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The progressive bee-keeper. Vol. IX, No. 2 Feb. 1, 1899

Higginsville, Mo.: Leahy Manufacturing Company, Feb. 1, 1899

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FEBRUARY 1, 1899.

PROGRESSIVE BEE-KEEPER

A JOURNAL
DEVOTED TO BEES, HONEY AND
KINDRED INDUSTRIES.

PUBLISHED BY
LEAHY MANUFACTURING CO
HIGGINSVILLE, MISSOURI.

TURKAY & SONS CLEV. O.

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

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I have used Ripans Tabules with so much satisfaction that I can cheerfully recommend them. Have been troubled for about three years with what I called bilious attacks coming on regularly once a week. Was told by different physicians that it was caused by bad teeth, of which I had several. I had the teeth extracted, but the attacks continued. I had seen advertisements of Ripans Tabules in all the papers but had no faith in them, but about six weeks since a friend induced me to try them. Have taken but two of the small 5-cent boxes of the Tabules and have had no recurrence of the attacks. Have never given a testimonial for anything before, but the great amount of good which I believe has been done me by Ripans Tabules induces me to add mine to the many testimonials you doubtless have in your possession now.

A. T. DEWITT.

I want to inform you, in words of highest praise, of the benefit I have derived from Ripans Tabules. I am a professional nurse and in this profession a clear head is always needed. Ripans Tabules does it. After one of my cases I found myself completely run down. Acting on the advice of Mr. Geo. Bower, Ph. G., 588 Newark Ave., Jersey City, I took Ripans Tabules with grand results.

Miss BESSIE WIEDMAN.

Mother was troubled with heartburn and sleeplessness, caused by indigestion, for a good many years. One day she saw a testimonial in the paper endorsing Ripans Tabules. She determined to give them a trial, was greatly relieved by their use and now takes the Tabules regularly. She keeps a few cartons Ripans Tabules in the house and says she will not be without them. The heartburn and sleeplessness have disappeared with the indigestion which was formerly so great a burden for her. Our whole family take the Tabules regularly, especially after a hearty meal. My mother is fifty years of age and is enjoying the best of health and spirits; also eats hearty meals, an impossibility before she took Ripans Tabules.

ANTON H. BLAUKEN.

I have been a great sufferer from constipation for over five years. Nothing gave me any relief. My feet and legs and abdomen were bloated so I could not wear shoes on my feet and only a loose dress. I saw Ripans Tabules advertised in our daily paper, bought some and took them as directed. Have taken them about three weeks and there is such a change! I am not constipated any more and I owe it all to Ripans Tabules. I am thirty-seven years old, have no occupation, only my household duties and nursing my sick husband. He has had the dropsy and I am trying Ripans Tabules for him. He feels some better but it will take some time, he has been sick so long. You may use my letter and name as you like.

Mrs. MARY GORMAN CLARKE.

I have been suffering from headaches ever since I was a little girl. I could never ride in a car or go into a crowded place without getting a headache and sick at my stomach. I heard about Ripans Tabules from an aunt of mine who was taking them for catarrh of the stomach. She had found such relief from their use she advised me to take them too, and I have been doing so since last October, and will say they have completely cured my headaches. I am twenty-nine years old. You are welcome to use this testimonial.

Mrs. J. BROOKMYRE.

My seven-year-old boy suffered with pains in his head, constipation and complained of his stomach. He could not eat like children of his age do and what he did eat did not agree with him. He was thin and of a saffron color.

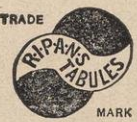
Reading some of the testimonials in favor of Ripans Tabules, I tried them. Ripans Tabules not only relieved but actually cured my youngster, the headaches have disappeared, bowels are in good condition and he never complains of his stomach. He is now a red, chubby-faced boy. This wonderful change I attribute to Ripans Tabules. I am satisfied that they will benefit any one (from the cradle to old age) if taken according to directions.

E. W. PRICE.

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The modern standard Family Medicine: **Cures** the common every-day ill of humanity.

ONE GIVES RELIEF.



A new style packet containing TEN RIPANS TABULES packed in a paper carton (without glass) is now for sale at some drug stores—FOR FIVE CENTS. This low-priced sort is intended for the poor and the economical. One dozen of the five-cent cartons (120 tabules) can be had by mail by sending forty-eight cents to the RIPANS CHEMICAL COMPANY, No. 10 Spruce Street, New York—or a single carton (TEN TABULES) will be sent for five cents. RIPANS TABULES may also be had of some grocers, general storekeepers, news agents and at some liquor stores and barber shops. They banish pain, induce sleep and prolong life. One gives relief.

"Higginsville" Bee Supplies at Kansas City.



Having purchased the goodwill and business of H. L. Miller, of Supplies, I will be in a position to furnish all Bee-Keepers' Supplies at Higginsville prices.

You will save freight by ordering of me. Write for Catalogue.



419 Walnut St.

C. E. Walker, Kansas City, Mo.

PRICES OF Bingham Perfect Bee-Smokers and Honey Knives,



Smoke Engine	largest smoker made.	per doz.	each
Doctor.....	3½ "	4 inch stove \$13.00—Mail,	\$1.50
Conqueror.....	3 "	" " 9.00—	1.10
Large.....	3½ "	" " 5.00—	.90
Plain.....	2 "	" " 4.75—	.70
Little Wonder.....	2 " wt 10 oz	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 sitty 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 Conquerer 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 3½ 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 Manufacturing Company.

Vol. IX.

HIGGINSVILLE, MO., FEB. 1, 1899.

No. 2.

TWO LIVES.

A maiden, a youth, and a sunshiny day:
The maiden was pretty, the season was May;
And the youth he was comely, with bonny
brown eyes,
While the maiden's were blue as the blue of
the skies.

The breezes were balmy, and charming the
maid
In the garb of the summer girl sweetly ar-
rayed.
Mused the youth at her side, with a passion
divine:
"I were happy if only this maiden were mine."

While the maiden was thinking: "Why does-
n't he speak?
I am sure that he will by the end of the week.
O, isn't he handsome?" "Look, Irma," he said
And showed her an oriole's nest overhead.

Her eyes were upturned, and, fruition of
bliss,
On the ruby red lips he imprinted a kiss.
"Why, Jack!" she exclaimed. And "I love
you," he said,
"And I can't live without you." She held up
her head.

"Do you love me?" he asked. "Why, I cer-
tainly do.
You are dull of perception. I thought that
you knew.
But it isn't quite fair, so I'll give your kiss
back,
And another one with it, a better one, Jack."

"Do you mean it, my darling?" "Why, cer-
tainly, Jack:
Don't say you're not wanting a kiss given
back."
So they builded sweet visions where love
ever thrives
In a beautiful fulness, to gladden two lives.
—Will Ward Mitchell.

AT REST.

Forever free from life's attendant ills,
Rests one who lately walked the ways of pain.
Enduring trials, after-bliss to gain.
Doing the work of One who wisely wills
The things of time, and in His wisdom fills
His finite sons with patience. Why complain
Of losing loved ones who from earth's domain
Rise to the glory of the sunset hills?
It is not long. Life's day is brief at best.
No city of abiding have we here.
God needed him, and called him to His rest.
To perfect peace, to wipe away each tear
Of earth's creation. In the country blest
Now he is waiting for his earth-loved dear.
—Will Ward Mitchell.

WAYSIDE FRAGMENTS.

Somnambulist.

AT the close of a long, busy and
trying day, I pick up a solid
little roll I recognize to be the
Review. With a refreshing
feeling, akin to delight, I pro-
ceed to relieve it of its wrap,
and reverse the roll to flatten it out,
all the while wondering what good
stores there are within, when sud-
denly a wave of disappointment
sweeps o'er my feelings, for now I
remember that Hasty will not be
heard from in this or probably fu-
ture numbers. Having so com-
pletely spoiled us, it seems almost
like a cruel trick, this sudden stop
or breaking away. Hasty, how
could you so harden your heart?
No wonder the editor refuses to ac-
cept your decision as strictly final,
and begs that, "occasionally, when
the spirit moves," some little re-
membrance will be sent the Review.
'Tis needless to add that his prayer
is supplemented by those of all the
readers of the Review.

It seems more natural for the ma-
jority of mortals to wear mourning
and long faces over that which they
have not, rather than to be thankful
for that which they have, and it
would appear that I belong to this
great majority by the foregoing,
but I am going to tell the good, or,
rather, a part of it, that is to be
found in the January Review.

W. Z., in his inimitable manner, tells of the nice little points—p's and q's as it were—which command recognition in the manufacture of so small an article as the "section honey box." This information was gleaned during a visit to one of Michigan's section makers, who acknowledged that "had he, at the outset, realized the difficulties to be overcome, he doubted if he should have ever gone into the business." In this one particular, is section making very different from most undertakings in life? But as to those nice points: The wood must be from "YOUNG, thrifty trees," be cut, sawed, and the lumber piled, while FROZEN, to secure white sections. Must be piled so as to permit free circulation of the air, to prevent mildew. Then it must be sawed, planed, notched, the insets cut, sandpapered, in all "pass thro eight different machines before it comes out a perfect section, and there must be no mistake, not even of the 64th of an inch (in some of these operations), or the section is spoiled." And yet the buyer frequently quarrels with the quotations per thousand, and the ordinary employee snaps them in two, rendering them useless, as thoughtlessly as though they were as free as the air we breathe. W. Z. points out the fact that this particular manufacturer and wife started their married life in a small frame cottage, whereas they now occupy a mansion bold. Nothing so very unnatural about that, but then 'tis true, some young people there are who prefer to work it the other way, i. e., commence with the income and large house, regardless of the ending.

I. W. Beckwith claims that the profits of bee-keeping are considerably modified by the loss of beeswax in the most common modes of rendering. He opens his article in this

way: "When the comb is NEW, and especially when it contains honey, and the weather is hot, there is probably no better method of rendering it into wax than by use of a solar extractor; but with the conditions reversed, the solar is no good."

How many times have we seen questions relative to securing wax from old black combs. The question of how to economically use old combs, coming up in one of our state conventions, was answered by a leading and successful apiarist by his saying, "Feed them to the hogs." He evidently thought them as innocent of all other desirable qualities as they were of nutrition.

