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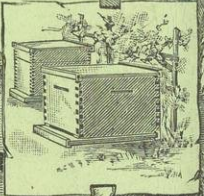
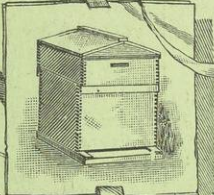
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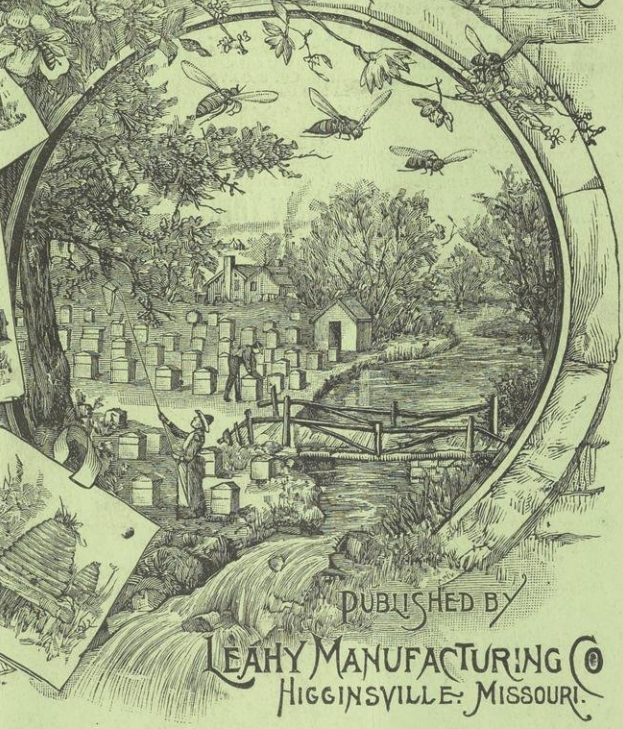
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— FEBRUARY 1, 1898. —



PROGRESSIVE BEE-KEEPER

A JOURNAL
DEVOTED TO BEES, HONEY AND
KINDRED INDUSTRIES.



PUBLISHED BY

LEAHY MANUFACTURING CO
HIGGINSVILLE, MISSOURI.

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

Advertising Rates.

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

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

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We reserve the right to refuse all advertisements that we consider of a questionable character.

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We will send the Progressive Bee Keeper with

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

Colman's Rural World.....	1 00.....	1 35
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Bee Books

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

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

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

A Year Among the Bees,—by Dr. Miller; price, 30c.

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

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

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

LEAHY MFG. CO.,
Higginsville, Mo.



Anyone sending a sketch and description may quickly ascertain our opinion free whether an invention is probably patentable. Communications strictly confidential. Handbook on Patents sent free. Oldest agency for securing patents. Patents taken through Munn & Co. receive special notice, without charge, in the

Scientific American.

A handsomely illustrated weekly. Largest circulation of any scientific journal. Terms, \$3 a year; four months, \$1. Sold by all newsdealers.

MUNN & Co. 361 Broadway, New York

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Please mention the "Progressive"

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

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

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

W. T. FALCONER MFG CO. JAMESTOWN N. Y.

The Review at Reduced Rates.

The **Bee-Keepers' Review** is \$1.00 a year, but, for the sake of getting it into new hands, and being able to begin the year with a large list, I will, until Jan. 1st, send free to each new subscriber, a copy of "Advanced Bee Culture," a 50-cent book of nearly 100 pages, that gives briefly but clearly the best methods of management from the time the bees are put into the cellar in the fall until they are again ready for winter—32 chapters in all. Those who prefer can have, instead of the book, 12 back numbers of the **Review**, the selection to be mine, but no two numbers alike. All who send \$1.00 now will receive the last four issues of this year free, and the **Review** will be sent until the end of 1898. If not acquainted with the **Review**, send 10 cents for three late but different issues.

W. Z. HUTCHINSON, - **FLINT, MICHIGAN.**

The Bee-Keepers' Review

Closes its Tenth Year with Substantial Improvements.

Increase in Size.—Beginning with the December number, eight more pages are added, making thirty-six in all.

Better Paper.—Heavy, white, sized, and super-calendered paper is used in printing the December number, and its use will be continued.

New Type.—The December number is printed with large, clear, *new* type of that beautiful style called the Ronaldson.

A Beautiful Cover.—The cover is of extra heavy, smooth, cream-colored Paradox, printed in that warmest and richest of all colors—claret.

A Fine Frontispiece.—As a frontispiece, printed on 88-pound Ivory enameled paper, is a half-tone, made from a photograph of a comb badly infected with foul brood. A more perfect picture of such a comb has never been made. In short, the Review will now compare favorably with the high-class magazines, as regards typographical neatness and beauty. As to the value of the information it contains, here is a partial list of

CONTENTS FOR DECEMBER.

Foul Brood.—Many descriptions of foul brood have been published, but none the equal for detail, exactness, and clearness, of that given by Mr. R. L. Taylor in the December Review. With this description, aided by the accompanying engraving above mentioned, no one need fail in positively identifying foul brood. Not only this, but Mr. Taylor also gives plain, simple and *exact* methods for getting rid of the disease.

Mr. M. M. Baldridge also describes a novel method for getting the bees of a foul-broody colony into a new hive, and free from the disease by means of the bee escape. He also

tells how to disinfect foul-broody hives by burning them out with kerosene oil.

The Plain Section.—Mr. L. A. Aspinwall has used this style of section for several seasons, and in the December Review he enumerates its many advantages and illustrates and describes the style of super and separator with which he uses it. He also illustrates a simple machine for cleaning propolis from sections of this style, nearly as rapidly as they can be handled.

First-Premium Wax.—The finest wax, that of a clear, pearly "dandelion yellow"—wax that for two years in succession took first premium at the Wisconsin State Fair, was made by E. Oschner, and in the December Review he tells exactly how it was rendered.

Shipping Comb Honey.—The bee-keepers who never have cause to mourn the loss of honey broken in shipment would be more plentiful if all could read in the December Review of the simple yet novel method employed by J. E. Crane to prevent the trucking and "dumping" of heavy crates of honey.

But there is not room to tell more; better send \$1.00 for the Review for 1898, and receive the December number free; or, if you prefer to see that issue before subscribing,

Send Ten Cents, in silver or stamps, (either U. S. or Canadian), and the December number will be sent you, and with it will be sent two or three other back numbers. This will give you a fair idea of the Review, and, if you then wish to subscribe, the 10 cents that you have paid may apply on the subscription. A coupon will be sent entitling you to the Review for 90 cents, if sent during 1898.

W. Z. HUTCHINSON, Flint, Mich.

"Higginsville" Bee Supplies at Kansas City.

Having purchased the good will 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.

C. E. WALKER, Kansas City, Kas.

407 Minn. Ave.

PRICES OF Bingham Perfect Bee-Smokers and Honey Knives,



Smoke Engine	largest smoker made.	per doz.	(incl. Mail)
Doctor	3 1/2	9.00	1.10
Conqueror	3	6.50	1.00
Large	2 1/2	5.00	.90
Plain	2	4.75	.70
Little Wonder	2	4.50	.60
Honey Knife		6.00	.80

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

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

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

Cuba, Kansas, Jan. 27th, 1897.

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

W. H. EAGERTY.

Corning, Cal., July 14th, 1896.

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

O. W. OSBORN.

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

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

WM. BAMBU.

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

Please mention the "Progressive."

T. F. BINGHAM, Farwell, Mich.



The Progressive Bee-Keeper.

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

PUBLISHED MONTHLY BY LEAHY MFG. CO.

VOL. VIII.

HIGGINSVILLE, MO., FEB. 1, 1898.

NO. 2

A FUTURE MEETING.

Sometime, somewhere, beyond the tide
Of vanished years the cherished dead
Who left their dearest when they died
Will meet again when time is fled.
Will meet again the loved of earth,
And clasp the hand they used to hold.
Ethereal with holy birth,
Irradiate and angel-souled.

Though cynics carp and preachers preach,
Bewailing life degenerate,
In yonder world each soul will reach,
And find its own celestial mate.
Life is so sweet and fair to those
Who look thereon as optimists,
For whatsoever are its woes,
An all-transcending joy exists.

Earth's separations but enhance
The bliss of seeing those we love,
Who passed in life's uncertain chance
Before us to the clime above.
Beyond the peaceful shoreless sea,
Where asphodel and lily share
Their loveliness, the dead will be
United all—sometime, somewhere.
—Will Ward Mitchell.

OLD MISSOURI.

You kin talk about the southland,
Where the roses ever blow,
But I'd ruther have Missouri,
With her winter and her snow.
She is glorious in the springtime,
Grand in summer and the fall.
But in winter when the snow comes,
Old Missouri beats 'em all.

Then the ponds and streams are frozen,
And the snow is everywhere,
While a fresh exhilaration
Greet's us in the frosty air.
Who would give a jolly sleighride,
For a world of scented flowers?
Or exchange delights of skating
For the joys of summer hours?

There is nothing that is finer
Than a skate on glassy ice.
'Less it is to go a sleighing—
Golly! either of 'em's nice.
And the coasting down the hillsides,
Or the parties here and there,
With the schoolhouse spelling-matches,
Are delightful I declare.

Keep your roses and your summer,
They are well enough in place.
Keep your yellow jack and ague,
Gimme frost and rosy face.
But your summers, they ain't in it,
With Missouri's. Don't you know me?
Sunny South? I'm from Missouri,
And I guess you'll have to show me.
—Will Ward Mitchell.

SOMETHING ABOUT THE QUEEN BEE AND HER RELATION TO THE OTHERS IN THE HIVE.

GEORGE W WILLIAMS.

