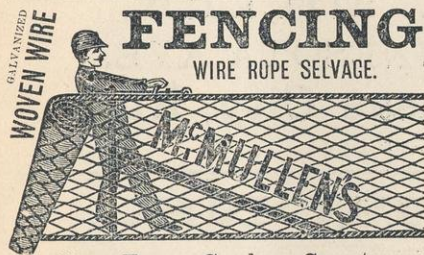
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Write us

before you order your **Sections** this season, as we can make it an object for you to buy of us. Our prices will suit you, and we know when you get some of our Sections, you will be more than suited. We have all the up-to-date machinery for manufacturing the **ONE-PIECE SECTION**. We polish them in the highest style of the art. Let us hear from you, one and all.

Wauzeka Section Co.

Wauzeka, Crawford Co., Wis., Jan. 15, 1897.



Poultry, Farm, Garden, Cemetery, Lawn, Railroad and Rabbit Fencing.

Thousands of miles in use. Catalogue Free. Freight Paid. Prices Low.

The McMULLEN WOVEN WIRE FENCE CO.

114, 116, 118 and 120 N. Market St., CHICAGO, ILL.

Please mention the "Progressive"

Italian Bees and Queens.

Friends, I have removed to this place from Pettus, Texas, on account of my wife's health and also to secure a better climate for the production of Queens and Bees, and in this I have not been disappointed. My facilities for shipping from here are also better, and I am prepared to fill all orders promptly, in season. I am also glad to say that I have entirely escaped from foul brood, as there has never been a case in Northwestern Florida, and paralysis is entirely unknown.

I quote you a special price of 50 cents each for untested Queens; tested Queens \$1. Special prices in dozen lots. Bees by the pound, 75 cents. Two-frame nucleus, \$2, including a good Queen. I guarantee satisfaction in every instance, and solicit a continuation of your valued patronage. Yours very truly,

E. L. CARRINGTON,
DE FUNIAK SPRINGS, FLA.

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PLEASE don't neglect to mention the **PROGRESSIVE BEE KEEPER** when answering these "ads."

Tested ITALIAN QUEENS

\$1.00. UNTESTED, 75c

No black bees here, and no disease.

W. C. GATHRIGHT;
DONA ANA, NEW MEX.

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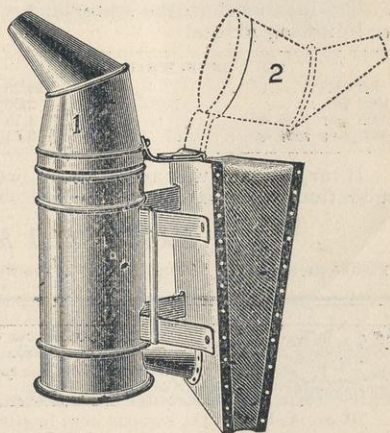


I am now ready to receive orders for May delivery, 1897. Full colonies of three-banded Italian bees in 8-frame dovetailed hives, \$5. Strong three-frame nucleus, with tested queen, \$2.75. Untested Italian queens, each, 75c; per doz., \$7.00. Tested Italian queens, each, \$1.00; per doz., \$10.00. Best breeding queens, each, \$2.00, \$2.50.

I know what good queens mean to the producer, as well as how to rear them. Safe delivery and satisfaction guaranteed. No disease.

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Bx. 103. GRAYVILLE, ILLS.

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THE "HIGGINSVILLE SMOKER."

A Good Smoker for a Little Money.

THE HIGGINSVILLE SMOKER A DANDY.

I received the Higginsville Smoker all O. K. It's a dandy; please find enclosed stamps for another. Yours truly, **OTTO ENDERS,**
Oswegathie, N. Y.

Price 75c; by mail, \$1.00. Address,

LEAHY MFG. CO., HIGGINSVILLE, MO.

“Higginsville Supplies” AT

Higginsville Prices.

KANSAS

people will save freight by
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BEE HIVES, SECTIONS, FOUNDATION,

and Everything Needed in the Apiary,
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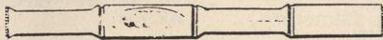
HENRY L. MILLER,

315 MINNESOTA AVE.,

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Write at once for his Illustrated Catalogue.

4 1-4 SECTIONS.



Our business is making sections. We are located in the basswood belt of Wisconsin; therefore the material we use can not be better. We have made the following prices:

NO. 1 SNOW WHITE.		NO. 1 CREAM.	
500 @.....	\$1.25	500 @.....	\$1.00
1000 @.....	2.50	1000 @.....	2.00
2000 per 1000 @.....	4.75	2000 per 1000 @.....	3.75
3000 per 1000 @.....	6.75	3000 per 1000 @.....	5.25

If large quantities are wanted, write for prices. Price list of sections, foundation, veils, smokers, zinc, etc., sent on application.

MARSHFIELD MFG. CO., Marshfield, Wisconsin.

Please mention the “Progressive” in answering this advertisement.

FREE TO BEE KEEPERS. How to manage bees? Send for our 36 p. x. Illustrated Catalog - It tells you all about hives, fixtures, sections, bees, queens, etc. The best and cheapest goods. **JOHN NEBEL & SON, HIGH HILL, MO.**

P. S. A. I. Root Co.'s goods kept in stock.

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We handle HONEY every day in the year. Correspondence solicited. We have been twenty years at above location, and refer to First National Bank, Chicago, First National Bank, Los Angeles, Cal., First National Bank, San Jose, Cal., Gleanings in Bee Culture, Medina, O.