Mr. Beckwith says the residue from the solar wax extractor, in the case of old combs, is nearly HALF wax. His advice is to "save all the residuum" from the solar extractor, and at the end of the season chop it very fine, boil it, and then run it through a press. Thinks that where most failures come in is in BOILING IT TOO LONG.

How many times have I been convinced there must be considerable wax in the refuse thrown away when preparing the extractor for a new lot of cappings, etc. Perhaps it would be as well to test the matter in the future, especially as the boiling and pressing process might be performed in midwinter when the bees were taking their annual sleep, while the solar extracting business is best carried on in the height of the season, when the bees are constantly making other engagements for you.

Again under "Editorial Offerings" we are told "we are losing a little wax when we throw away the propolis scraped from our sections." Then there are moths. They are first-class assistants in the way of eating up the profits; and on the same page we are advised, after the

combs have been emptied, to return them to the bees that they shall be made perfectly clean and dry, and "in this condition, free from honey pollen or cocoons, they may be hung in hives and stacked up out of doors, and, even with the hives left open, there's no trouble from moths."

No trouble from moths, I consent, but the way the elements would work on those hive bodies! Why, it would take the wax SAVINGS of a lifetime to equalize matters.

I see also we are to have a new semi-monthly, in Denver Colo., the "Western Bee-Keeper," to be "especially adapted to that PARTICULAR LOCALITY." Have you noticed that for some time the editor of the Review has treated us to pictures and stories of MICHIGAN apiarists, apiaries, and scenes of apiarian interest? In short, Michigan's apiarian wealth occupies a front seat. No objections to offer, but how about Missouri? Is there any reason why "poor old Missouri" should take a back seat, Mr. Editor? Have we no lovely nooks, no unoccupied territory, awaiting the "conquering hero"? Are there no men of wealth within our precincts who have directly or indirectly accumulated the same from bees? Plenty of 'em. Don't let Missouri fall behind.

The American Bee Journal in referring to my "notions" regarding the use of toxic drugs, in almost the same breath, as it were, spoke of whiskey being used for stings. Bro. York, I know you can not run a paper in the stirring city of Chicago, and not be "up to date," but let me whisper in your ear that whiskey as a remedy for bee stings, is out of date; in fact, an old foggy notion, and I for one am glad of it, and I am not a temperance fanatic either, being a sort of "middle of the road" man, as it were. But while not a fire eater, neither do I

in the slightest degree wish to encourage the drinking of "fire-water."

All of the PROGRESSIVE readers learned with pain of their big chief's illness, and hope to soon see FAVORABLE reports as to his getting on his feet again, in which we feel they will not be disappointed.

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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.,

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DO BEES FREEZE?

DR. C. C. MILLER.

THE novice in bee-keeping starts into his first winter with dim forebodings, fearing that his pets, being natives of a warm clime, may freeze to death. Later he learns that they live through the winters of the far northern regions. He also learns of colonies that have come out good and strong in the spring, although wintered in old hives so open that the bees could be seen through the cracks in more than one place, said colonies having had a good supply of fuel, in the shape of honey, to keep them warm. Then he changes his belief, and says, "Bees never freeze; they starve."

Let us try to see if we can get at the truth. Scientists have taken the pains, with delicate instruments, to measure the temperature of bees under varying conditions, and have given us some interesting facts upon which we may build. Bees are

warm-blooded. The exact normal temperature of a bee's body is a thing upon which all do not agree. Cisielsky places it at 95 degrees, and others considerably lower. Seven bees confined in glass and held at a temperature of 104 degrees, were all dead but one at the end of an hour and a half. The same bees confined in a temperature of 50 degrees, or even higher, would become torpid, if held long enough, a sufficient length of time producing death. Some that were brought to life after becoming torpid in a temperature of 48 degrees, showed an interior heat of 77 degrees. Putting it in round numbers, it seems that if a bee becomes heated to 100 degrees, or cooled to 75 degrees, its lease of life is about run. Please understand that doesn't mean that a bee cannot live in a temperature of 100 degrees, or in a temperature of 75 degrees, but it means that the heat of its own body must be kept somewhere between those two points.

How then is it that a bee which is dead if its temperature sinks to 50 degrees, can live and continue in good health in a temperature 70 degrees or more below that? Just in the same way that you and I live in a temperature much below that of our bodies. I am now sitting in a temperature of 70 degrees and feeling very comfortable in my shirt sleeves, but I wouldn't be entirely comfortable if the temperature of my body should sink to 70 degrees. The food I eat, properly combining with the oxygen I breathe, practically makes a little furnace within me that keeps me warm. Same with the bees. They eat honey, take in air, and so keep warm in a zero temperature.

But one bee can't stand a zero temperature, no matter how much it has to eat. Perhaps about 75

degrees above zero is all it could stand alone providing it kept still. By flying about it can keep warm for some time at a much lower temperature, perhaps below 40 degrees. For heat is produced by muscular exertion. If you find the lowest temperature at which a bee can live sitting perfectly still alone, you will find it will stand just a little lower temperature if another bee sits close beside it, for one helps to keep the other warm. Increase the number of bees, and you increase the ease of keeping warm, so that when you get together enough bees to make a strong colony, there will be no difficulty in their remaining quiet and keeping warm in a temperature of 45 degrees, with almost no consumption of honey.

If the cold be increased, there must be an increased consumption of honey, but with enough honey on hand, there is no more danger of freezing than there is danger of freezing in your house with a good furnace and plenty of coal. Some things must be attended to, however, or there might be danger of freezing with the best furnace and unlimited coal. Shut up the draft so the fire can have no air, and you may dread freezing in weather sufficiently cold. Let the ashes accumulate without ever being carried out, and your fire may go out.

Just so with the bees. Stop up all entrance of air, and no matter how much honey the bees have, they cannot produce heat with it. Let the ashes accumulate in the shape of fecal accumulations, and the bees will perish.

Given, however, a strong colony of bees, with a sufficient supply of honey within easy reach, sufficient pure air, and a chance for a cleansing flight without too long an interval, and there is no sort of danger of freezing. Indeed, taking the

conditions stated, enough bees, enough honey, and enough flights, and I see no reason why a colony might not live without even the semblance of a hive to protect them, out in the open air, in a winter continuously 30 degrees below zero between flights.

The danger is that the thoughtless or the inexperienced will stretch this truth too far and make the statement too general. Indeed, taken perhaps from the careless statement thoughtlessly made by some fairly good authority, there seems to be going the rounds of the agricultural papers now, somewhat in the form of an axiom, the statement in this bald and unqualified form, "Bees never freeze; they starve." A novice reads that, and he says, "My bees have abundance of honey, no danger of starving, and they never freeze." The only thing in the world he thinks necessary is to have honey enough, so he makes no provision of any kind to protect them, and in the spring most of his colonies are gone. Some were so weak in bees that they could not keep up the heat in a very cold spell, and they froze to death. A strong colony had its entrance clogged so it couldn't get air, and it froze to death. I know that an objector might insist that the bees smothered to death, and if it's any comfort to put it in those words, I don't know that I ought to object. Still the fact remains that if it had been warm enough, those bees would have been all right. Another colony not very strong in numbers suffers so much from accumulation of feces during a long spell of confinement, that before spring it has died of diarrhea. It may be said to have died of disease, but cold was a prime factor in the case, and if a little more care had been taken to prevent freezing, the

bees might not have died of disease.

Aside from the death of an entire colony by cold, there is perhaps no colony north of the parallel of 40 degrees that does not lose individual bees by freezing. A bee that wanders from the cluster in an atmosphere below 40 degrees, is soon chilled, and dies. A cluster of bees is left alone on one of the outer combs, and if they do not have the benefit of a rising temperature in due season, they're dead bees.

The statement, as I saw it lately made by G. M. Doolittle, that a strong colony of bees, under proper conditions, with plenty of honey, never freezes, is all right, but when the unqualified statement is made, "Bees never freeze; they starve," the answer should be, "Bees do freeze, millions of them."

Marengo, Ills.



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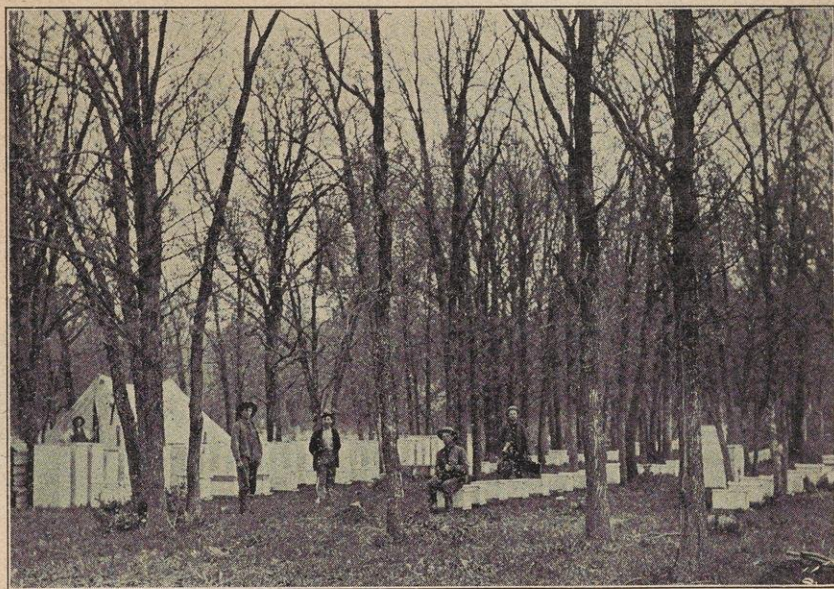
OAK GROVE APIARY,

S. A. MIDDLETON.

I ALWAYS enjoy looking at pictures, especially if I can know something of their history. This picture represents my home bee yard, known as Oak Grove Apiary. I also have another yard about 4 miles from home. You will see by the picture that the trees have

and reap the full benefit of the white clover and basswood that comes later. We don't usually wear our hats as we did in this picture, but as it was early in the morning, we wished the light to strike our smiling faces so you could see what we looked like.