In a colony of bees about swarming time there are three kinds of bees—a queen, the workers and the drones. The queen is the mother, the workers of course do the work, while the drones are the gentlemen of leisure. As a general rule, there is but one queen, from 20,000 to 45,000 workers, and the drones will number from a few dozen to as many hundreds. But these gentlemen of leisure are very short-lived. Very few of them ever live to see their mother and sisters safely quartered for the winter. The life of a worker is about 45 days of actual working time, or about 80 days from the time the egg is laid until the bee has died from overwork, if there has been a flow of nectar.

Supposing the colony contains 45,000, and their life is only 45 days, it makes an average of 1,000 deaths daily in that family, and no yellow fever either. To keep this colony in a normal condition, it is necessary that the queen lay 1,000 eggs every 24 hours, saying nothing about doubling this in order to make the increase necessary to swarm. There has been much said and written about "her royal highness," the queen, by bee-keepers, and many erroneous ideas advanced. Where she is spoken of as "her royal highness," the impression is conveyed that she like many another "royal" animal, rules her kingdom,

or queendom, with arbitrary laws, and her mandates must be strictly obeyed by all in her dominion. Nothing can be farther from the true state as it actually exists. The queen is a QUEEN only in name; she is properly the MOTHER, practically the slave of the colony. She does not manage or control anything except her egg-laying, and only that so far as to the fertilized (worker) or unfertilized (drone) eggs, and I feel like saying that even that is controlled indirectly by the workers, for if the bees would build no drone comb, she would lay no unfertile eggs. We are told how the bees feed and pet the queen, and move around out of her way as she travels over the comb. Bees have one peculiar characteristic, and that is that their love does not reach down to the individual members of their family as individuals, but it is extended collectively, and they work for the general good of the family, taken as a whole. Thus we often see them drag out one of their own family who is yet alive, as ruthlessly as they would an intruder, when they become disabled from old age or any other cause, to be of no farther use to the colony. The queen is of so much importance to the welfare of the colony that she is fed and petted as we feed and pet some useful animal on our farm, not from any affection for the animal, but because it is of much use to us. Farther than this, the bees care no more for the queen than they do for any other individual bee. We have often seen them drag out the old queen after she had become useless to them through old age, having superseded her with a young and vigorous one. The feeding and petting is done to stimulate her to egg laying. If the queen is compelled to feed herself, she will lay but few eggs, if any, but if fed lavishly

with good wholesome food, she will deposit eggs to her fullest capacity. Thus, when the bees are bringing in nectar at a rapid rate, or in other words, working hard, they know that their lives are shortened by hard work' and to perpetuate their race, it is necessary that the queen deposit eggs. They go to feeding her all they can persuade her to eat, and as she is like most of us, loves good things, she keeps her stomach full of egg-producing food, and she lays because she can't help it. This is kept up until flow (as it is called) is over, and the bees cease gathering nectar. Then they do not want so many eggs laid, for two reasons. One is that they do not want too many babies on hands to feed and care for, with no honey coming in; the other reason is, having no more work to do, their lives are lengthened, and if they keep up the increase, with a lessening decrease, their colony will become so populous that they will be compelled to swarm, a thing they do not want to do with "no visible means of support" on the outside; so they stop feeding the queen, which stops the egg-laying. The queen knows nothing about the honey flow stopping, only as the bees let up on giving her so much to eat.

Again, we often see the statement that "when the queen enters the hive after her wedding trip, she never comes out again, unless to lead swarm." She NEVER leads, and only goes with the swarm because she is pushed out. Did any of the bee-keepers ever see a queen come out of a hive alone when trying to swarm, and fly around awhile, and go back? No; but many times the bees will swarm out and go back, because the queen failed to come, and if the queen is caught in a trap, or any other way, and held at the entrance of the hive as she comes

out, the bees that are behind will rush out past her, crawling over and around her, paying no attention to her, only expecting her to follow, until after they have taken wing and flown until their "hurry" is over, when they begin to search for her, and if not found, they return to their old home to look her up. They will sometimes even cluster before they miss her, but they will always break cluster and return. In experimenting with queen traps, I have placed the trap over the entrance after $\frac{1}{2}$ or $\frac{3}{4}$ of the swarm was out, and never failed to catch the queen, which fully satisfies me that she does not lead, but follows.

When a swarm issues without a queen coming out—and any experienced bee-keeper can tell—if the hive is opened before the bees begin to return, the queen will be found surrounded by bees who seem to be nibbling or biting her, trying to get her out. I have no doubt but what she moves out of her old home "for parts unknown" to her, as reluctantly as you or I would out of ours.

Humansville, Mo.

Some time ago we mentioned that we would show to our readers the Williams self-hiver, queen and drone trap. We herewith present a front and back view of same; also the position on the hive:

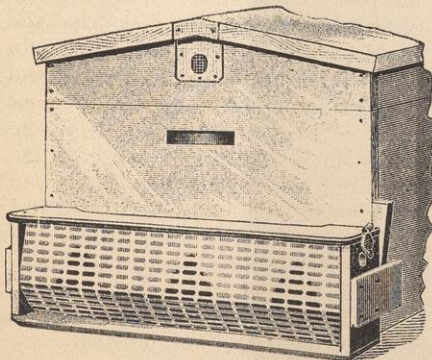


FIGURE 1.

Figure 1 in the cut shows front view when in place; also manner of attaching to the hive.

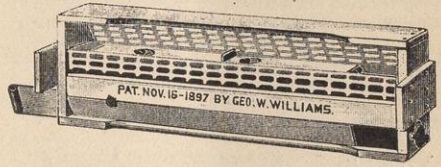


FIGURE 2.

Figure 2 is a back view of the trap bottom side up, and showing cone slide partly slipped over the openings in cones, which when entirely slipped up shuts off communication from one story to the other; this cut also shows back slide partly drawn out, which when the trap is in position to receive or hive the swarm, opens communication between trap and hive.

Mr. Williams also sent us the following directions for using the self-hiver:

DIRECTIONS.

See that the center or cone slide is pushed so that the cones are open, and the door in the end is closed; place the trap and fasten on hive as shown in Fig. 1. When the swarm issues, the bees will pass out through the perforations in the zinc, but the queen being larger cannot get through, but in trying to get out she will find one of the cone holes and run up into the upper story—she will usually do this by the time the swarm is all out, and can be easily seen up there in front trying to work through the zinc.

Take the trap off the hive and while holding it in an upright position reach in behind and close the cones by pushing the tin slide as far as it will go, thus completely caging her. Set the hive you wish to hive the swarm in *by the side* of the one they issue from, throwing some old cloth or covering over the *old* one to hide it from the bees; place the trap *bottom up* on the new hive, draw out the back slide which opens communication with that part of the trap the queen is in, and the hive, and—well, the bees will do the rest. As soon as they miss the queen from the swarm they will return to the hive they issued from, and will find her and all go into the hive together—thus hiving themselves. If it is preferred, as many bee-keepers practice, to move the

old hive to a new place and set the new hive on the old stand after the queen is trapped and while the bees are swarming around hunting for her; set the old hive to one side and the new one on the old stand, placing the trap on as before. In this plan there is no need of covering the old hive as it is away from where it was when the bees went out.



1898.

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

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

E. W. MOORE,
Bx. 103. GRAYVILLE, ILLS.

Please mention the "Progressive."

Do You Think



of coming to California? Then you should be posted, and the best way is to take the

PACIFIC BEE JOURNAL.

Send for free sample copy. Also a Catalogue of Bee Supplies made by

THE BENNETT BEE HIVE CO.,

365 E. 2d St., Los Angeles, Cal.

"There's money in Bees this way."

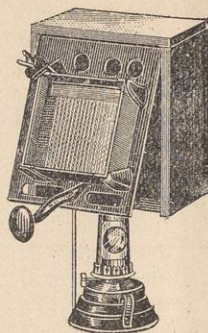
American Bee Journal.

Established in 1861. Issued weekly. All devoted to bees. Has a review of all the other bee papers each week. Best bee-keepers write for it. Send for free sample copy. Address,

GEO. W. YORK & CO.,

2-12 118 Michigan St., Chicago, Ills.

Please mention the "Progressive"



MAGIC PRESS

& HOT PLATE FOUNDATION FASTENER.

This Press is of malleable iron and brass. Non-breakable chimney. Its speed equal to 4000 per day, or more, according to activity of operator. One closing and opening of gate finishes the section. Starters or full sheets. This year a FINE EGG-TESTER goes with it. Supply dealers write for cut for your own catalog. Have sold in thirteen states. Write me if

your supply dealer does not keep them in stock. The BEST and CHEAPEST yet made. Size 7x8½ inches. Price, \$2.00.

JAMES CORMAC, Des Moines, Iowa.

Please mention the "Progressive."

Second Hand Foundation Mills.

We have the following good second-hand Foundation Mills which we have taken in exchange for bee-keepers' supplies:

One ten-inch Root Mill, with dipping tank, all complete. This mill, for all practical purposes, is as good as new, and the price of it new, with tanks, would be \$27. To dispose of it quick, we will take \$16 for the outfit.

LEAHY MFG. CO., Higginsville, Mo.

A Good Report from Utah.

I got 2,000 pounds of comb and 2,800 pounds of extracted honey this year, from 34 colonies, or 21 colonies spring count. I run 14 of them for comb and 20 for extracted. The 20 averaged 140 pounds apiece, and the 14 colonies 139 pounds, besides about 300 partly filled sections. My best hive filled 310 sections, besides finishing up and capping over 84 sections taken from other colonies. This colony was very strong early in the spring. Early one nice morning I changed places with a very weak one. This gave all the worker bees to the weak colony, and stopped their swarming, but they built up so it took six supers to keep them from sitting out on the porch and loafing.

W. A. MOORE.

Murray, Utah.



Bee-Keepers,

buy your

Hives, Sections,
Foundation, etc.

of

FRED A. DALTON,

WALKER, VERNON CO., MO

Send for Catalogue.

Texas Queens.

Golden Italians, Adel or Albino Queens.