Your banker can see our rating.

Also dealers in Butter, Cheese, Eggs Apples, Potatoes.

Our facilities for selling unsurpassed.

Reserve our address for future reference.

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25 CTS.

Send 25c and get a copy of the

AMATEUR BEE KEEPER,

A book especially for beginners. Address

Leahy Mfg. Co., Higginsville, Mo.



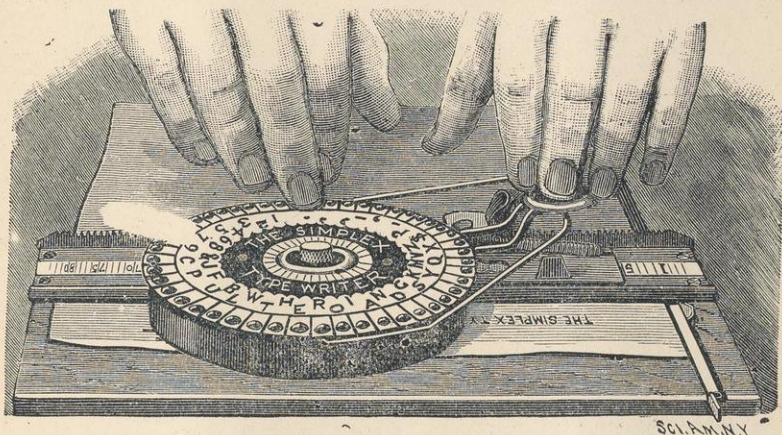
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The only really practical cheap typewriter ever put on the market.
Is Rapid and Does Good Work. Is Easy to Operate. Is Handsome. Can be
Carried in the Coat Pocket.

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THE LATEST OF THE BEST TYPEWRITERS. THE CLIMAX OF IMPROVEMENTS. THE
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The "SIMPLEX" is the product of experienced typewriter manufacturers, and is a
PRACTICAL TYPEWRITER in every sense of the word, and AS SUCH, WE GUARANTEE
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LAWYERS find them indispensable. MERCHANTS acknowledge their great value. CLER-
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FOR BOYS AND GIRLS.—The "SIMPLEX" will be hailed with delight by BOYS AND
GIRLS. It will improve their spelling, and teach proper punctuation. It will encourage
neatness and accuracy. It will print in any colored ink, violet red, green, blue or black,
It will PRINT A LINE EIGHT INCHES LONG, and admit any size letter paper. The print-
ing is always in sight. A USEFUL, INSTRUCTIVE AND ENTERTAINING NOVELTY, AT
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Nothing is of greater importance than correct forms of correspondence, The "SIMPLEX"
encourages practice, and practice makes perfect. Writing with this machine will be such
jolly fun for your boys and girls that they will write letters by the dozen. This may cost
you something for postage stamps, but the improvement in their correspondence will repay
you.

EXTRA POINTS,

The alignment of the 'Simplex' is equal to the very highest priced machine.

It is positive in action, and each letter is locked by an automatic movement when the
stroke is made.

It has no ribbon to soil the fingers.

The "Simplex" is mounted on a hard-wood base, and put up in a handsome box, with
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"I think the 'Simplex' is a dandy."—D. L. Tracy, Denver, Colo.

"The 'Simplex' is a good typewriter, and I take pleasure in recommending it as such."—
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"I received the typewriter one hour ago. You can judge my progress by this letter. It
much better than I expected, and with practice I think I will be able to write very fast
with it."—E. T. Flanagan, Belleville, Ill.

Price of Machine, \$2.50. By mail, 25c extra for postage.

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CATALOGUE,
PRICES,
GOODS.....

1897.

QUEEN BEES IN SEASON.

Three-frame Nuclei and Fall Colonies a Specialty.

Hives,
Smokers,
Sections,
Honey
Extractors,
Comb
Foundation.

AND ALL KIND OF **APIARIAN SUPPLIES**

AT
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Write for estimates on large quantities. Send for my 24-page, "large size" catalogue.
P. S. Save freight! How? Send for my Catalogue and find out.

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1897. **ROOT'S GOODS.** 1897.

Before placing your order for this season, be sure to send for Root's 1897 CATALOG! Our 1897 hives, with improved Danzy cover and improved Hoffman frames, are simply "out of sight." Acknowledged by all who have seen them to be a great improvement over any hive on the market of last year.



Weed New Process Foundation.

Cheaper and better than ever; clear as crystal, for you can read your name through it. Process and machinery patented Dec. 8, 1896, and other patents pending. Samples of the new foundation free.

THE A. I. ROOT CO.,

Main office and factory **MEDINA, O.**

Branch offices at 118 Michigan St., Chicago; Syracuse, N. Y.; No. 10 Vine St. Philadelphia; St. Paul, Minn.; Mechanic Falls, Me.

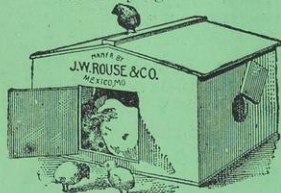
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Latest Improved Hives and all kind of

Apiarian Supplies, Bees & Queens

Everything Cheap.

Send 25c for the Amateur Bee-Ke per. It will tell you how to begin and how to succeed in bee-keeping.



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