I manage most of the bee business myself, as it will be seen in the picture that I have both hands full. Two of my assistants are my broth-



APIARY OF S. A. MIDDLETON, EAGLE GROVE, IOWA.

not yet put forth their leaves, but you will see by the supers in the background that I am expecting honey soon; also by the dress of myself and assistants that we are ready for business. I don't expect to get these supers all filled from the early bloom, but I expect to put them on, one on each strong swarm, and get a start made in them that will enable me to draw the bees up

ers, one a cousin, and the fourth a faithful young man who stays with us. My assistants do me good service when moving bees, removing honey, or on special occasions, but do most of their assisting in caring for the farm.

What I say of myself is soon told. I was born April 14, 1870, at the same place where I now have my home bee yard, which is located

near Eagle Grove, Wright county, Iowa, and my career as a bee-keeper began in this wise: My first sweet recollections take me back to a jar my mother used to get filled with honey each year, and the sweet pieces of bread my mother used to spread for me from this jar seemed to take such a fascinating hold on me that I soon quizzed into the honey business, and like all other good little boys, I persuaded my "pa" to get me the thing I most desired, which in this case happened to be a swarm of bees. These bees were not very good-natured during the summer, as a look at my face most any day would have indicated, but before the winter was near over, they were perfectly harmless, and permitted us to take what honey they didn't want, without any resistance. In the spring of 1885, father bought two swarms of Italian bees. These bees swarmed so much that we soon had all the cracker boxes and nail kegs filled, that we could get our hands on, and, as we used to feel, the hateful, things wouldn't die in the winter, so we could get the honey they didn't want, so that we soon had an elephant on our hands.

After father's death, I wished to attend college, and tried in many ways to dispose of my bees, and finally persuaded a friend to take them at about \$1.50 per swarm. After returning from school, my former friend wasn't long in urging me in turn to buy his elephant. After looking back at my first great failure, and feeling I could do better next time, I again engaged in the bee business in 1895, by buying about 100 colonies of bees in nail kegs, box hives, etc., and transferred them into 8-frame dovetailed hives, and Italianized most of them.

I have never had any experience in any other yard except my own,

but have been quite successful so far. I have had swarms yield over 180 pounds comb honey in a season, and averaged about 100 pounds per swarm, spring count, for the first three years. Last year my yield was much less, being about 45 pounds for the home yard, and less than ten pounds for the out yard.

I have been trying to act as missionary to the neighboring bee-keepers, to get them to give their bees the proper care, etc., and with this end in view, I handle bee supplies. In three or four towns, I furnish merchants with supplies to sell, and sell what I can from my own yards. I manufacture my own comb foundation and some supplies. I like the work generally quite well, only find some parts a little tedious.

As to success, I have been enabled in this short time to pay for my bees and quite a line of supplies; also to invest quite a surplus in land. With a start of 80 acres from home, and profits from bees, I have been enabled to buy more land until now I own 360 acres of Iowa land, but of course with a mortgage on it.

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5-lb " 40c for 10;	3.40 per 100;	" 75 lbs

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

LEAHY MFG CO., Higginsville, Mo

METHODS AND MANAGEMENT OF A NEIGHBOR.

F. L. THOMPSON.

ANOTHER Montrose bee-keeper who has given me some new pointers is Mr. R. D. Willis, who supplies foundation for the bee-keepers of the valley. In this work he is assisted by Mrs. R. D., who also fastens the foundation in the sections. In addition, four olive sprouts surround his table, and lend apicultural and other assistance; the oldest boy folding sections and assisting at extracting, and the others pushing the churn handle or washing dishes. This is what I know they do; and what I don't know may amount to as much more. As if this was not enough, Mrs. Willis puts up fruit with honey (for which she prefers the first crop alfalfa honey, as it is mildest flavored), and is prepared to analyze new honey plants. It was Mrs. W., by the way, who told me about sweet alysum, to which I have been so learnedly referring. When I add that Mr. Willis has a water-power and saw-table, and makes his own hives and shipping cases, it will readily be seen that he is favorably situated for bee-keeping as a specialty, and no one can blame him for increas-

ing his bees and letting other people have the fun of making his hay.

For a foundation-fastener, he has gone back on the Daisy, after using one for several years, and has made one according to his own ideas, which he says beats it. A treadle at right angles to the direction of a sewing machine treadle is attached to a string, which, passing over two spools, is attached to the iron which melts the foundation. The whole arrangement is in a suitable frame. The treadle only needs to be pressed down about three-fourths of an inch to move the iron sufficiently. Both hands are free. If I was working it, I would use both hands to put in the foundation; but they are so used to the Daisy, apparently, that they still use but one hand.

Mr. Willis is a firm believer in the efficacy of stimulative feeding. If feed honey is not obtainable, he thinks it would pay even to melt up some of the honey in the hives, and feed it back, for that purpose. He generally uses honey from combs that have been melted in the solar extractor, and reduces it with water, so that it is quite thin. He always feeds outside for stimulating. The thin feed is put in the solar extractor, with a long board under the outlet and the other end over some vessel, to catch the excess; and the plug is turned enough to let the feed trickle down the board. It is astonishing, he says, what a quantity of feed the bees can carry away in a short time when it is given to them in this manner.

Last season there were very few swarms in Montrose county, as I was told by those who did not prevent swarming. From some facts, I had come to think that perhaps, unless in exceptional years, such as the year before, the swarming problem would not be much of a problem; but Mr. Willis, who has kept

bees there a number of years, says that isn't so.

All bee-keepers have noticed how a swarm often scatters too much when hived, and how some enter neighboring hives, so that the swarm is reduced in size. Mr. Willis showed me once, when he was visiting me as I was hiving a swarm, how this may be entirely obviated. Simply sprinkle the bees with a little water whenever you dump them off of the branch or object on which they have clustered; then they will not take wing, but march straight for the hive in front of them.

He has had the same experience that I have had with wide and deep top-bars as a preventive of burr-combs. They don't amount to very much in that line. They may work very well the first year or so, but if a colony has the burr-comb habit, it is going to make burr-combs, no matter what top-bar it has. He now uses the slatted honey-board (not queen-excluding) on all his hives, between the brood chamber and supers.

Year before last, Mr. Willis tried several hundred 7-to-the-foot sections, and liked them so well that last year he used them for most of his honey, only using $1\frac{1}{2}$ inch sections for the outside rows in the supers. He used to think he could not produce good honey without separators; but now he does not use them at all, for the narrower the section, the straighter the comb; and in the case of 7-to-the-foot sections, the proportion of bulged combs is too small to take into account, according to his experience. His sections last season averaged 14 5-7 ounces. This is heavy enough; for, taking the average of the whole crop, we can't get STRAIGHT combs that will average a full pound as long as the $4\frac{1}{4} \times 4\frac{1}{4}$ measure is used. That reminds me

—at our last state convention, it was voted that no combs bulging beyond the edges of the sections should go into the first grade, no matter how white and nice they are otherwise. That makes a difference of two cents a pound to us in Montrose county—hence it is emphatically a matter of dollars and cents. Speaking of separators, others have urged upon me so strongly the importance of using them, that I can see no other way to make up my mind than to try different sections together in the same supers, with and without separators, on a sufficiently large scale to make the experiment of value, and count all combs that project the least trifle beyond the edges. In this matter, as in many others, the only way to know is to try it yourself.

Another innovation that Mr. Willis has gradually swung into, as the result of favorable experience in his practice, is tiering up by setting the second super on top of the first one, instead of under it. Last season he did this pretty extensively, and got as much honey as ever. The bees finish the sections more evenly in one super, by this plan, before starting on the next. Of course, this has been recommended before for finishing up the season; but Mr. Willis thinks there is an advantage in following this method all through the season, except perhaps at the first. It may be that for our peculiar conditions the plan is worth trying.

Like many others, Mr. Willis doesn't fool very long in getting the bees out of the sections. He adopts the plan of setting the super over an empty box with a hole in it, and smoking through the hole, so that ALL the smoke meanders through the bee-ways, and makes the bees think they want to be somewhere else; just a minute or two of

this, and then the super is carried into the honey house, and the few bees left find their way out through the house escape. I like bee escapes pretty well, but I must admit that when the supers run up into the hundreds, it is possible that some one of those plans by which, whenever a super is taken hold of, it is disposed of then and there, might come out ahead.

Mr. Willis is rather inclined to agree with Mr. Bruce about excluders. He would use them as little as possible.

Every hive run for comb honey in his yards has an inner cover, strongly cleated with $\frac{1}{4}$ inch cleats all around on top under the ordinary cover. This, I think, is something that all practical apiarists, in this cover-warping climate at any rate, must come to, sooner or later, unless they use wide frames—which, by the way, I have never seen yet in actual use, except when I tried a few double-tier ones by way of experiment. Any sort of a quilt has serious drawbacks in comparison.

Anyone who has tried melting up combs containing a good deal of honey in the solar extractor, knows what a mussy job it is to remove the cake of wax from the taffy-like mass in the bottom. Mr. Willis easily obviates this by first putting some water in the bottom, before the combs are melted. The resulting thin honey is easily washed off the cake. One might suppose that the vapor of the water, condensing on the glass, would cloud it too much, as happened to me once when I melted up some chunks of drone brood. I forgot to ask Mr. Willis about this point; but as I tried it once myself, and do not remember that the glass clouded any, I suppose that when the source of the vapor is beneath the pan, not in it, not enough is formed to hurt. To

be sure, my extractor has some chinks in it, which would allow a certain amount of vapor to escape.

Mr. Willis has a plan for getting rid of laying workers, which I do not remember to have heard of elsewhere. Towards evening, put a queen and some frames of bees and brood in an upper story over the colony containing laying workers. He has tried it half a dozen times without a failure; but has not practiced it of late, as bees have become cheap.

In the Uncompahgre valley is a good deal of soil that looks almost like the rest, and has not infrequently been sold to the luckless tender-foot for fruit land. It is no doubt fertile enough, but no cultivated crops can be got to grow in it, at least not until it has been thoroughly worked and irrigated for a number of years—which of course no one wants to do without immediate returns. The trouble is, it will not take up water unless it is fairly flooded a long time, and after that it goes to the other extreme, and bakes. It comprises all the land where chico grows exclusively; also some spots where almost nothing grows. Wherever sage brush and cactus grow, is good land. Well, Mr. Willis had a patch of this discouraging soil on his land, in which the fruit trees he set out all died; and so he sowed it to sweet clover, which did not refuse to grow. After three years, he sowed it to wheat, and had a good crop.