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

J. D. GIVENS, Lisbon, Tex

EXPERIENCE AND ITS LESSONS. R. C. Aikin.

(Continued from Jan. PROGRESSIVE).

CHAPTER IV.

In the previous number I told about the large hive $13\frac{1}{2}$ inches wide, 15 deep and 24 long. It was originally Kretchmer's "New System" hive. As I soon changed it, and rapidly evolved it to something else, I thought best to rename it, so called it "The Clipper, Sr." This "Jumbo" hive at last seemed too big, so I again changed, and while preserving the same general plan, I cut down the length from 24 to 20, and the depth from 15 to 12 inches; and since it was very valuable, I named this new thing,

"THE CLIPPER, JR.," HIVE.

In this Junior hive the surplus room was just about the same as in the Senior hive. I retained the two adjustable division boards, and the rack or super on top to hold 48 pounds of honey. A cleat was nailed on the outside of the hive at the top edge, which made a very convenient hand hold to lift by,

and also supported the cap that went over the sections. The cap telescoped in so far as to be enough larger than the hive body that it dropped over and rested on the cleats.

In the former hive I made the cap body a separate thing from the cover—just a rim so that when the cover was lifted the rim could be placed under; just as dovetailed hive supers are today adjusted, but with this difference, that the super or section rack went inside this outer case. In the Junior hive the cover was nailed to the rim and telescoped the super, so the hive was just as big without a super as with one.

The Junior hive was more compact and neat in appearance. The brood nest was 3 inches shallower, making it almost a cube. With the shallower frame, average and weak colonies did not store such a space of honey in the top of the brood combs as to make the distance too great between the brood nest proper and the sections above; hence, would more readily enter the super.

With the former frame 14 inches deep, there was a tendency, especially when new, for the combs to break down with heat or handling. The frame of this smaller hive had just about 10 inches deep by 12 inches wide, net comb space. It was no uncommon thing to have these combs with the brood touching the bars on all edges of the comb. This brood chamber was very near the size and capacity of the first hive I used, the Champion, being a little more shallow and a little broader, thus giving good super surface on top. Notice that the brood chamber was about a cube, 10 frames occupying $13\frac{1}{2} \times 15 \times 12$ inches deep. Although this hive was discarded in a short time, let me here

emphasize the fact that it was a good one, and today there is no better shape of BROOD CHAMBER than one very nearly approaching this one. As this will again come up in this series, we drop it here.

CLOSE SPACING.

My brood frames at this time were all the loose hanging style, cut from $\frac{1}{4}$ lumber, top and end bars $\frac{3}{8}$ thick and bottom $\frac{1}{4}$ inch thick. A nearly square frame is a more natural shape for the bees to build comb in than a long one horizontally, so I had some very pretty straight combs. My practice was always to increase by dividing and nuclei, and this gave me a fine chance to have nice straight combs built between two other straight combs. But about the close spacing:

If I remember aright, it was in those days that some were advocating $1\frac{1}{4}$ inch spacing of brood frames. I had observed that when the combs were spaced $1\frac{1}{2}$, that when brood was in one comb and its neighbor was filled with honey and sealed, the comb containing honey was very much thicker than the other. When using the metal bearings and spacing by dropping the metal support into a notch in the tin rabbet, I had learned that when I shifted combs from the position originally built in, or from the position occupied during a honey flow, I could not again get the FRAMES spaced as they were without comb faces touching at some points, and at others being too far apart.

Having so much trouble in this respect led me to believe that combs that were to be INTERCHANGED must be spaced close; so close that when one was occupied with brood and its next neighbor with honey, the one with honey could not be made any thicker than the one containing brood. Spaced thus and absolutely straight septum to the combs, they

could at any and all times be INTERCHANGED AT WILL. I then undertook to see how it would work in practice. I selected some straight combs and filled some experimental hives, putting the combs as close as I could without the honey surfaces touching. As soon as the bees got the spaces adjusted, I would crowd still closer until the BROOD FACES would just admit of the passage of the workers.

Here again I learned something. As before mentioned, ANY loose hanging frame is sure to get more or less out of plumb, and while I regulated the top spacing, the bottom spacing was always a varying quantity. Two combs would conclude to swing toward each other, and the top being already the proper distance, the bottoms came so close together that brood could not be reared in them, because the cells must be shaved down (by the bees) to allow bee space. Sometimes one comb would be so pared down to allow of brood in the adjoining comb, that no cells at all would be left in the pared one. I think in a few cases they became so close that neither comb could be occupied. Of course the opposite side had plenty of room and was occupied with brood or honey, the additional weight in the one side aggravating the out of plumb condition. For this reason, and this only, was I compelled to give up close spacing, while I used such a frame. I am not able now to say just how close I did space, but I know that I was from that time an advocate of close spacing. This subject, too, will again come up in relation to more modern hives.

While using the Clipper, Jr., I also experimented somewhat with sections and supers. I made four piece sections about $1\frac{1}{2} \times 5 \times 6$, to stand long way up and down. The

top and bottom bars were calculated to be just as wide as the thickness of the combs. I want to tell everyone who reads this, that I never have had such nicely finished sections of any other style. I then learned that the true principle in a section was this very feature of having the top and bottom bars just about the width of the thickness of the finished comb in said sections, and the same width throughout its entire length. I also bought sections of the Forn-crook manufacture in Wisconsin, said sections being made in two pieces and open top and bottom. One end was made just like the sections of today—scalloped out for bee passages—and the V groove at the corners to fold; the other end was made just as I made four piece ends for nailing, save that it went together by dovetailing instead of being nailed. The finish of the honey was always nicer on this straight end than on the scalloped end made as they are in the present section.

A REVERSIBLE SUPER.

Then, as now, I always used compression on sections to hold them tight together, and also tried to have the super or rack so close fitting that the sections would line up smooth on the inside. This lessened the propolizing. I invented a reversible super, calculated to reverse to get sections finished to the bottom bars same as to the tops. To accomplish the reversing and preserve correct bee spaces, half a space was in the hive and half in the super. The super was in two parts. The sections would be set in one part which was only a HALF SUPER, then the other half was shoved over the top of the sections and the two parts clamped together, holding the sections absolutely square and tight in every direction.

As the two halves of the super were identical, there was also a half bee space in the top, so in tiering up or reversing there was always proper spacing.

Reversing proved a failure because some sections would not be far enough advanced for the comb to stand alone on its head, while other sections were already completed. This fact precludes the reversing act ever being a success where the whole super reverses at once.

Loveland, Colo.

(To be continued in our next.)

Recapitulation by G. M. Doolittle.

Adjustable Division Boards.—

Bro. Aikin tells us in this article that he "retained the two adjustable division boards" when changing from his "Clipper, Sr.," hive to the "Clipper, Jr." There is no one thing about the apiary I think of more profit to the apiarist than a division board, and I am glad to find that here Bro. A. and myself fully agree. I make these division boards of inch stuff, generally of hemlock lumber, as this is the cheapest of all lumber with us, and what is still more in its favor, it will hold its shape better, inside a bee hive, than any other lumber with which I am acquainted. I cut the board a little smaller than the inside of the hive below the rabbets, and then nail the top bar for a frame to one side of the board, this making the division board hang in the hive the same as any hanging frame. It will be noted that A. used two to each hive, while I use one, two, three, four or five, or none at all, just in accord with the requirements of the colony. If division boards are not to be used according to the requirements of the colony, they are of no use at all, according to my way of thinking. But when used in this way, they will show on the dollar and cent side of our rec-

ord as much as any one thing which we use about the apiary.

Hand Holes.—Next we find that Friend A. used a cleat on the outside of his "Clipper, Jr.," hive instead of hand holes to lift them by. Here we agree again. After trying everything by way of something to lift hives, I prefer the cleat to anything else; especially where hives are carried to and from the cellar every fall and spring. No waiting and feeling around in the dark cellar to find a hand hole, or looking to see where such hole is when in the light. Just take hold, wherever the hand happens to strike the cleat, and you are all right at once. However, unless the cap or hood to the hive telescopes, I prefer to have these cleats on the two ends of the hive only, in which case the hives can be packed as closely as is desired in the cellar and elsewhere. And with telescoping caps, it is not absolutely necessary to have the cleats on the sides to the hives, although it is a little more convenient. I formerly used cleats one inch square, but of late I make these cleats only five-eighths square, and consider them just as good as the other.

Telescoping Caps.—Then we find that the "Clipper, Jr.," hive had a cap enough larger than the hive so that it telescoped over the hive as far down as the cleats and rested on them. This is just the style of cap or hood I have used on my hives for 29 years, and I consider such a cover arrangement for a hive of very great value along certain lines, the most important of which is that by its use a much more even degree of heat can be had in the sections than where the surplus arrangement is of the same size as the hive, as in the Heddon, the dovetailed, and other styles of hive, which are arranged to be used on the tiering up plan. On cool mornings, where there is only the one thickness of lumber between the outside air and the sections, we will

find that the bees have stopped work in the sections and very largely gone below, while with the telescoping cap, the bees are enabled to keep up sufficient heat so that comb building is going on the same as it was the evening before, on account of the dead air space between the two thicknesses of lumber. Then we find nearly the same thing happens during the afternoons of extremely hot days, at which times the extreme heat, caused by the sun shining on the single thickness of lumber, drives nearly all the bees below or to the outside of the hive, while with the telescoping cap, only the outside board is heated up, thus leaving the super quite comfortable for the bees. I had always believed such was the case, but did not have full proof in the matter till I bought my out apiary, in which tiering up hives are used.