Denver, Colo.



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Please mention the "Progressive."

EXPERIENCE AND ITS LESSONS.

R. C. Aikin.

(Continued from Jan. PROGRESSIVE.)

CHAPTER XVI.

GETTING THE SURPLUS.

THE manipulation of a colony in getting the surplus is a very important matter. I should judge that more fail at this, than in the work preceding or building up the colony ready for the flow. Leave a colony to itself, and it will, ordinarily, become reasonably strong by June.

For most locations outside the subtropical south and California, I take it that the general rule applies that the colony, in passing from winter to summer, usually build up to full strength or to a condition to cast a swarm, by about the time of the main honey flow.

In a former article, I told you about using a hive, for winter and spring, of something like 16x16 inches and 20 to 24 inches deep, and Doolittle almost danced up and down with excitement at the thought. I used the figures in a general way, and I do not care whether you take them net, inside measure, or gross or outside measure. The general statement was all right, for such a hive will serve well, exceeding well, in wintering and springing and up to the honey season, the thought I was trying to impress. Doolittle may have the authority of Huber and others for the use of small hives, but I think not for the matter of good wintering and springing, as I applied the thought, and I will pit against him so good MODERN authority as the Dadants and others, and point him to the change now already set in to revert back from the extreme of using small hives.

But while a big hive is all right,

as I have hereinbefore described, it is just as true that we want the hive elastic so that it will accommodate all circumstances, conditions and places, so far as possible. An experience of 9 years using a large number of shallow frame divisible brood chamber hives, and that in connection with 8 and 10 L frame hives, coupled with a careful study of the experience of others, as reported in the journals and otherwise, ought to give me some trustworthy information concerning the matter, both as to shallow frame divisible hives, and the use of large hives as compared with small. I have been experimenting in using hives (brood chambers) from 15x17 square by 4½ deep, and 13x13x6 deep, up to the same square by 24 inches deep, the frames 4½, 6 and 12 inches deep respectively.

Having in former articles discussed the matter of getting strong colonies by the time of the flow, now comes the task of getting proper work out of them. Having the colonies strong, we have the first prime factor necessary to harvesting the crop, and also the first prime factor leading to swarming. Add to the strength of the colony, warm weather and a honey flow, and you have two more prime factors common to the business of swarming and to honey gathering. Let the colony swarm, and you do not materially decrease the honey gathering, but you do decrease work in the surplus apartment.

Let us see how it works. I have in a row 20 colonies, and all strong. True to instinct, they will swarm just about the time the honey flow gets well started. That is according to nature, for then the new colony can get its hive well stocked with comb and honey very promptly, and be safe for winter. I let 10 of the 20 colonies swarm. The

first week or 10 days after swarming, the parent colony puts no honey in the super, but will store some in the brood chamber, filling comb vacated by hatching bees. At the same time the swarm in their new home have been building comb and stocking the brood chamber. Every day from the day the swarm issues, the old colony is getting stronger for about 3 weeks, because of the hatching bees, and during the same time the swarm is growing "beautifully less" in numbers, because of the death rate and no bees hatching. While this is going on, the honey flow goes on, too, and often has clean gone out of reach. I have a glorious prosperity in the way of increase in stock, and in fine shape usually for winter, and money out for hives, etc., besides time, and in shape to do the same thing over again the next year, and the next and next, till a hard winter leaves me a host of hives and combs, but no bees.

When the honey flow is very good, some surplus honey may be gotten from both the old and the new. Should the flow be very free soon after the swarm is hived, it may fill the brood chamber and do super work, too, and excel the parent colony in the amount of work done; but should the flow be light till about 2 weeks after the swarm was hived, and then come strong, the parent hive will most likely do the better work of the two. You see it makes all the difference whether the colony is in the right condition at the right time. Keep in mind always, that when the flow is on, you want a host of workers, enough in every hive so that the brood chamber will have a full complement of workers, also enough to occupy the super, and besides a large field force.

The apiarist who follows the

method I have just outlined, viz., allow the bees to swarm at will and hive in new hives, cannot possibly obtain the best results. True, some of the colonies will just be in right condition when the flow is at its prime, and of course such ones will put up surplus. You see all do not arrive at prime strength and condition at the same time, all do not swarm at the same time, some queens will fail just when they should be doing their best to have the colony ready for the flow, some come to prime condition too soon, and some not soon enough. Much depends on how the colony got thro the winter, whether they got started early or had a hard battle to even get started at all, after the rigors of winter. All these things have to do with the getting of a crop, and the intelligent apiarist must understand and help the weak, control the strong, always be watchful, and manage the whole business in a scientific manner. Only by so doing will the general average compare favorably and the total crop be profitable.

Now let us see what would be the result of the other 10 colonies of the 20 in that row. Suppose I find one that is likely to become over strong before the time of the honey flow. By over strong, I mean a colony that has become full of brood and bees, whose queen is keeping the hive well filled with brood, and workers have become so numerous as to be crowded and have to cluster out. Such a colony should be made to either help up a weaker one, or be drawn on to start a new one, or both. But how can you tell when a colony can spare help for others? When a colony is strong enough to cover 2 or more combs more than the queen is keeping full of brood, then such a one may spare a comb of ripe brood, brood that has many

bees just emerging or ready to emerge, such comb to be given to a colony whose queen has not workers enough to cover and care for brood as fast as she can lay. These, hatching quickly, populate the hive where given, and reduce the rapid increase in the one from which taken.

We will assume that the whole row of 20 colonies had been so manipulated up to the time of the honey flow. The 10 that were not allowed to swarm would everyone be ready for super work, and all the force kept at home, they were ready to take advantage of any rush of honey. When nectar is free, a colony will in a large measure neglect work that would be done under other circumstances, and it is surprising what a large per cent will go fielding. These 10 colonies can every one occupy the super in force, and the fact that they do so occupy, very, VERY much encourages the storing of honey there. Almost every one of these 10 colonies will, if the flow be fair to good, take so freely to the supers that in a large per cent of them less honey will be stored in the brood combs than will be in the brood combs of the ones that swarmed. The 10 that do not swarm, will, in surplus honey, discount the swarming ones in all probability about 2 to 1 in pounds of surplus, and in plump, even, smooth finish, excel in about the same proportion.

The first 10 colonies have increased to 20, and have 20 hives full of honey; the other 10 have not increased, but they, too, have 20 hives full of honey, only that in this case the extra 10 is surplus for the apiarist. Suppose these 20 colonies had a good and long flow, the ones that swarmed would put up super honey, but the ones that did not swarm would put up more almost in

proportion to their strength.

But should the flow be very poor, then what will the swarmers do? I will tell you what—they would do well if they got the brood chambers stocked. The non-swarmers, however, would be able to put up some surplus.

Do not say that the colony that swarms works with so much more vigor that a much less number of bees will do equal work. That is a doctrine largely taught and believed, but like a good many other things taught and believed, is not based on fact.

I do not practice increase by swarming, yet, like most apiarists, sometimes a few colonies would get the start of me, and swarm. I have hived these swarms, small, large, larger, and whoppers, just this summer hived three fair swarms together. This kind of thing has been going on for years and years, and of course in all kinds of seasons. I tell you the truth when I say that the rule is that in proportion to the number of bees would be the honey gathered. This summer I had 3 colonies that swarmed, and while the swarm was out, I took away the brood, and slipped in frames with starters, then the super on. Two out of the 3 did not occupy the super at all, the third one giving about a dozen very poorly finished sections. Had the flow been free and good, I suppose they would have worked the supers. Almost every other colony not allowed to swarm, gave from 1 to 3 supers each—most of them 2, and had more brood chamber room, too.

Loveland, Colo.

(To be continued in our next.)

Recapitulation by G. M. Doolittle.

Right You Are.—I would like to have the reader turn back to the sec-

ond paragraph of Bro. Aikin's article, and read it over again. As far as my correspondence goes, I find that in all places north of forty degrees north latitude, swarming comes just in advance or in the immediate beginning of the main honey flow, and that is just the time when a division of the bees in the hive is the most disastrous to a good yield of section honey. Now, if Bro. A. and myself are right in this thought, the reader will see that so much does not depend on LOCALITY as it does on *manipulation*. Locality has been "thrown" at some of us of late, and it has even been hinted that did Aikin and Doolittle live only 15 to 17 miles from where they now live, they would find that LOCALITY would make so much difference that they would throw away all the plans they now use, and adopt something else. But I have failed to see things in that light, for, like Bro. A., I am led to believe that where white clover is the main honey crop, bees get ready to swarm about the 15th to 20th of June, at about which time clover commences to yield honey. If no clover gives a surplus, but basswood gives the main honey yield, then the main swarming comes from June 25th to July 5th, or at about the time basswood yields honey, as it usually does in this locality. If buckwheat and fall flowers give the yield of honey, then there is very little swarming, save during August, or the swarming is not abundant at any time, and scattered over a period of from two to three months, as it was here the past season, when buckwheat was about the only thing which gave any yield of surplus. Therefore, as Bro. A. hints at, a plan of manipulation which will bring the *maximum amount of bees* on the stage of action *just in time for the honey harvest*, whenever that may be, and those bees without any desire to swarm while the harvest is on, should be the thing sought after by *everyone*, for in such

plan of manipulation lies the *great secret of successful comb honey production*.

Small Hives.—It is amusing to hear the large hive advocates calling the 10 frame Langstroth hive a small hive, or the Quinby hive, as Quinby himself used it, a small hive. Quinby gave from 2,000 to 2,250 cubic inches as the right size for a brood chamber, which has generally been called a large hive. I have used for nearly 30 years a brood chamber containing but about 1,500 cubic inches, and with a success not out-equalled by any of the large hive advocates, supposing all the while that I was using and advocating a *small* hive. But now comes Bro. A. quoting the Dadants, who use the Quinby hive, as authority for his advocating his 6,144 cubic inch hive as the right size. Shades of Quinby! whither are we drifting? If I am not much mistaken, even the Dadants will object to being "stretched" in that way. But then, as Aikin is only talking theory, I suppose it will be all right for him to tell us about that hive of his that is so small that it will take only 30 Langstroth frames when used to the best advantage. But when he brings his theory down to *practical* work, look out and see him "hieving around the corner" with from 20 to 22 of those frames, concluding that Father Langstroth knew what he was talking about when he gave us his 10-frame hive.

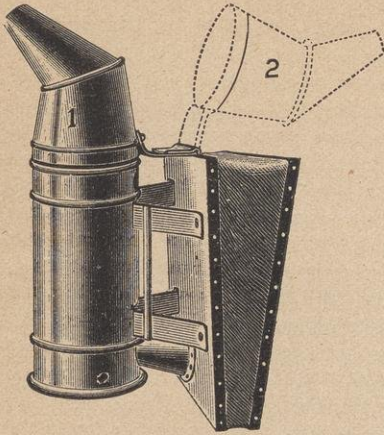
Those Prime Factors.—Bro. A. gives us four prime factors. Strong colonies. Swarming. Warm weather. Honey flow. Now that is all right with a ten-frame Langstroth hive; but with a hive containing 6,144 cubic inches, swarming will scarcely enter into the problem at all, for in the average location, no matter whether the honey yield comes from clover, basswood or buckwheat, not one such hive out of five will give either swarms or surplus,

providing the combs are nearly free from honey when the harvest commences; and if they are not, a surplus will be a rarity. No, no, Bro. A., you need not talk swarming to us with such a monstrosity as that for a hive, and should such a thing as swarming happen, ("the new colony can get its hive well stocked with comb and honey very promptly") would be a myth. New swarms do not fill such a hive promptly, and the swarm would be a monster that would fill one of your 16x16x24 hives in a single season, let alone any surplus. But I need not say more, for I see you realize how it is coming out, for you tell us (if we are foolish enough to go into the thing) we will be "honey out for hives, etc., besides time," and at last some hard winter will take the whole, and we be left with a "host of hives and combs, but no bees." Hurrah! Aikin is coming to his senses, if nothing more, on the hive question.

I Don't Know.—Someone by my side asks me what kind of a hive Bro. A. is using all through the latter part of this article, and I have to answer, "I don't know." Certainly it cannot be his 6,144 cubic inch hive, for no colony would get strong enough to hang out of that hive by the time the honey harvest arrived; especially if he put on surplus in proportion to such a hive. Then the question comes, "How does he keep the 10 colonies he is working on the non-swarmling plan from swarming?" Again I answer, "I don't know." He started out with a *great big* 16x16x24 hive, hinted at "elastic," and then tells us how ten colonies would perform if they swarmed, and what another ten would do if they did not swarm, and there he leaves us without telling us how it is done at all. Then he talks about building up weak colonies by taking ripe brood from the stronger, equalizing all in all, so that *all* will be

of the same strength as that of the strongest, just when the honey flow commences, and so on, just the way Bros. Hutchinson, Heddon, Doolittle and others, have been advocating for the past 25 years, when using hives containing from 1,500 to 1,800 cubic inches. And we don't any of us know whether this is a joke on that "*elephant*" of a hive, or a puff for the small hives, used by thousands during the past, with such marked success. But then, let's wait. Perhaps this is only a little "jack rabbit" practice, preparing for that great "stretch of legs" we were going to have when he left that "rackety gait," which I suppose he is going to do in his next article. Meantime, *don't forget* about that equalizing of brood so that each colony will be at its best *just when the honey flow is on*, for therein lies one of the "cleanest, straightforward jumps" any bee-keeper can ever take, and this in connection with no desire to swarm, will secure the greatest *yield of nice surplus honey* possible to obtain, no matter whether the year is extra fair, good, or poor. And to keep those colonies from swarming, all you have to do is to cage the queen for ten days, just before the beginning of the harvest, and when the ten days are up, open the hive and cut off *all* queen cells. If the queen in the cage is a good prolific one, just such an one as you wish to keep, take out the stopper and put in a plug filled with queen candy, gauged so it will take the bees about two days to eat the candy out, thus liberating the queen. If the queen is not such an one as you would like to have head the colony, put in the cage one which has just commenced to lay, allowing the bees to eat her out the same as the other, and all swarming will be done away with for the next six weeks to come, and for the whole season, unless your honey flow is long drawn out.

Borodino, N. Y. G. M. DOOLITTLE.



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OUR FIRST BEES.

By
ALICE HARDING CROSSMAN.

Written for the PROGRESSIVE.
(Continued from Jan. PROGRESSIVE).

One night not long after, my better half sat reading a farm paper.

"Here is what I want. I am going to send for one," he said aloud.

"One what? What are you talking about?"

"A place where they make bee hives to sell."

"Gracious me! You are not going to send for bee hives, I hope?"

"No, but I am going to send to a place where they make them, for a catalogue." He did, and in due time it came. He studied it carefully. Now it was his time to talk bees. He laughed at me; made fun of my wise uncle. He wanted to send for half the things he read about, but I could not see as he did.

"I wish we had never seen a bee gum," I said.

"Don't say bee gum; say bee *hive*," he said proudly. "I will show you something about bees. I am going to put those bees into hives." He stayed at home to make hives. He made three. He found directions for transferring. How wondrous wise he was now. What wonderful things he knew.

I made a bee face out of screen wire. The memorable day came for transferring the bees. The strings were again used to hold pantaloons and shoe tops together. With an important air he went about his work. While he was pounding away, Mrs. Brown came by. She called me out.

"Law sakes! What is that man a-doin' with them bees?"

"He is transferring them," I answered proudly.

"Yes, he'll play hobbs. Why, they will leave, for that is one of the oldest gums we had. That swarm has been in that gum fur five years. They'll go off."

"Well, I don't know anything about it," I said, feeling uneasy. "He read some place they do that way."

"Pshaw! read nothin'! I don't read nothin', an' I don't pay no 'tention to what I hear anybody else readin'. You can't believe what you read."

Mrs. Brown was very indignant. When she left, I hastened to tell my husband what Mrs. Brown had said.

"Let her take care of her own bees. I'll take care of mine. I am going to run this boat."

The next day Mrs. Brown came back.

"Lor me! if I don't think he is crazy. I wouldn't let him fool with them bees that way," she said as she stood watching Mr. C.

"Well, I can't do anything with him; he does as he pleases."

"Well, they'll go off."

"I don't care if they do, for he wants to fool with them all the time. And besides, one stung me this morning. Hateful things! And Will just laughed at me."

"It's because he's stirrin' 'em up so,"

Mrs. Brown said.

"I have been looking for him to get stung. He is getting so brave. I do hope he will get a good stinging; then he won't be so smart. I just hate bees, so I do." I felt so angry I wouldn't acknowledge that I ever wanted a bee.

Mr. C. came in for a drink.

"My wife, was fighting a bee this morning, and it stung her," he said laughing.

"I was not either. Never mind; you will get stung yet."

"I'm not afraid," he said.

After Mrs. Brown had gone, I stood by the window watching Mr. C.

"Does seem strange," I thought. All at once Will gave a jump, grabbed his trousers leg, and came tearing to the house.

"Oh, murder," I gasped, "What is it, Will?"

"An infernal bee up my breeches leg."

"What do you want me to do about it? I would be ashamed to make such a fuss over a little innocent bee."

"Innocent? Thunder and blazes! How would you feel—with a bee—acrawling—? Get me— Never mind. I guess I have killed it."

"I would think you had mashed him long ago, holding him like that."

"You have no sympathy for me," he said.

"But what did you say to me this morning when I got stung?" He made no reply, but shook his trousers. Down on the floor fell a drone. "Well, of all things on earth! All this fuss over a drone."

"You made such a fuss this morning, I thought it would hurt dreadfully."

"Well it did hurt, but it wasn't a drone, and—"

"O, the deuce!" he said, and out he went. I was singing at my work when he entered the kitchen an hour later.

"Get me the soda. Stand there and sing, and my eye swelling shut."

"What is the matter?" I asked in astonishment.

"Matter? Get something to put on my face; don't you see?"

"No, I don't see anything wrong at all."

"If both eyes were swelled shut, you wouldn't see anything wrong." He went to the glass, and looked, and gave a grunt. "It hurts awful bad, anyway."

"What did you say to me this morning?"

"But that was on your hand. This is nearly in my eye. I don't see how it got inside—"

"I know. You were smoking, and when you raised your bee face to—"

"Was there ever anything to beat a woman's tongue? Get me something, quick, to put on my face?"

"Well, what do you want?"

"Why soda, of course."

"Ammonia is the best. I tried everything this morning, and found ammonia gave relief immediately."

"So would soda, if you leave it on."

"All right; here it is."

He daubed his face; then went out.

He was the laughing stock of the neighborhood. One day I would like the bees; the next I would not. It was a pleasure to Mr. C. to look at his three colonies in their nice painted hives.

But he grew over confident in his ability to manage his pets. He laughed at me for being such a coward, for I was afraid of bees, and there was no use denying it.

Bee keeping in the prospective had seemed attractive enough; in reality I derived little joy from our new possessions. I didn't like bees so well as I had thought I did.

Will often said to me:

"You couldn't say, 'Boo' to a duck. Afraid of bees! The idea!"

"You needn't laugh. You'll get stung some day, and then you'll laugh on the other side of your mouth."

"O, maybe not," he said confidently.

But, alas! he sure enough did get stung, for one day when I had been churning, he picked up two buckets of buttermilk sitting by the back door, and started right through where the bees were thickest, to the hog lot, I believe just to show his bravery. My!



"My! how the bees did go for him, and how Will did hit the air with those buckets of buttermilk! It was a caution."

how the bees did go for him, and how Will did hit the air with those buckets of buttermilk! It was a caution. He was covered with buttermilk from head to foot, and resembled something that had been fished out of a hog trough more than he did a bee-keeper. But the lesson was not lost on Will—he was less boastful and more careful after his buttermilk dance—and he didn't laugh at me any more.

The bees were busy at work, when Mr. C. said to me one morning:

"Now watch them close, for they are ready to swarm. Don't let them go off, while I am in town."

"Well, I will try, but I am so afraid

of them."

"You were the one that was so brave at first."

"You told me to take care of the house, and you would take care of the bees."