Combs Breaking Down.—Bro. A. tells us that with the large frames used in his "Clipper, Sr.," hive there was a tendency toward breaking down of combs from heat and in handling. I agree that large combs are more likely to break down than smaller ones, especially in handling; but if every beekeeper would use WHITE paint for hives, instead of that having a dark color, they would have very little, or no trouble, from combs breaking down with the heat; and the bees would not be driven out on the outside of the hive on hot days, as they are when in hives which are painted a dark color. If a man cares for the comfort of bees, say nothing about looking at the matter from a dollar and cent view, he will never paint his hives a dark color and allow them to stand in the sun. Then if the apiarist uses wired frames filled with comb foundation, he will have no trouble with combs breaking down in handling, and I think very little from heat, no matter where his hives stand, or what color they are painted.

Brood Touching the Frame Bars.

—Bro. Aikin tells us "it was no uncommon thing (after he had reduced the size of his frames) to have these combs with the brood touching the bars on all edges of the comb." And in this sentence he gives us one of the great secrets of COMB honey production. He says a little further on that this hive was a GOOD one, and I claim the main reason for its being a good one was because he could thus secure the brood in the frames. Few seem to realize that, unless the hive is so filled with brood at the commencement of the honey harvest that it comes out to the frame bars in the most of the combs, there is no assurance of a GOOD crop of honey, no matter how profusely the flowers bloom, nor how abundant the secretion of nectar in those flowers.

With plenty of unoccupied comb in any hive at the commencement of the honey harvest, goes the assurance of plenty of honey in the sections; for plenty of honey in the sections and much unoccupied comb in the brood chamber to the same hive, do not go together. To give the best results, the combs remaining in the brood chamber at the commencement of the honey harvest must be LITERALLY FILLED WITH BROOD, otherwise the bees will commence storing their first honey in the empty combs in the brood chamber, instead of the sections, then keep crowding down the queen till, at the end of the season, we will have little honey in the sections with few bees in the hive for winter. But with the combs full of brood, the first storing is done in the sections, and having commenced work therein, the bees continue (not thinking of crowding out the queen at all) with little honey being put in the brood chamber till near the close of the season, when the queen slacks in brooding of her own accord. And herein lies the reason for my using the one, two, three, or more division boards. At the commencement of

the honey harvest I take away all the combs in the hives which are not occupied with brood, and insert in their places the cheaply made division boards, and thus bring the brood in the hive to where I wish it, whether the queen is very prolific or otherwise. Some of my queens are so prolific that there is no need of any division board, many more only require one board, while very few require more than the two. But I would far rather allow a colony to go into the honey harvest with only five combs FILLED with brood and five division boards, than to have the same colony with five frames with brood and five empty combs. Herein is something we apiarists have not given enough thought and study upon.

Borodino, N. Y.

BEE SPACE, ETC.

O. P. MILLER.

In the November PROGRESSIVE, I notice Mr. Boatman wants 200 hive bodies with one inch bee space under the brood frames. My experience for the past twenty-five years does not agree with the ideas of this gentleman.

1st, From the fact I find that if there is more than a bee space under frames the bees will build knots of bee glue up so they can reach the frames, or in other words, to fill up the extra space there is more than a bee space.

2d. I am ready to admit that a large entrance to some extent will do away with swarming, but it will not do away with it absolutely, for when bees take the notion to swarm, they will swarm. Mine will.

Yes, the idea of raising the hive from the bottom board is an old one. I remember of my grand-

father, 45 years ago, raising up the hives, or gums, as he called them, and putting blocks under the edges; then taking elders and splitting them, and taking out the peth, lay them with hollow side down for moth traps; and they answered the purpose first rate. But to resume:

I found in my first experience that I had left too much space below the frames and not enough at the top. I then went to work and cut down the rabbet at the top so as to let the frames cluster down to the bottom, and was much better pleased with results.

I have two objections against the PROGRESSIVE. The first is, it is too small, and the second is, the numbers are too far apart. I have looked at Bro. Doolittle so often on paper, and read so much of him, I seem to be acquainted with him. I just finished reading the communications of Mr. Doolittle and Mr. Aikin. Reminds me of the time when I began bee-keeping. I traded the musket that I brought from the war for my first colony of bees, but not knowing how to handle them, they died the next winter. I then resorted to bee hunting in the woods and taking them on shares. I very soon dropped the latter, as an unsatisfactory means of obtaining stock, as the men who had bees to let knew nothing or very little about the business, and expected honey whether there was any or not.

The five-bander that I got of you was a fine bird, and produced five-banded queens as gentle as could be. I don't know how they will pan out as foragers. I raised several nice queens, and have applications for some of her progeny next summer, should she come through all right. We (the boys and Wife and I) have 61 colonies in our bee cellar, in good shape, with plenty of honey. I have learned several

things new (to me) this past summer.

I would like to ask if you make the Hoffman frame with square shoulders where they come in contact with each other.

Glendon, Iowa.

[Yes, we make them that way when requested to do so, and we believe that is the best way. Mr. Flanagan who operates nearly 1000 colonies of bees has this to say of the V-edge, writing under date of January 12: "The V-edge is a nuisance."—Ed].

CALIFORNIA TALK.

F. S. BRAUTIGAM.

May you all enjoy a happy and prosperous new year.

The Klondike fever is contagious in this part of California. The only cure prescribed is, sell out and go to Alaska. A number of our bee-keepers have already sold their apiaries at quite low figures in order to use the cash for that purpose. Some of these bee-keepers may chance to see the bee at Chilcoot Pass, of which Joaquin Miller writes. He saw a bee—yes, a honey bee—gathering honey from the flowers at Chilcoot pass.

That's enough. Now we know just why so many bee-keepers are going there now, so as to be in time and select the best location for a bee ranch. Just watch the reports from Klondike. It promises to outdo California. Our departed brethren have my sincere sympathy, and I hope all who must go will soon be located and meet with success. The bee at Klondike stings the nose and bites the toes.

Look here! That would be a good place for some of our eastern manufacturers to put up a branch house for the purpose of selling their supplies, for you see the field

is as yet unoccupied. But it would be better to wait until someone has worked up the trade, while running on a small scale, and then come in and crowd this small dealer to the wall, and take it all. By the way, a lady queen breeder may do well there also. Surely there she could enjoy the free air of heaven, and if the queen business did not pay, she could join Miss Hannah Gould's party, who are on the way now from New York to Alaska, as women prospectors, and will wear knickerbockers. But remember, Miss Hannah Gold—Gould will not accept any girls. She announced that no woman under twenty-four would be allowed in the party.

W. A. Pryal, in an article in *American Bee Journal*, Dec. 9, 1897, page 775, says: "Why should not California manufacture her own foundation? and why should not our apiarists use her home product? California bees do not send east for honey out of which to make wax—they use home product."

That's what. We are with you, Bro. Pryal. There are several manufacturers of bee-keepers' supplies, and others that manufacture good foundation: For instance, the Bennett Bee Hive Co.; W. N. Bliss, and others now starting in. See what Dr. Gallup says about home product, especially on foundation, July number, page 17, *Pacific Bee Journal*. With such authority as Dr. Gallup, besides many others, California bee-keepers ought to be contented with home product.

But, say, how would it be if California bee-keepers would enforce a (Dingley bill) high tariff on these eastern goods, or keep them out entirely? Would it benefit us? If not, let us have free trade, and let the goods on our market decide whether the California bee-keepers shall use home product or not, 16

to 1, in our favor. California supplies many states in the east with her honey, and is also sending some of her sweetest of sweets to Europe. A few days ago, M. C. Nason & Co., of San Diego, Cal., shipped to Germany a carload of amber honey, this being the second shipment of honey direct to the old country. You see California bee-keepers produce honey by the ton, not by the hundred pounds.

The *Pacific Bee Journal*, Dec. 1897, gives to its readers the California foul brood law, an act to authorize the board of supervisors of the several counties of this state to appoint inspectors of apiaries, and provide for their compensation, and defining their duties; and for the protection of bee culture. Approved March 13, 1883.

How about the Omaha Fair, California bee-keepers? Shall California be there? If so, get ready and show some of that NICE BLACK SAGE HONEY.

The prospects for the coming season are not very encouraging for the bee-keepers of Southern California, as there has been but very little rain up to this date (Dec. 17). But plenty of rain may come yet.

Missouri has now two bee-journals. How about California with its army of bee-keepers? How many of this army keep and read a bee journal? and how many of them take the *Pacific Bee Journal*, or the *PROGRESSIVE BEE-KEEPER*, or some other bee journal?

Los Angeles, Cal.

LARGE ENTRANCES FOR BEE HIVES.

G. M. DOOLITTLE.

The following questions have been sent in with the request that I

answer them in the PROGRESSIVE BEE-KEEPER, which I will do to the best of my ability:

"I notice that some bee-keepers are desiring more space between the bottom boards and the brood frames, they claiming that bees having their hives thus arranged cluster out less, swarm less, and when coming in loaded from the fields, do not easily reach the bottom bars to the frames, hence, are mostly compelled to go to the sides of the hives, in which case they go up into the supers to deposit their loads of honey, instead of leaving it in the brood frames to crowd out the brood and give poor results in surplus comb honey. What do you think of this idea? If this is right, how would it do to nail seven-eighths strips on the two sides and back end of the bottom board, instead of the three-eighths pieces which are generally used to form the entrance and give a bee space, thus raising the bottoms of the frames nearly one inch off the bottom board instead of the customary three-eighths inch? Then, what would you think of a bottom board having a bee space on two sides, one to be $\frac{3}{8}$ and the other $\frac{1}{8}$ or what is termed a loose bottom board? Again, what do you think of raising the hive up off the bottom board all around, except at the corners, to prevent swarming, etc., as is advocated by some of our writers?"