"Well, let them go off. I am obliged to go to town." While he was away, I did watch faithfully. Mr. C. came back at dinner time. "Any bees out, or did you look out the window a single time?"

"Yes, I did watch, but none came out."

"I bet you let them go off." He went out to look at them. Presently I heard the well-known hum. I ran to the door.

"There's a swarm out!" I cried.

"You are crazy; they are working," Mr. C. said, looking around.

"No, I tell you they are swarming. They hum differently."

Not until they began pouring out of the hive did he realize that they were swarming. Then he became excited.

"Where is my bee hat and gloves, and—? Do be quick. I believe everyone will swarm. Do be quick, Honey."

I did try to be quick but, but "haste makes waste," but after some time we had the pleasure of looking at our five hives.

"Now we have five stands of bees," I said proudly.

"Yes, but you don't like bees," he said provokingly.

* * * * *

A year later, when he sold his crop of honey, I said to him:

"Are you sorry I paid seven dollars for three stands of bees?"

"No, and I am going to get you a nice present."

He did; he bought a nice rocking-chair for me. I gave him a pair of easy slippers. In the evening he would sit in the chair, his comfortable slippers on his feet, and enjoy life.

Venus, Tex.

THE END.

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STRAWS FROM THE APIARY.

Fred S. Thorington.

I see by different journals the question is repeatedly asked, Shall starters only, or full sheets of foundation be used in the sections? I will say, I think it depends. Depends upon what? The kind of foundation used, and by whom the honey is to be consumed, or whether it is to be marketed abroad or placed on the home market, or sold direct to the consumer. If full sheets are used, it always should be of the extra thin variety. 'Tis claimed by some that where full sheets of foundation are used, the bees fasten the comb more securely to the sections and leave less pop holes in the corners of the sections, and that such section honey stands rough handling in shipment better than does honey built from starters alone. It may stand shipment better; I don't know. But I don't think in all cases, and under all circumstances, the full sheet honey will be found to be any better attached to the sections than is the natural comb where only a small starter of foundation is used in top, or both top and bottom, of section,

as case may be, and then, too, the consumer often complains of the fishbone in section honey, as being objectionable to the taste or requirements, meaning the foundation used in said section. 'Tis not near so bad where only small starters are used, and where nice straight even combs can be obtained by the use of small starters, I would say, let only starters be used, more especially if it is to be placed on the home market to be sold, or sold direct to the consumer, and let the good people have what they want to eat as long as they pay for it. Let extra thin foundation be used for starters, and I don't see where the comb built from starters, if well attached to the side of the section all round, would not stand shipment as well as comb built on full sheets of foundation. I am quite sure by past experience that many such combs filled with nice honey can be produced.

Last fall a man that had kept a grocery in Chillicothe for years, though he now was in the real estate business, wanted me to bring him twenty pounds of comb honey. I took him the honey in sections, which he paid for, and at the same time ordered thirty pounds more, to be brought in at any time, as he was in no hurry for it, wanting it for his own family's use. When the honey was delivered, and as he paid for it, he said: "The only objection I have to buying of you fellows is on account of that stuff you use in the comb." meaning the foundation. I told him the stuff was made of beeswax, and was put in the section in order to enable the bees to start their comb more correctly in the center of the section, so one section could be separated from the other, and in place of using full sheets, I only used a small piece for a starter in the top of the

section to get them started right. He said he did not notice it in my honey like he did in others'. I told him the foundation was wholesome and pure wax. Above, where he said "fellows," he meant us bee-keepers.

Will that one race, *apis dorsata*, inhabiting the Philippines, be a welcome addition to American citizenship, and receive every facility and inducement to emigrate to the United States and engage in the skilled labor in which it is said to have no peer? I, for one, don't know.

Was sorry to learn through the January PROGRESSIVE of Friend G. M. Doolittle's misfortune and suffering, and hope for his speedy recovery.

As ye writer is not very well, will close for this time. Grip and measles are running wild here.

Chillicothe, Mo.

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ANENT LARGE HIVE ENTRANCES.

J. W. ROUSE.

I HAVE seen a number of articles in the bee journals in regard to hive entrances, some advocating the raising of the hives and placing blocks under them, in very warm weather, so as to give good ventilation in order to have the bees at work even when very hot, instead of clustering out or hanging out, as it is called. After giving the hives a proper entrance

or opening to the hive, I doubt the wisdom of enlarging this to be reduced later. Getting a proper size entrance is the question, at least with some.

In my own experience, I have used mostly an entrance from six to ten inches by three-eighths. I am using 10-frame hives made some 15 years, and the entrance was cut in the bottom board. I expect to use some new hives the coming season, and if so, will use the 10-frame dovetailed hive, with the entrance full width in front, by three-eighths. I think this entrance is plenty large, in fact, too large for cold weather.

While it may be true that any entrance, no matter how large, may not be too much in very hot weather, or a hive open top and bottom would make but little or no difference, unless it rained, still I think there is very little or nothing gained by a large entrance, even in very hot weather, as there is but little nectar to be obtained when it is so hot anyway.

There is a brother bee-keeper who kept bees some ten miles east of here, but is now in the same town as myself, who has always (at least as long as I have known him) had an entrance to his hives both in front and at the rear of his hives. I have been just as successful in securing a honey crop as he; in fact, I got a partial crop of honey the past season, when he got nothing, although he has more than twice as many colonies as I, and he is a veteran bee-keeper, too, although I do not lay my success and his failure to our hive entrances in particular, only to show that I do not believe after securing an entrance on one end of a hive, it is at all necessary to make any more.

If an entrance is made in the bind-er part of hive, or a hive is raised

up, it certainly should be closed to a smaller entrance for wintering, if left on the summer stand, and if the bees are used to going out at the back or sides, they certainly would be at a loss to find the right entrance if the others were closed when they should go out of hive.

To raise the top for ventilation would doubtless work all right when very warm, if let down again when it turned cooler, but I would not do this much; that is, I would not like to raise the top but little, as it might interfere with comb building. In fact, as first stated, I doubt the wisdom of doing any of these things besides a whole front entrance. In the far south it may be more necessary to ventilate than here in Missouri, or farther north, but if I am rightly informed, it gets very nearly as warm at almost any part of the United States in one place as another, except it may be in local surroundings. I have heard that it gets very warm even as far north as Alaska. Of course in the far south there are much longer periods of warm weather. So I would advise the beginner to be cautious about enlarging the hive entrances more than whole entrances in front.

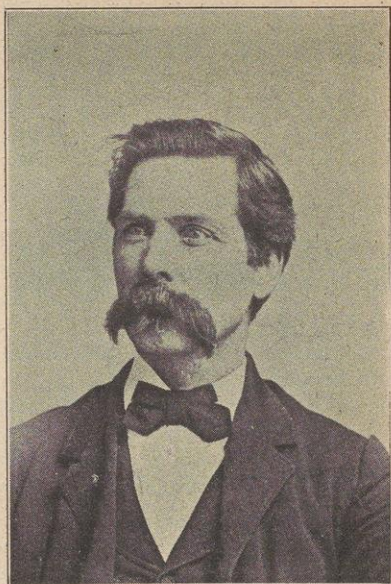
Mexico, Mo.

ERRONEOUS IDEAS.

GEORGE W WILLIAMS.

AFTER my fall's work with the State Board of Agriculture in the Institute work, I have been pondering over the amount of ignorance I find among many who keep bees. Not that they are an ignorant set of people by any means; but ignorant about bees, their habits and peculiarities. I will venture the assertion that there is nothing else that is kept on a place that the

average owner knows as little about as bees. Many do we meet who know absolutely nothing about these little pets, and yet upon inquiry as to how long they have kept bees, they will say, "Oh, all my life," meaning of course that their father, and perhaps their grandfather, had kept bees for years and years. These people still call the queen the "king", and think that the drones lay the eggs, and that bees live for years, same as heroes, etc.



GEORGE W. WILLIAMS.

One of these "lifelong" bee-keepers was here at my place the past summer, and in watching the bees at work in an observatory hive, he asked me to point out the "queen's house," and upon questioning him, I learned that his idea was that the queen had a palace, and sat on her throne, and ruled the workers with a royal tyranny that would put to

shame a despot of South Africa; that she was surrounded by her court, who acted as body guard and staff officers, carrying her orders from place to place in the hive, and woe be unto the disobedient subject that dared to assert independence enough to disobey one of the least mandates. You can imagine his surprise when the queen came around on the front side of the comb, and began depositing eggs. He was amazed, yes, "riveted to the spot," at such a procedure. His idea of her royal highness had taken such a tumble that he was dumbfounded.

The above is only an example of hundreds we meet in our work. How could anyone expect to get profits out of anything they knew so little about, or gave such little attention? Let me say to the "life-long" "king" (?) bee-keeper, Study your bees. Get some good standard work on bees, take at least one bee paper, and devote a little of your time to the bees, and you will be rewarded for the time thus spent. If you are not willing to do this, GIVE YOUR BEES to some good neighbor who will care for them.

Now, dear PROGRESSIVE, while we find these erroneous ideas among those who acknowledge they do not know anything about bees, we can and will excuse them, but how is it with the fellow who has studied (?) b-e-e-s, and writes for the journals for the edification of others, and makes almost as wild "shots?"


For instance, the assertion that there is, in work-time, a guard kept standing at the door (entrance), as if the colony had military discipline in it. And the queen laying eggs in queen cells, a thing that never happens, or was never done. No bee-keeper has ever seen this, and I am sure never will. Instinct (we call it "instinct" for want of a better name) teaches her that if she

lays an egg in a queen cell, there will be another queen reared in that home, which means a supersedure or a swarm, and that means to her either death or change of home, a thing that she tries in every way possible to her to avoid. If she lays eggs in the queen cells, why is it that the bees have to guard the cells to keep her from tearing into them and destroying the pupa? If the queen does not deposit the eggs in the cells, how do they get there? you ask. In most cases, the bees build the cell AROUND the egg or young larva selected, and if they can not do this, they will move an egg from a worker cell to a queen cell, and I have circumstantial evidence enough to fully satisfy me that they will, in emergencies, in some cases, slip into another hive, and steal an egg, carry it home, and rear a queen from it. The latter I have no POSITIVE proof, yet circumstances are such that I am convinced they will do it.

Now, Mr. Editor, I have opened the gap to the fellow who says that bees do not move eggs, and if he wants to take up the fight, I will say, in the language of Peck's Bad Boy, "Bring on your royal bumper, and let him bump.

Humansville, Mo.

HIBERNATION.

 SOME say that bees hibernate in winter. The bee-keeper should NOT HIBERNATE. He should prepare EARLY for the season's work. He should study some good book or journal on the subject, should order his supplies now, and decide where he will purchase his QUEENS and BEES this coming season. Let me send you an 8-page circular describing an IMPROVED strain of **GOLDEN ITALIANS**, giving a list of the leading bee books and journals, etc.

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Belleville,
Kansas.

(Mention the
'Progressive')

THE DEATH OF FRED S. THORINGTON.

(Obit January 23, 1899).

The following sad news came to us this week of one of our contributors, and more—a beloved friend, for Friend Thorington held a warm place in the heart of every member of our firm, and many of our co-workers here.

"The death of one of the best citizens of this county, Fred S. Thorington, occurred early Monday morning from the effect of measles. He was in his 44th year, and for over 20 years he has been an invalid, not having the use of his lower limbs. [He wheeled himself about in the apiary in a wheeled chair.—Ed.] This debility was brought on by a severe attack of fever. Although he was an invalid for so many years, he was always cheerful, and kept himself employed in the study of bee raising. He wrote several articles on this subject which have received much praise.

Fred Thorington was born April 17, 1855, at Pulaski county, Michigan. Two years later his parents moved to Calhoun county, Mich., where young Fred spent five years around the rural haunts of their Calhoun county home. His early life was spent in the district school. When but a lad of 8 years, Fred went to his sister's at Homer, Mich., where he made his home until 1871, when he came south to join his parents, who had removed to Livingston county, Mo., in 1865. Since that time he has lived in this part of the state, engaged chiefly in the bee business.—Chillicothe Times.

On Jan. 14, I received the following note from Friend Thorington:

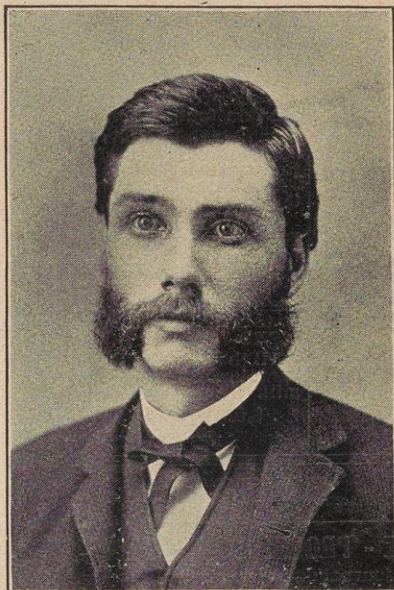
"I was in hopes to finish my article next week, but sickness will probably prevent my sending it soon. I will try and send it in time. The grip and measles are abroad in the land. Chillicothe, Mo. FRED."

I little thought when I read the above that it was poor Fred who had the measles. Like him ever, non-complaining, only to explain.

Often in the springtime, when the branches of the trees were waving in the gentle breeze, and the bees were gathering nectar and pollen from their soft buds, and their musical hum seemed to drown discontent, and usher in the joyous spring with her myriad voices—it was then I have thought of poor Fred, for he was a true son of nature. I could almost imagine I could see him in his wheeled chair, at his rural home, caring for his bees, with a smile on his face. He would wheel himself about the apiary, doing his work, attending to the little pets he loved so well.

But he is gone. The spring will soon be here; the roses will bloom again, but Fred will not be here to enjoy the vernal beauty and freshness, nor note the sweet bird songs. And, too, the bees he loved so well will shortly come from their winter rest; but no more to greet

the ear of the patient sufferer who loved them so. The roses, birds and bees will be as dear as in the days before—they are left for us—but he has gone to



FRED S. THORINGTON.

a land where flowers never fade, where angel voices make glad music about his Father's throne forevermore, and where is no more suffering or death. It is not goodbye, Fred; it is only farewell, for a little while. R. B. L.

TEXAS QUEENS.

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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.

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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

SWEET CLOVER seed and Japanese buckwheat wanted.

THE coldest night we have had here this winter has been 25 degrees below zero, and we have had many nearly as cold; but Boreas will soon take his flight to the polar region, and the blackbird will come again.

THE following from G. M. Doolittle is good news indeed:

FRIEND LEAHY:—Mrs. D and myself are getting nearly as well as ever, and I hope you can say the same of yourself.

G. M. DOOLITTLE.

Hurrah for Bro. Doolittle and his good wife! May they get sick no more.

THE Western Bee-Keeper is the name of a new bee publication hailing from Denver, Colo., F. L. Thompson, one of our contributors, editor. It is published semi-monthly, and the price is 50c per year. It makes a much bet-

ter appearance than most youngsters, and we predict for it its share of success. Those wishing to subscribe or call for a sample copy, will address the Western Bee-Keeper, No. 2341 15th St., Denver, Colo.

SEVERAL of our Nebraska customers have sent in complaints because we had removed Dr. Miller from Omaha to East St. Louis, Ills. The accompany-

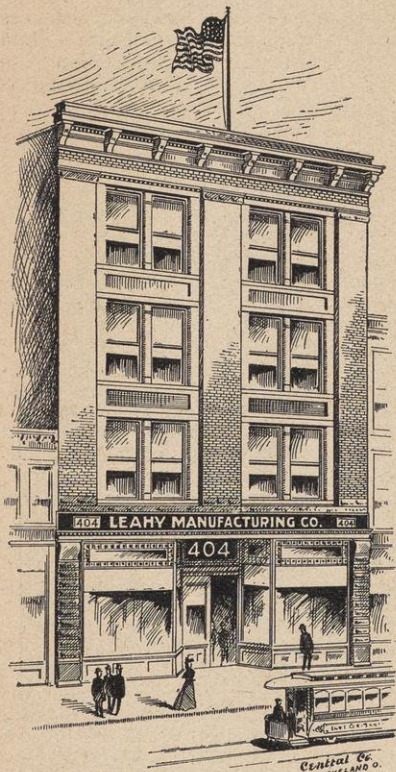


MR. OLIVER ROUSE, OUR NEW MANAGER AT 1730 SOUTH 13TH ST., OMAHA, NEBRASKA.

ing cut introduces to you our new manager at Omaha, Mr. Oliver Rouse. For the life of me, friends, I can see no room for complaint. If he is not as good a man for the position as the Doctor, I am sure he is a much handsomer one. Oliver is the son of our friend, Prof. J. W. Rouse, of Mexico, Mo., and was at the head of our packing and shipping department, and gave us better satisfaction than any man that had ever before held this position. We can say with all candor that the more business you do with Mr. Rouse, the better you will like him.

WE now cancel all contracts made prior to Feb. 1st; that have not been accepted to this date, for zinc of all

kinds, tin cans, and other vessels made of tin or galvanized iron, except Smokers and Honey Extractors, which will remain the same as quoted in our Catalogue No. 29, and Dealer's List No. 10.



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In selecting sites for our branch houses, we have kept in view the convenience of our customers, and rented rooms that would be light and dry, where our goods could be packed for shipment. The above cut represents the building we are in at 404 Broadway, East St. Louis, Ills. Our office is on the first floor. The Doctor is much pleased with his new quarters, and takes this occasion to invite bee-keepers to call on him.

THE following from J. H. Martin, (Rambler.) of Shermanton, Cal., announces that the long drouth which has caused so much suffering of stock and

loss of bees in that state, has at last been broken:

Herewith find 50c for renewal of the PROGRESSIVE for another year.

Bee-keepers in California are much encouraged, for within the past week we have had fine rains, and now that they are started, there is good ground to hope they will continue to come until we get enough.

Mr. Frank McNay, of Portage, Wis., is spending the winter here, and seems to enjoy himself.

Our State Association was held on the 11th and 12th inst. Owing to the failure of the honey crop last season there was a light attendance.

I remain truly, etc.,
J. H. MARTIN.

May our California friends get abundance of rain, is the wish of ye editor.

Telling What You Know.—I

find in one of our bee papers an editor saying, "Do not tell all you know, for if you do, the other fellow will know just as much as you do," and yet this editor professes to believe the "GOOD" Book which tells us that God made of one blood all nations of men, and that we are all brethren. This being the case, why should we not tell our brother bee-keeper all the useful things which we know about bee-keeping instead of withholding what we know? There is that which withholdeth and tendeth to poverty, and that which scattereth abroad and tendeth to riches. I am firm in the belief that the giving of our bee knowledge to others is that which will secure to us the greatest wealth and the highest enjoyment, and that the sharing of what we dig out to others will, in time, raise this selfish world up to a higher plane, one nearer God.

Which Way Should Hives Face?

—In another bee paper I find this: "As to the position of the hive, east, west, south or north of the entrance, is a matter of taste, and plays no important part." It is a rare thing that we find anything more fallacious than that in our bee literature of the present, especially where bees are wintered on the summer stands. Ye rs ago I tried the experiment of facing a part of the apiary to the north, leaving them thus during the winter, and while those facing south had two or three good flights during the winter, and came out in good condition in the spring, those facing north flew scarcely at all, and all but one died before the next May. And even during the summer season, the hives having their entrance facing north would not start out to work in

the morning for a long time after those facing south were fully started for the day. If anyone thinks that the way hives face plays no important part, let them experiment a little in the matter, when they will be fully convinced of their folly. In every apiary which I have visited during my 30 years of bee-keeping, I have found the hives facing from southeast to southwest, the majority facing SOUTH, which is the correct way, where hills do not seem to make it necessary to vary a little.