Well, let me say in the outset that the starting point is based upon a false premise, or a man of straw, and having thus set up something which does not exist, very good logic is used to knock it down with, but the same amounts to nothing when we know that the base of the whole is fallacious. The whole thing is based on the idea that worker bees returning from the fields go immediately to the surplus apartment of the hive to deposit their loads of nectar. If loaded field bees do thus enter the sections or surplus arrangement to the hive, to any great extent, then all of my hours and days of watching to discover the inside workings of a bee hive, when a colony was in it, have been in vain. I have lain hour after hour beside an observatory hive, both by day and by night, to see if I could solve any of the mysteries of bee-keeping in this way, and the result of such watching has led me to believe that not one bee in one thousand, which returns from the field with a load of honey, ever enters the sections till after it has dis-

gorged that load. I have watched hundreds of bees as they came into an observatory hive, whose colony was at work in sections, and never saw a SINGLE loaded bee offer to go up to those sections. As an observatory hive should contain only one comb, all the bees that come on the side of the comb next the observer can be watched from the time they enter the hive till they go out again. Instead of going to the sections, the loaded bee seeks a young bee that is anywhere from one inch to six inches from the entrance which it came in at, when it puts out its tongue to meet the tongue of the young bee, which, if its honey sac is not already filled, takes the load, the observer seeing the nectar sparkle as it passes from one to the other. The young bee now takes the load and proceeds to evaporate it to the consistency of ripened honey, while the field worker, after resting for from a few moments to half of an hour, goes to the field for another load. If nectar is coming in faster than all the young bees can hold it till evaporated, then they deposit this nectar, or a certain part of it, in the cells, and at night both field bees and young bees proceed to evaporate it. Thus we often find thin honey falling out of the combs during the afternoon, while by the next morning, not a drop can be shaken from any. Again, I will give proof of the correctness of this position which anyone can verify, even if they have no observatory hive. Along about thirty-five days before your main honey harvest is to arrive, remove a black or poorly marked hybrid queen from a colony and substitute an Italian queen, giving very yellow bees, in her place. In twenty-one days, the last bee from the old queen will have hatched, and in sixteen days more the

first yellow bee will be ready to go to the fields as a laborer, providing the colony is in a normal condition. Now go to the hive on the fourteenth day after the first yellow bees began to hatch, at about ten o'clock in the forenoon, and you will see only black bees going in and out at the entrance, but upon taking a look at the sections, you will find very few save yellow bees therein building comb and depositing nectar. Thus it will be seen that no matter how or where the hive is raised, or what other precaution is taken, the loaded bees will not do different from what they have been doing all through our forefathers' bee-keeping days. But supposing these loaded bees did deposit their loads of nectar in the combs, would the raising the hive from the bottom board help any? No. And in proof of this assertion, I will quote from *Gleanings* for December 1, 1897, page 850, where J. L. Hubbard says, in speaking of raised hives:

"The bees were packed down solid to the bottom board, and at no time could I look from one side of the hive to the other side under the frames. There was always a bridge for them [the loaded field bees] to climb on to the frames."

This is as I found it years ago when it was the fashion to raise all box hives, and the patent Weeks' hive, from the bottom board by placing little $\frac{3}{4}$ inch blocks under each corner to the hive. The reader who has followed me thus far will doubtless come to the conclusion that Doolittle is not captivated with the big entrance scheme; and this is right. The reason bees do not lay out so much with this big space under the hive, is because a space to cluster in is kindly furnished them under the frames, by the deceived apiarist. For my part, I would as soon the bees would cluster on the outside of the hive as in

a $1\frac{1}{2}$ space under the brood frames, as did Mr. Hubbards'. But I think that the $\frac{3}{8}$ bee space bottom board, with plenty of surplus room, together with a properly shaded hive, so that the clustered bees will be at work perfecting combs in sections, is preferable to having bees cluster out on the outside of a hive, or in any vacant place under or about the brood frames, as the former is much more profitable. In no case should this space under the frames be made a permanent affair by using fast bottom boards, as in the cool weather of early spring it would be a great damage to rapid breeding by allowing so much cold air to circulate around and in the hive before the bees are abundant enough to come out to the sides and bottom of the hive. That swarming can be overcome by raising the hive up from the bottom board, was proved a myth long years ago, when we had abundant swarming with ALL hives fixed that way. This answers all of the questions I believe except the one about having a bottom board having a $\frac{3}{8}$ bee space on one side and a $\frac{1}{4}$ on the other. Such a bottom board is just the same as I am using, only that instead of a $\frac{1}{4}$ space on the deep side, I use a two inch space. When thus fixed, we have a regular Dr. Miller bottom board, which I consider, after having tested numerous bottom boards recommended, the very best of any now in use. But the two inch side is for winter use, not for summer. While the fast bottom board has some advantages over a loose one, yet I am firm in the belief that whoever uses the Dr. Miller bottom board, together with "tobacco staples", (these fastening the bottom board to the hive when it is not wanted loose), will not wish for any other.

Borodino, N. Y.

WASHINGTON CITY.

The Green Printers.—Fight of the Gladiators.

(Continued from Jan. PROGRESSIVE.)

One who has not been in Washington City, and has only read of the public buildings there, or seen them pictured in groups, would naturally suppose that the Capitol and all the other public buildings were in close proximity, or at least in sight of each other. However, this is not the case. Some of them are nearly a mile from Capitol Hill.

Washington, D. C., came into existence March 30, 1791, by virtue of legislation and a proclamation issued by the Father of his Country; and was laid off under the direction of Thomas Jefferson. Its artistic beauty and grace is a happy combination of Old World studies, so as to furnish noble and commanding sites for buildings. The alphabet is used in naming eastern and western streets, the numerals for northern and southern streets. Across this geometrical regularity run twenty-one diagonal avenues, named after the several states and forming open squares, circles and triangles. Fully one-half of the city is occupied by streets and parks. Of the former, Pennsylvania Avenue is the widest and most magnificently shaded street in the world.

The District of Columbia lies on the east side of the Potomac, and is surrounded on three sides by the state of Maryland. The surface is undulating, surrounded by hills of from 150 to 400 feet elevation, which afford fine sites for public edifices and private residences. Two considerable streams empty in its borders, the Anacostia and Rock Creek, a picturesque hill stream. Within this amphitheatre lies the

Capitol City of the nation. The District is more populous than seven states of the union. About one-third of the inhabitants are colored individuals who have come to Washington "since de wah," and who claim (as the white folks say of them) that as the government had freed them, it now owes them a living.

The Capitol building is one of the most imposing and magnificent structures in the world, as also in grandeur of form and richness of material. It has cost for material and furnishing, so my guide told me, thirty millions of dollars. It stands on Capitol Hill, overlooking the city, the Department Buildings, the beautiful Potomac, and the treeless hills of Virginia. The dome is 307 feet high, and 155 feet in diameter. The building is 750 feet long, with a breadth from 121 to 324 feet, covering 153,112 square feet.

After visiting the White House, my guide proposed that we next take in the botanical garden. This is the finest botanical garden in America. The glass structures cover many acres, and all the tropical plants and trees that could be put under glass, will be found there. There is bloom and fragrance here all the year round. There are other fine large flower gardens here also. I was told that the flowers for the Bradley-Martin ball (that caused such a sensation by its extravagance and magnificence) was furnished by a florist of Washington City.

Next we went to the United States Patent Office, but as they were moving at that time out of one building into another, there were no records whereby we could obtain what we wanted. From the Patent Office we went to the Pension Building. This is called in Washington, so my guide said, the

“building of thirteen columns.” These columns hold up the roof, are 42 feet high, and contain 22,000 brick each, plastered over to imitate marble. The building is about 125x200 feet, with five tiers of offices around the sides and ends, while in the center (a space about 70x160 feet) is a large hall studded by the thirteen columns. This hall is where the inauguration balls are held.

From this building we proceeded to the printing department. Here I expected to see something grand in the way of printing presses. You can imagine my disappointment when I tell you that nothing was used but hand presses. In the department where paper money was printed, at each press was a man and a woman. Instead of using a roller for inking the die, they would smear the ink on with their hands, wipe off the surplus with a piece of rag, the woman would push the die plate under the press, and the man would pull the lever. There were hundreds of these presses in use. All the operators wore aprons, and the aprons would show plainly what color of ink said operators were using. Their faces, too, were badly smeared up. For instance, those using black ink—their faces and clothes would be black from their wiping their hands on them. If they were using brown ink, they would be brown; if red ink, they would be red; and if green ink, they would be green. To me, they all looked GREEN. In passing the cages where these different printers were, they would hold up a sample of the work they were doing, which was bills of denominations running from \$1 to \$1000, as much as to say, “How would you like some of these?” In leaving the printing department, I asked my guide why the government used

hand printing presses, to which he replied, “to give people employment. Why,” said he, “to adopt power presses would throw 7,000 people out of employment. The labor union is opposed to power presses on this account, and when ever a question arises of using power presses, they always manage for the officials to disagree as to what kind of power press to buy; hence, they do not buy any.”

The Smithsonian Institution was next visited. This building was founded on a bequest from an eminent Englishman by the name of James Smithson, and was established in 1846. The Institution contains a museum of natural history, a cabinet of minerals, a chemical laboratory, a gallery of art, and a library. One could spend days, yes, almost years, in this building, and see something new, or learn something, almost every day. It seemed to me there were thousands of different species of birds and fish. It would be useless to go into a description of them here. We spent about an hour here, and then went down to the Dead Letter Department. Most every American is familiar with the name, “Dead Letter Office,” and has had matter sent there through their bad penmanship, or from not placing sufficient postage on their mail matter, but here I was, going to the Dead Letter Office myself. Well, I had a desire to see what became of so many misdirected and otherwise dead mail matter, so my guide took me up in one of the galleries of the Dead Letter Department where I could overlook the clerks opening the dead letters. There were something like a dozen of these clerks seated around a long table, cutting open envelopes, pulling out the contents, pushing them back in quickly, and then continuing. I asked

my guide what they looked into the envelopes, and then put the letters back for. He said, to see if there was any money in the letters. If there was any money in them, it was taken out in that department before the letters were sent on to other clerks whose business it was to locate the sender. I noticed one old chap, when he would get an envelope open and pull out the contents, his curiosity was aroused, and he would sometimes read a little bit. I asked the guide why it was this particular person took so many liberties. "Oh," he said, "he is an old soldier, with a big pull, has got a lifetime job here, just to keep him good-natured." Along the walls of the gallery were cases containing many articles of curiosity that had been sent through the mails. There was one pistol loaded and cocked, which my guide said came that way through the mails. There were other cases containing envelopes with partial addresses or characters to denote where the writer wished the letter sent. For instance, one was like this:

"WOOD,

New York City, U. S. A."