Out of Joint Politically.—And here is another sentence I find in another bee paper: "Do not conclude that it is because something is out of joint politically that you get such a low price for your honey." Well, what are we to conclude then? What has caused the price of honey to drop two-thirds during the past 25 years, while the prices obtained by those who rule us *politically* remain about the same as they were a quarter of a century ago, the political rulers becoming multimillionaires, while the mass of bee-keepers are struggling with poverty? Who has caused the state of affairs which we now enjoy (?); if it is not our political law makers? These were questions, for which I sought an answer, but a further reading of the same printed column gave not the information. Wonder if it ever occurred to the bee-keepers of the United States that they have no hand in making any of our national laws? We as bee-keepers have been voting for men, not measures; and when the men we voted for arrived at our legislative halls, they worked for the interests of our political rulers; not for the interests of the bee-keepers who elected them. And we have been powerless to remove them till their term of office expired, no matter how many measures they passed which were detrimental to us, as nearly everyone passed was. And yet a man who stands so high in our ranks that we send him to the capitol of the nation in the interests of the United States Bee-keepers' Union, comes out boldly with the fallacy that nothing is out of joint politically, as a cause of the low prices of honey. And the strange part of the matter is, in our finding these words at the bottom of the page: "There was no discussion of Mr. —'s paper." Wonderful! No matter if our industry is *entirely* killed, not a word must be said, if the killing is only done "*politically*."

Very Big Profit.—Then here is something from another bee paper, which I suppose was necessary to quiet our nerves, when we were a little uneasy, and complain about "hard times for bee-keepers" and "low prices for honey." It reads as follows: "If bees are handled rightly, there is very big profit in them in comparison to other stock on the farm." That sounds very much as we used to talk a quarter of a century ago, when honey brought readily from 25 to 30 cents per pound. And because some of us would talk that way, Bro. Heddon and others used to tell us we were hired by the bee papers to so talk that their subscription list might be boomed, but if we had any sense at all, we would stop that kind of a boomerang, as it would cause an over-production of honey, and the result would be the ruination of our business. And so we stopped, but not because there was an over production of honey, for there can be no *over production* of honey as long as millions of mouths are "watering" for the same, with no chance to get it. If it were possible for these "watering mouths" to consume our product, the shortage of supply would be twice the amount now produced, for there is not one pound produced at present to where three pounds would be consumed, were the masses free to eat all the honey they desired. And they would thus consume had they the means to buy luxuries. But I want to look a moment at the profit in bee-keeping as compared with other kinds of farming. There are scores and hundreds of farmers who are worth from \$50,000 to \$500,000, but have we got a single bee-keeper in the United States who has accumulated even the former figures from his bees? If we have such an one, it has never so appeared before the world. The most known to have been accreted by anyone from the apiary as \$22,000, which it was said that pDoc-in bee-keeping, Adam Grimmer was worth at his death. *No! no!* friend, no "big profit" in the bee business but when it comes to a fast and health-giving and enjoyable pursuit which will give any energetic man or woman a comfortable living, our pursuit need take no back seat for anything in the world.

Having a Real Love For It.—But here is something from still another bee paper, right to the point:

"If you expect to make a success of the business, you *must have a real love for it*. If you don't think enough of your bees to take and *read a bee paper*, and read one or more of the good text books that are published on bees, and then put into practice what you read, the sooner you get out of the business the better off you will be," all of which I suppose was included by the writer last quoted in the words, "If bees are handled rightly." This is just the way I have written and talked for years, and I believe every word of it, for unless such *love* is at the bottom of the whole thing, bee-keeping *cannot* become a "fascinating, health-giving, and enjoyable pursuit," without which there is no success. But suppose a man or woman has no such love for bee-keeping, and so takes the advice given, and "gets out," so as to be better off. Where is such a person going, and what business is he going into to make a success? "To one which he loves." is the answer usually given. But thousands upon thousands do not *love* any calling in life. What is to be done with them? Will they not make as good bee-keepers as they will anything else? The writer further tells us that "bee-keepers are born and not made." Well, if this is so, what is the use of giving any instruction to any except those which are "born" bee-keepers? Why was he writing about reading, posting up, cultivating a love for our pursuit, etc., if *all* bee-keepers are always "born," instead of made or cultivated? I take the ground that if any person will only put forth the energy necessary to make a success of any calling in life, that person will learn to *love* that calling, whatever it may be. I believe it impossible to put forth a true, manly effort on anything without learning to love the thing the effort is expended upon; and loving the same will cause a greater effort to be put upon it, this giving more love, and so on until the thing is an assured success. The trouble is we have so many half-hearted people amongst us. They start at something in a don't care sort of a way, and when success does not crown their half-hearted efforts, they conclude that they have mistaken their calling, or were not "born" for such a pursuit, so change to something else, which gives no better results for their half-hearted service. Then they change again, and keep changing, till at the end of life, the whole thing has been a miserable failure. My advice is to

choose some calling in life, and then put forth enough of the *right kind of effort* to cause a love for the calling, when 99 out of every 100 will succeed.

Plain Sections and Fence Separators.—The excitement now going on in some of our bee papers over plain sections and fence separators, reminds one of a similar craze which came over the bee papers some years ago, regarding reversible hives and frames. The reversible excitement raged very nearly equal to the one of the present, and caused hundreds and thousands of bee-keepers to put dollars into the thing, which dollars, if we are to judge by the quietness regarding reversible frames of the present day, were entirely thrown away; for if there are any bee-keepers now using either reversible hives or frames, they are not enough pleased with them to say anything regarding that pleasure. It is to be sincerely hoped that this plain section and fence separator matter will not prove such a bankrupt affair as did the other. History tells us that through the influence of the New York Tribune, Horace Greely was enabled to push to an issue the battle of Bull Run, when neither the country nor the army was prepared for it, thus bringing defeat and sacrificing hundreds of lives for the unadvisable "push" of one man; and while there can be no such momentous issue at stake in bee affairs, as there was in this country in the early sixties, yet I cannot help but think that the course pursued by some of our bee papers in pushing new things, is as ill advised as was the pushing of the battle of Bull Run by the Tribune. I am not opposed to giving any new thing publicity, and a chance for such new thing to make its "mark in the world;" but it does seem that the throwing of the whole force of a periodical into such things as reversible hives and frames, deep cell comb foundation, plain sections and fence separators, etc., is ill advised, and has a tendency to influence the readers of such a periodical to invest money in something which will surely sink it for them when the craze is off, and reversible hives and frames, deep cell-walled foundation, etc., is declared a flat, dead failure. As for me, I am willing to "bide a bit," and use the old sections a little longer, especially as they brought the *top price* in the market the past fall, in an open race with all the others.

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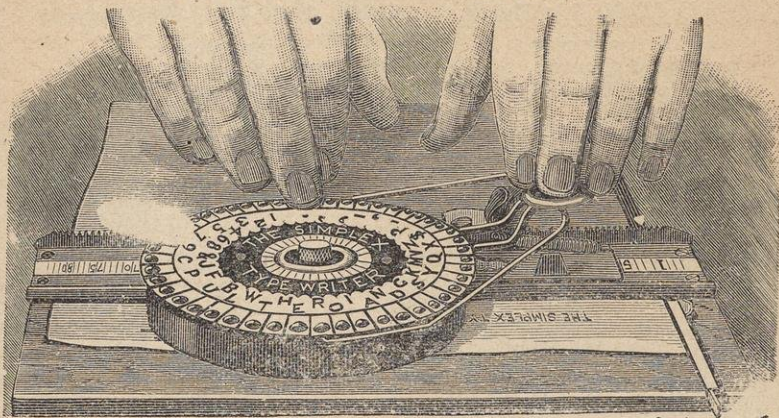
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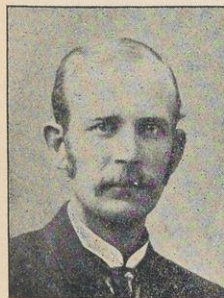


MY BEE-KEEPING FRIEND—If you really knew how good a journal the Bee-Keepers' Review has become, you would soon be one of its subscribers. It is my honest belief that in calling your attention to its merits, I am doing you (as well as myself) a *real benefit*. One way in which I can do this is by allowing you to see what others think of it. During the past year I have received hundreds of letters praising the Review; and from them I select the following:



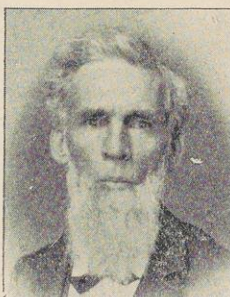
THE REVIEW has always been near my heart. It has struggled hard, and cut its way through thick and thin. It is neat and clean. Though mild, it is just. It has in its columns the least amount of light and superfluous matter. It is dignified but plain. I admire and love it because of the careful, thoughtful spirit it manifests. For depth with

brevery, it has no equal.—R. C. AIKIN, Loveland, Colo.



I AM not much given to flattery; on the contrary, I am rather inclined to be critical; but I must own that I like the Review. Here are some of the reasons why: Editorially and typographically, it stands at the head of the bee-keeping journals. It is not disposed to ride hobbies, but is disposed to give all a hearing upon all topics. Neither

pains nor expense are spared to make it one of the best bee journals published. "Last but not least," it has recently published my *picture*, and that of one of my *apiaries*. Success to the Review.—GEO. E. HILTON, Fremont, Michigan.



WITH the aid of your contributors, you have succeeded, Friend Hutchinson, in making the Review an up-to-date first-class journal. I like it because its editorials are terse fearless and unbiassed; because it frowns upon the very appearance of crookedness in any shape, because it opposes anonymous writings, and because it gives

the addresses of its contributors. I never close a letter to a bee-keeper without asking him if he reads the Review.—J. A. GOLDEN, Reinersville, Ohio.



FRIEND H.—I may as well say right here that I like the Review. If I remember rightly, it was started with the theory that the editor of a bee journal, to be independent in his work, ought not to engage in the manufacture or sale of supplies. So far as I know, the Review is the only journal holding such views that has stuck to

them, and lived to grow up. This shows how it is regarded by the bee-keepers of the land.—J. E. CRANE, Middlebury, Vermont.

As I have said before, once a really *good* bee journal visits a bee-keeper a whole year, it usually becomes a permanent member of his family; and for the sake of getting the Review into the hands of new readers for this "first" year, I am making the following offer: For \$1.25 I will have your subscription to the "Progressive Bee-Keeper" renewed for one year, send you twelve back numbers of the Review, and the Review for all of 1899. But remember, you must be a *new* subscriber to the Review, and the order must be sent to

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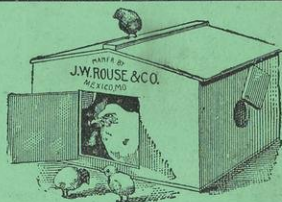


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