This letter came from England. The postoffice authorities re-mailed the letter, addressed:

"MARK UNDERWOOD,

New York City, U. S. A."

Mr. Underwood got his letter, and was happy. This is only an illustration of many that come before the postoffice department.

In passing along Pennsylvania Avenue, the guide pointed out the old Ford Theatre, now Armory Hall, where President Lincoln was assassinated in 1865. Also the plot of ground on which stood the scaffold where Mrs. Surratt, E. Herrold, and others, expiated for the con-

spiracy. Also the house where Lincoln died on the morning of April 15, after a nation had watched and mourned at his bedside through the dark hours of the eventful night. The government has lately purchased the building for \$30,000. It was formerly rented by its owners to people who would charge admission to tourists for entering it. My guide told me an amusing story of an enterprising German who once rented the building and charged a half dollar from those who wished to see the room where President Lincoln died. It seemed that nearly everyone who entered the room would want to take some little token away with them. They would cut slivers out of the door-cases and window-frames. One day someone asked our German friend if he was not afraid they would ruin his house. "Oh, no," he said, "ven dem doors and vindows vas gone, I geds some more. Dis makes dree dimes I buy some vindows and doors already. I don'd mind paying new doors and vindows, ven I geds 50c for a toothpick." Must the vale of tears be soured by dishonor? Must the dead heroes be mocked to pacify the greed of the unscrupulous masses? This reminds me that there is deception in all business except ours. Conscience often finds a hiding-place, and is petrified to stone. The Lord deliver us from sin.

The next we visited was Washington's Monument. This is located on a beautiful elevation overlooking the city. It pierces the sky at 351 feet. An elevator is kept running from 9 a. m., till 4 in the afternoon, during which time anyone that chooses can go up into the monument. It takes 8 minutes to go up, and 7 minutes to come down, and you are allowed to stay at the top 5 minutes. From this elevation you

can see the country 20 to 30 miles around. After visiting the monument* we went and took dinner and a much needed rest, for we had made all our explorations on foot, as the guide said we could see so much more that way. Late in the afternoon I went down to the Capitol building. As I have said before, this is a magnificent structure. I hunted up the House of Representatives, but congress had adjourned. I then went over to the Senate Chamber, got into the galleries, as near to the front row of seats as possible, peered over into the Senate Chamber and beheld row after row of baldheaded gladiators, two of whom were testing their steel on each other. It seemed that one Four-acre, of Ohio, and one Alien, of Nebraska, were not satisfied with President McKinley's vote in Ohio, and to kill time they were making a recount—in their minds. I came to the conclusion that, here, medicine for the nation is dished out in small doses and far between by those who are always wanting the job of administering to the nation's health. After listening to the debates, pro and con, on the last election, I hied me away to my hotel once more. After supper I listened with much interest to my landlord tell of incidents that happened "before the war." One peculiarity about the Washingtonians is their habit of using the war as a dating point of all the incidents of their lives. For instance, "I was married before the war;" "Our son, John, was born after the war;"

"This building was built before the war," or "after the war," etc. It's a wonder to me they haven't abbreviated it before this, thusly: "B. T. W." or "A. T. W." For instance, like this: "I was married 10 years B. T. W.;" "Our son, John, was born 5 years A. T. W." I heard many things of interest, and sat listening with my mouth open until it was quite late. Then I retired to my room and to bed.

I dreamed of a beautiful plain, covered with waving grain; of valleys sleeping in the sunlight; and of pearly streams winding their course to the far-off sea; of beautifully laid-off farms marked by evergreen hedges; of orchards, groves and windmills thereon, that marked the homes of the freemen. In the center of all this, I beheld a beautiful city, as beautiful and as great as Rome. In the center of this city was a large arena. In the center of the arena was a pedestal on which was placed a golden calf. Around this golden calf the rich men and the chiefs came to worship. All was serene under a mid-day sun. But, hark! from the distance a bugle sounds, and the worshippers rush, some to arms and some to prayer. The bugle sounds again more distinctly than before; a mighty host arises in the west. They are the silver hosts, led by Cæsar Byrine. Their mission is to destroy the golden calf, as they believe it consumes the milk of human kindness, and to invade the enemy's country. But, hark! There has been a call, "To arms! to arms!" and a bugle call is heard again—but this time from the east. A mighty host rolls over the Alleghenies, led by one General Marcus. The two hosts roll on toward each other, one with their spears tipped with gold, the other with silver. They meet at the shrine of the golden calf, and it is about to be engulfed; the roar

*The height of this monument is 555 feet, instead of 351 feet, as stated on previous page, this being 30 feet higher than the Cathedral at Cologne. The Monument was commenced in 1835, and was dedicated in 1885. The structure at the time of its erection was the highest in the world. It contains more than 18,000 blocks of stone. They are mostly of white marble, and weigh several tons each. Many blocks of stone in the Obelisk were contributed by friendly foreign nations. The cost of the whole structure was \$1,500,000.

and shriek of battle is horrible. The smoke from the onslaught makes the day grow dark, and the blaspheming of the gladiators putrifies the air. The sky turns red, and a nation seems about to sink*. Again and again the spears and the shields flash against each other, and at times it looks as though the silver hosts would win, as Cæsar Byrine lead his hosts—leads them in person—while General Marcus directs his army from a high place in the north. (I think they called it, Chicago). But hold! The tide of battle turns. The silver forces are driven away to the west again; the golden calf is saved, and the worshippers, most of them, are still alive. The gold gladiators strike up a song of victory, open a barrel of hard cider, and shoot anvils. This and the pounding on the door by the hotel porter awakened me. It was morning, and nearly time to take the train for New York. After dressing, I went down to the hotel office, but though it was after 6 o'clock, no one was there but the porter who had awakened me. I called for breakfast, but was informed breakfast would not be ready till 8 o'clock, this late breakfast being one of the luxuries the Washingtonians like, and as my train would leave at 7 o'clock, I bowed to the inevitable, and repaired to the depot. On my way, I had a feeling of uneasiness about my colored friend who had taken me to the hotel the day before, as he had promised to call for me that morning, and had failed to do so. I was afraid the other negro had "fixed" him; but on arriving at the depot, I found my apprehensions were groundless. The black scamp was

there, sound in body, if not in mind. When I told him of my fears for his personal safety, he said: "Don't you worry 'bout me, boss. Ef dat niggah ever bothers me, I'll carve him wid a razer." As the train was about to pull out for New York, I stepped on board. It seemed to me now that the last link in the chain of events was about to be forged. A few hours more, and I would be once again in that old familiar city, NEW YORK. R. B. L.

(To be continued in our next.)

J. T. HAIRSTON.

J. T. HAIRSTON was born in Lee county, Miss., March 10, 1862. In infancy he was left without a father's love and care, his father being killed at the battle of Chickamauga, Sept. 20, 1863. Mr. Hairston was raised on a farm, and when he was 21, was married to Miss Ardena Isaacs. He quit the farm, when he was 24, and learned the carpenter's trade. Leaving Mississippi in 1888, he removed to the Indian Territory and commenced doing contract work, and for nearly three years has been in the employ of the Cherokee Nation, doing the carpenter work at the Cherokee Orphan Asylum. He had little schooling, that little being acquired at home. All his spare time is put in in reading. He takes six newspapers and four bee journals, and as a matter of course, the PROGRESSIVE is among the list.

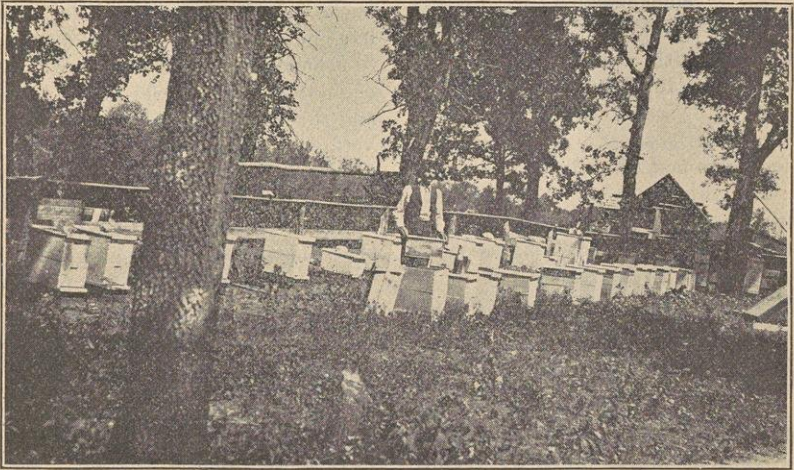
Mr. Hairston commenced in the bee business in 1894, with his bees in two old box hives. At that time he had never seen a frame hive, did not know there was such a thing as a book or paper devoted to bee culture, and had never seen but one swarm hived. He bought his hives in February. One night in May,

*It was stated that sugar and railroad stock fluctuated greatly on Wall street, New York, during the battle, as many of the gladiators were heavy holders of these stocks.

his wife came in and told him she believed the bees were going to swarm, as they were out on the hive and roaring. This was about 9 o'clock. He was excited. Got on his shoes, got his tools, and went to work, making a hive that night, keeping his wife stationed near the hives to watch them. The bees swarmed ten days later. This shows, as Mr. Hairston says, how little he knew about bees. He related his troubles to a lady friend, who was much amused thereby; then she gave him an old copy of the *Western Bee-Keeper*. He saw the

had all his hives arranged, as he was moving them.

The first year Mr. Hairston did not get any hives; he increased to four and got about 70 pounds of honey. The spring of 1896 he sent to the Leahy Mfg. Co. for twenty No. 1 hives, and transferred his four colonies all right, and commenced to divide. That was the poorest year ever known in that locality. Nearly all the wild bees died of starvation. He had to feed sugar syrup all the year—fed 800 pounds. Sent for 17 Italian queens that year. Had to double up in



APIARY OF J. T. HAIRSTON, SALINA, I. T.

advertisement of a bee journal, and subscribed for it. That was the beginning. He has read nearly all the best books on bee culture, and is a constant reader of the four leading bee journals.

Mr. Hairston's apiary is near the Cherokee Orphan Asylum on the beautiful Grand River. We take pleasure in presenting to the *PROGRESSIVE'S* readers the accompanying view of Mr. Hairston's apiary. The picture was taken before he

the fall to ten colonies. These came through all right, except that one was queenless.

He commenced the spring of '97 with these ten. Commenced to feed to stimulate early breeding. The first swarm was cast April 19; they continued to swarm, two or three a day till he had used all his hives. He hurried an order to the Leahy Mfg. Co. for 20 more hives. These were soon exhausted. In the meantime he had ordered thirty more.

He had been reading how to increase. He now was reading everything he could find on stopping this increase. They increased from 10 to 45, in spite of all he could do. He united some queenless colonies, and now has 37 strong colonies in winter quarters. He took 600 lbs of extracted honey and 75 pounds of comb; only run one for comb honey. He will run mostly for comb honey the coming season.

Success to him. THE EDITOR.

◆ ◆ ◆

WAYSIDE FRAGMENTS.
Somnambulist.

Any snow with you? Only about 8 inches, on the level, of "the beautiful" with us. The warm, wet variety, if I may so describe snow. At any rate, it melted quite fast when it first began to fall, and this part of it afterwards freezing formed a sleety substance on all exposed surfaces. As long as snow remains snow, 'tis harmless, but when converted into ice, "look a leedle out."

Doolittle and Aikin agree as to the fatal results attending long continued cold weather, such as precludes cleansing flights, and entrances made air tight by the formation of ice are another cause of much fatality. Happy is he who knows his hives are well inclined from rear to front.

Am glad to hear Friend Rouse say "conditions are good for a bounteous crop next year." Sommy, like some of his critics, has a habit of "considering the source." you know, and in this case I lean back in my easy chair thoroughly at rest. "You all can 'pend on him," as our darkies assure us of themselves. Certainly, if all the clover were not killed, "root and branch," by our extended drouth last fall, we've enough moisture on hand at present to make ample amends for last fall's shortage. I join hands with Bro. Rouse, inasmuch

as I am still enrolled with the ranks of the hopeful. Hopeful regarding all connected with the pursuit. And how well the name, "PROGRESSIVE," fits the times. Almost prophetic!

In Germany, bee-keepers are largely dispensing with the services of the middle-men, dealing directly with the consumer and the surrounding and home markets. Pretty safe to follow the Germans; they're mostly a thrifty set. They've discovered the value of appearance of product, too, and favor the use of small glasses holding one-third, one-half, two-thirds and one pound each. Is this not nearly correct for the home market? I have long used buckets, as being a convenient vessel, but—but—but—well, am almost ready to pronounce them a nuisance. So irregular in size. Order gallon buckets, and three quart buckets arrive to cultivate your acquaintance, much to the detriment of your usually sunny temper. Transportation oftentimes seems to disagree with them, so that they and their lids are so out of shape as to either have a standing quarrel on hands, or are hopelessly divorced. Poor lids! Most of them are started out on too short an allowance in life, and their troubles forcibly remind us of the old adage, "When poverty comes in at the door, love flies out at the window." Like many luckless mortals, because they're short o' the "stuff," they're doomed to lives of single—(just the reverse of blessedness.) Then, if only they (bucket and lid) can be prevailed upon to peaceably live together, their contents seem to get "riled" and determined to get up a "muss," not satisfied with their life of confinement, nor, for that matter, anything within the bounds of reason, and they make a break to get out in the world and see what's going on, anyway. Evidently the outside world does not prove so attractive as it promised, but retreat being now impossible, they run down the sides of the bucket in a disconsolate

fashion which far from "leads enchantment to the view."

Always have thought myself on the side of attractive appearance, always have preached it, and imagined I practiced what I preached; but stop a moment, and think of my feelings when, recently, I viewed a row of buckets of honey sitting on the dirty floor of a grocery house. Evidently the honey was of the "disgruntled" sort which had tried hard to part company with its friend, the bucket—its absorbing friendship for dust was also self-evident. The free use of the sprinkler had not been limited to the floor alone. The buckets had come in for more than their share, if indeed they had not been used for targets by the tobacco-squirters. Disgusting? Rather a mild term. Expostulations were as "pearls before swine," for, being known by reputation alone in that store, I was politely but firmly told "the honey in those buckets was firstclass. The little *soil* on the outside mattered not. Why that honey was the pure, genuine article from SOMMY'S, *the bee-man,* out here near Naptown." Would you think it? could you believe it? those were my bright new buckets which had been sent out by an assistant only a few short weeks before. Alas! "pride goeth before a fall." Let us drop the curtain. (I will add, however; I failed to disclose my identity.) Even with the utmost care, lives there the man who has seen a dust-proof bucket? Bucket honey was slow sale at 8c per pound this season, while that put up in pint Mason jars brought almost twice as much. Compliments on the good sense of the consumer are in order.

I see United States Judge Lochren has decided that the Minnesota Pink Law, providing that all oleomargarine or butterine offered for sale in that state must be colored a bright pink, is constitutional. Appearance, you see, was at the bottom of this law. While it is not a prohibitive measure, it

amounts to as much, for will pink butter ever be likely to be a favorite article of consumption? And if oleomargarine *must be pink*, then it will die a natural death.

How about a pink law, or any other color, in connection with artificial honey? See how clearly they imitate the finest white clover and sage honey. Were they compelled to sail under some other colors than ours, maybe they might decide to haul in their craft. It's all on the same principle with the musical composer who signed a German name to his latest and best composition, in hopes of finding a player for it. Because "appearances are deceitful," a worthless compound is put on the public as pure honey. Barnum, the great showman, used frequently to declare "the American people love to be humbugged," and perhaps this little fact is somewhat responsible for the existence of so many fictitious compounds.

Do you recall to mind all the long sermons we've had of late months on oblong flat sections, slatted honey boards, etc.? What the sum and substance of their lastly paragraphs? Appearance, was it not? Well I remember E. R. Root's wanting to laugh at me because of my being no better posted than to be surprised at people neglecting to scrape their sections. But this season some have beat that badly, and are bringing their honey to town in the super, just as it was taken from the hive, cutting the price down 2c per pound. These supers remain sometimes for weeks in the store or grocery, and are treated regularly every morning to a free dust bath. No extra charge to the consumer for any increase of weight. Most assuredly this class of people consider that appearances go for naught, and a *little soil* don't count. Glad they're the exception, and not the rule. The world at large knows better. Half the satisfaction in handling honey arises from its beauty. Especially is

this so of comb honey; and how self-satisfied we feel on contemplating our product, and knowing imitation impossible. For what purpose do the counterfeiters place a bit of tempting comb in each vessel of prepared syrup? Ah! they've learned their lesson well. Their appreciation of appearance needs no cultivation. And this brings to mind, 'tis about that time of year to turn over that new leaf, and "avoid the appearance of all evil."

Naptown, Dreamland.

OUR LETTER BOX.

California Bee-Keepers' Meeting.

The meeting of the Southern California Bee-Keepers' Association which was held in the Chamber of Commerce, at Los Angeles, Cal., on the 10th of January, was well attended. Among the noted visitors were Mr. Thomas C. Cowan, of London, England. Mr. Wm. Porter, of Colorado, and others. Mr. Cowan's address on Bee-Keeping in England and Foul Brood, was greatly appreciated by all present. The fence separator and no bee-way sections did not receive as many compliments as we expected; but I believe they have come to stay, especially with many practical apiarists. Also the use of large hives and large entrances is favored. Several good rains lately have encouraged the bee-keepers, and many are preparing and getting their supplies for the coming season. F. S. BRAUTIGAM.
Los Angeles, Cal.

§ § § §

Likes the "Progressive."

Inclosed please find 50c to pay for the PROGRESSIVE for 1898. I see my paid-up subscription will soon expire, and there is none so worthy of support as ye editor who tries to please us for twelve months for the small price of 50c.

Yours respectfully,

Cuba, Kas. WM H EAGERTY.

§ § § §

Goods as Represented.

I will send you an order soon. I am waiting to get others to order with me. Otherwise I would order at once. I do all I can in getting others to patronize you, as I have always found your goods

just what you said they were, and I take pleasure in doing what I can for you.

Yours respectfully,

Sabinal, Tex. A. L. WHITLOW.

§ § § §

A "Daisy" Extractor.

If your catalogue for 1898 is out, please mail same to me. The Extractor bought of you last fall was a Daisy. I want a large lot of hives, etc., this spring. Send best prices.

Buford, Ind. J. B. ALEXANDER.

§ § § §

Worth Ten Dollars.

I enclose order for 65c to pay up and renew my subscription for the PROGRESSIVE. I expect the Aikin and Doolittle articles to be worth \$10, or more, to me—to say nothing of that delightful "Sommy." Truly yours,

St. Joseph, Mo. LUCINDA RITTER.

§ § § §

Fine for the Money.

I must say your paper is fine for the money.

Yours truly,

McFall, Mo. J. C. ENYART.

§ § § §

Enjoys Ye Editor's Writings.

We are having a mild winter here so far, except one cold spell. I enjoy your writings in the PROGRESSIVE. The sketch of your travels is quite interesting. I hope you will have a prosperous year in your business. I remain yours truly,

Salina, Ind. Ty. J. T. HAIRSTON.

§ § § §

The Finest Goods He Ever Saw.

The goods I ordered of you came all right, and by the way I want to say that they are the finest I ever saw. They are better than goods I bought of A. I. R. Co., which cost more money. The hives went together nicely, and the material and workmanship is first-class. I will send you a model for a new bottom board in a few days. It is gotten up to suit my fancy, and embraces the large entrance craze, which I think is a good thing.

Flora, Ill. Yours,
G. J. STURM.

§ § § §

Pleased with Notes of Travel.

The November and December numbers of the PROGRESSIVE to hand. I have read with much interest both numbers of your paper from beginning to end, advertisements and all. Your

Notes of Travel are especially interesting. Hope you will give us several chapters more off from the same piece.

Truly yours. BURTON L. SAGE.
Highwood, Conn.

§ § § §

Pleased With the "Progressive."

Enclosed herewith find \$1, which place to my credit for the PROGRESSIVE, and oblige. Your journal is certainly "progressive", and a gem. I also prize Doolittle's articles, a new, entertaining departure. Please send me two Emerson binders for the PROGRESSIVE. Send bill, and I'll forward amount for same.

Respectfully yours,

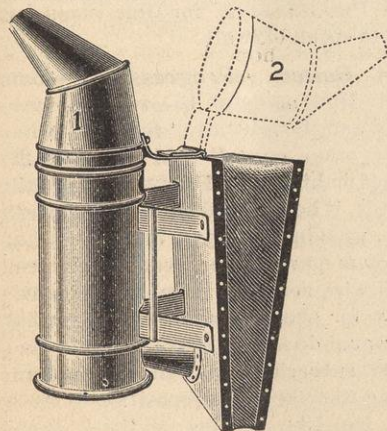
Ventura, Cal. M. H. MENDESON.

The apiary of Dr. P. C. Gress, at Atchison, Kas., with 150 colonies of bees and 5,000 pounds of honey, was destroyed by fire January 27th. The loss was about \$2,500. It is thought that the cause was arson by some person who objected to the bees.

WANTED.

10,000 lbs of Beeswax, for Cash.

LEAHY MFG. CO., Higginsville, Mo.



THE "HIGGINSVILLE SMOKER."

☞ A Good Smoker for a Little Money.
THE HIGGINSVILLE SMOKER A DANDY.

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

Price 75c; by mail, \$1.00. Address,
LEAHY MFG. CO., Higginsville, Mo

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

We have just got in a supply of new sweet clover seed. The price will be: Single pound, 10c; 5 pounds or more, 5c per pound.

"Observer" writes that he doesn't know half as much about bees as he was certain he knew 20 years ago. There are many of us in the same fix.

For the third time in the history of the nation, in recognition of the importance of a brilliant enterprise, Postmaster General Gary has decided to order a series of special postage stamps, commemorative of the holding of the Trans-Mississippi and International Exposition at Omaha, Nebraska, in 1898.

"Beedom Boiled Down" is an interesting department in the American Bee Journal. While I do not claim to know who the boiler is, (he has no earmarks), I congratulate Bro. York on his selection for this department. It is one of the first departments I read when the American Bee Journal comes to hand.

Large entrances and large bee spaces under brood frames may not be as good as some know them to be. If bees are going to loaf, they had just as well loaf on the outside of the hive as in a deep space in the bottom board, as you can then see them without going on your knees. Read what Messrs. Doolittle and O. P. Miller have to say on pages 45 and 47, respectively, of this issue.

We are having a real boom in business, and are running night and day, and have been for some time. We

have shipped 8 car-loads of supplies, and have orders on hand for 4 more. We are thankful for this rush of business, and intend to fill all orders, or leave our hide on the fence. Not the fence that the Roots are making so much fuss about, however.

* * * *

This reminds me that I do not like the fence separator. Don't believe they are durable enough. Too many sharp corners to be getting knocked off, and if you should accidentally get them wet—? There is also danger of bees fastening their cappings to the separator cleats. Now I said I did not like them, but I may after I try them, and I hope they will be a success, as "no bee-way" sections can be sold cheaper, because they take less material and less work to make them. But I do not think, like some, that honey will look any better in them. They will look too much like something with its ears cut off. Neither do I think that the bees will fill them any evenner than they do the old section. Why should they, when the cleat on the separator makes the construction of the separator and section practically the same as heretofore?

* * * *

Swarming in November.—I notice that the article which appeared in the November American Bee-Keeper which had in it the expression that "Swarming will be at its height when this meets the eye of the reader," has led many to think that Doolittle had gone crazy, or else his bees had taken on some new freak. Well, all I have to say is, that Doolittle is only accountable for what he writes in any article, and not for the time it appears in print. If any publisher sees fit to hold an article written the latter part of spring, so as not to publish it till the latter part of the fall, that is his privilege, and no one is responsible for that part but the publisher. But of one thing I am sure,

which is, the American Bee-Keeper has now found out that the readers of his paper have intelligence enough to know a "bug from a bear."

Our "Progressive."—Then, of course, if the readers of the American Bee-Keeper have intelligence, we claim that the readers of the PROGRESSIVE BEE-KEEPER should be fully as intelligent, and know a good thing when they see it. Hence, we assume that all the PROGRESSIVE readers have noticed how our paper has forged ahead of late. We, here in York State, think that the last two numbers of the PROGRESSIVE are equal to any two numbers of any bee paper in the world. Our other editor's "Shadows by Moonlight" and "A Swarm of Italians" are GEMS, and place him away up in the ranks of the great writers of the past and the present. He has a rare faculty in this direction, and we hope he will let it "burn brightly." Then there is "Sommy," and Aikin, and Rouse, and, and—well, I'm not going to stop to enumerate all the good things we have in the PROGRESSIVE, for time would fail me to speak of it all.

A Better "Progressive."—But, say! How many of the readers carefully and thoughtfully "took in" what "our other editor" said on page 28, about making the PROGRESSIVE still better, if he only had more subscribers? Say, wouldn't it be just fun to see what he *could* do were he given a chance? And why not give him the chance? Now for one, I should like to see what he would do if the PROGRESSIVE had 10,000 subscribers, and to this end I am going to make this proposition to those who feel like helping a little along this line: To the one who will send in the largest club of subscribers for the PROGRESSIVE between now and July 1, 1898, I will send postpaid one of my VERY BEST breeding queens, just such an one as I sell for \$5 00. To the one sending in the next largest club, I will

send a select tested queen of 1897 rearing, just such an one as I get \$3.00 for. To the one sending in the third largest club, I will send one of my select tested queens of this year's raising, such as I sell hundreds of at \$2.00. To the one who sends in the fourth largest club, I will send one of my tested queens, such as I sell at \$1.50 each; and to the one who will send in the fifth largest club, I will send one of my untested queens, such as I sell thousands of at \$1.00 each. All of these queens will be bred from my BEST stock, which I have been 25 years in bringing to its present perfection, a perfection which scores have written me was ahead of anything in the United States. Now, if you want "that better PROGRESSIVE," which Bro. Leahy is bound to give us if the subscription list is doubled, trebled, or quadrupled, just go out among your neighbors, and get one, two, three, four, five, ten, or twenty-five subscribers, and send them in to Higginsville, Mo., and Bro. Leahy will keep count of the clubs as they come in and announce in the July PROGRESSIVE the names and addresses of the persons sending in the five largest, and the number of names each sent, and immediately upon seeing who they are, I will send the queens. When the bees begin to be active in the spring is the best time I ever found to secure subscribers for a bee paper. Go and see some bee-keeping friends or neighbors on some pleasant day when the bees can fly, get them to show you their bees, opening a hive or two if they will, then talk bees a spell, and finally tell them how much you learn from reading the PROGRESSIVE, and finally ask them to let you send the paper for a year. If you can only get them enthusiastic over the bees and the prospects from them during the coming season, you will have no trouble in getting them to subscribe. And if you secure but one subscription, you will

convert that one from an old foggy bee-keeper into a "PROGRESSIVE" one. "hide a multitude of sin"-ful putting of his poorly prepared honey on your market at a price that will be ruinous to you and other progressive bee-keepers, help our other editor by the many ones which will come in, to give us the BEST *bee paper in the world*, and stand a chance of getting one of Doolittle's queens free. Will you do it? On your reply depends, depends—well, a lot of things. Remember if each present reader sends in just ONE new subscriber, the list is doubled. If TWO, the list is trebled. If THREE, the list is quadrupled. With best wishes for the best of success to everyone who tries for subscribers, and for the PROGRESSIVE in particular, I am yours truly,

G. M. DOOLITTLE.

Borodino, N. Y.

-:- Coming. -:-

The year 1898 is here, and we are happy to inform our friends and customers that we are now better prepared than ever before to fill your orders for Queens and Bees. We have the largest stock ever operated by us, and we mean to be ready with plenty of bees and queens to fill all orders without delay that are sent to us.



Bees by the pound, \$1.00; ten or more pounds, 90c each. Untested queens for 1898, \$1.00 each in February, March, April and May; \$5.00 for six, or \$9.00 per dozen. For larger amounts write for prices. Have your orders booked for your yearly queens. Safe arrival guaranteed.



Root's and Leahy's goods, comb foundation, and Bingham smokers. A steam bee-hive factory, and all kinds of bee supplies.



The **SOUTHLAND QUEEN**, the only bee paper in the South, monthly \$1.00 per year.



Send for catalogue, which is almost a complete book on Southern bee-keeping, giving queen rearing in full, all free for the asking. If you want full information about everything we have, and the bee book, don't fail to ask for our 1897 catalog.

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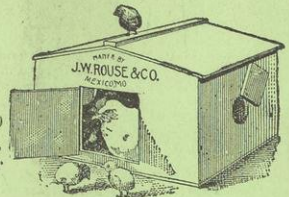
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